Natural Environment Study

(Minimal Impacts)

Gilman Springs Median and Shoulder Improvements Project

Riverside County, California
08-RIV-Gilman Springs Road

HSIPL-5956(263)

April 2021

STATE OF CALIFORNIA
Department of Transportation
AND
County of Riverside Transportation Department

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Summary

The County of Riverside Transportation Department (County), in cooperation with the California Department of Transportation (Caltrans), proposes to widen the median and shoulders along Gilman Springs Road from approximately 1.3 miles north of Jack Rabbit Trail to approximately one mile south of Bridge Street and add an approximately 6,900-foot-long passing lane in the northbound direction. The purpose of the proposed project is to improve safety and traffic operations on this narrow, undivided roadway and improve driver awareness on Gilman Springs Road.

The proposed project is located in Riverside County, California, and is entirely within the Plan Area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Dudek 2003). The proposed project is in the Reche Canyons/Badlands Area Plan and the San Jacinto Valley Area Plan, within Criteria Cells 1478, 1584, 1652, 1666, 1762, 1763, 1880, 1881, 1882, 1977, 1978, 1979, and 1982. The proposed project is a safety operations and maintenance project (MSHCP Volume I, Section 7.2.1 and 7.3.4), and a covered activity; however, due to the proposed project's location within an area that is considered highly sensitive by the Western Riverside County Regional Conservation Authority (WRCRCA) and resource agencies, and since it is a in a wildlife core/linkage of the MSHCP and is adjacent to Public/Quasi-Public (P/QP) and conserved lands (MSHCP Volume I, Section 7.2.2), the County has incorporated siting and design criteria, and general avoidance guidelines (MSHCP Volume I, Sections 7.5.1, 7.5.2, and 7.5.3 and Appendix C) into the proposed project. With some small exceptions, the entire project is within the MSHCP-designated Burrowing Owl (*Athene cunicularia*; BUOW) Survey Area. In addition, most of it is located within the Mammal Species Survey Area for Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; LAPM), with a small portion also within the San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) Survey Area. Portions of the proposed project are also within the Narrow Endemic Plant Survey Area (Area 3) and the Criteria Area Species Survey Area (Area 3). As such, focused surveys were conducted for BUOW, LAPM, SBKR, and rare plants in 2017 and 2018.

BUOW and smooth tarplant (*Centromadia pungens laevis*) were found during focused surveys. These two species are conditionally covered under the MSHCP, in that where surveys are positive within designated survey areas, 90% of those portions of the proposed project footprint that provide for long-term conservation value for that species shall be avoided until it is demonstrated that individually designated conservation goals for the species are met (90% rule). If 90% of on-site habitat constituting long-term conservation value cannot be preserved, then a Determination of Biologically Equivalent or Superior Preservation (DBESP) demonstrating how project mitigation would be equal or superior to existing affected lands is required. All individual smooth tarplant plants found in the biological survey area (BSA) were outside the designated Criteria Area Plant Survey Area and, therefore, not subject to the take avoidance requirements of the MSHCP. If the proposed project complies with other standard avoidance and minimization measures required under the MSHCP, then take of smooth tarplant would also be in compliance with the MSHCP. Additionally, based on an analysis of the expected project impacts and of the likely long-term conservation value of the properties on which this species was found during surveys, it is not expected that the proposed project would violate the 90% rule for BUOW as no habitat of long-term conservation value is present within the proposed project footprint (as described in more detail in Section 4.4.5.2 of this document). Otherwise, as long as the proposed project complies with and implements necessary measures to remain in compliance with the MSHCP, take coverage is provided under the MSHCP for these species and no further measures to address take would be required.

Cooper's hawk (*Accipiter cooperii*), tricolored blackbird (*Agelaius tricolor*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius ludovicianus*), coastal California gnatcatcher (*Polioptila californica californica*), yellow warbler (*Setophaga petechia*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*) were also found during project surveys. These 12 species are all fully covered by the MSHCP and require no additional measures to address take as long as the proposed project is consistent with MSHCP conservation goals and avoids any active nests.

Caltrans has determined, in accordance with Section 7 of the Federal Endangered Species Act (FESA), that the proposed project *may affect, but is not likely to adversely affect* coastal California gnatcatcher and Stephens' kangaroo rat (*Dipodomys stephensi*; SKR). There is no critical habitat present; therefore, there would be *no effect* on federally designated critical habitat.

The proposed project would have temporary and permanent impacts on areas designated as Existing Core H, Proposed Core 3, P/QP lands, and other conserved lands. Impacts on natural habitats within these areas will require a DBESP and compliance with the Urban/Wildlands Interface Guidelines described in Section 6.1.4 of the MSHCP. A number of culverts that may provide minimal means of wildlife crossings would be directly affected by being lengthened to accommodate the wider shoulders. Following construction, these culvert modifications would include enhancement efforts, including, at a minimum, routinely clearing vegetation and otherwise blocked entrances to improve accessibility for wildlife. An existing culvert adjacent to Bridge Street would be removed and replaced with a single-span concrete slab bridge, designed to create an enhanced wildlife crossing; wildlife fencing, in addition to associated jumpouts, would also be constructed.

A jurisdictional delineation was conducted in December 2017 and February 2018 (Appendix H). A total of 23 features were delineated within the 100-foot buffer, including concrete channels, earthen channels, wetland waters, and non-jurisdictional swales. Based on the results of the delineation, it is expected that the proposed project will require a Clean Water Act Section 404 permit (U.S. Army Corps of Engineers [USACE]) a Section 401 water quality certification (Regional Water Quality Control Board [RWQCB]), and Waste Discharge Requirements under the Porter-Cologne Water Quality Control Act (RWQCB), as well as a Section 1600 Lake and Streambed Alteration Agreement (California Department of Fish and Wildlife [CDFW]) for impacts on jurisdictional waters.

The avoidance, minimization, and compensatory measures that are applicable to the proposed project are summarized in Table S-1 below:

Table S-1. Summary of Avoidance/Minimization and Compensatory Mitigation Measures

Measure	Avoidance/Minimization	Compensatory
BIO-1	Clearing restrictions for natural vegetation (including sage scrub and riparian-riverine vegetation).	--
BIO-2	Watering for dust control.	--
BIO-3	Obtain appropriate firefighting equipment for construction-caused wildfires. Make personnel aware of fire hazards and fire risk.	--
BIO-4	Biological construction monitoring.	--
BIO-5	Establish environmentally sensitive area fencing and avoid environmentally sensitive areas.	--
BIO-6	Removal of vegetation and exotic species during construction.	--
BIO-7	Reduce spread of noxious weeds.	--
BIO-8	Establish and implement water pollution and erosion control plans.	--
BIO-9	Avoid jurisdictional areas and riparian habitat adjacent to the proposed project footprint.	--
BIO-10	Avoid placement of equipment within a stream or within adjacent banks or upland areas.	--
BIO-11	Preparation of a DBESP report.	--
BIO-12	--	P/QP Purchase of mitigation bank credits through in-lieu fee program and/or creation of riparian-riverine resources.
BIO-13	Biological resource training for construction personnel.	--
BIO-14	Night lighting within potential MSHCP conservation areas.	--
BIO-15	Avoidance of impacts on Narrow Endemic and Criteria Area Species	--
BIO-16	Preconstruction nesting bird surveys	--
BIO-17	Preconstruction survey for terrestrial special-status wildlife.	--
BIO-18	Focused survey and avoidance of impacts on special-status plants within the Bridge Street BSA	--
BIO-19	Annual clearing of debris within culverts after construction	--
BIO-20	Preparation of a Habitat Mitigation and Monitoring Plan (HMMP)	--
BIO-21	--	Acquisition of lands for P/QP and CDFW conserved lands replacement.
BIO-22	Clear culverts and drainages of debris during construction	--
BIO-23	Prepare a Wildlife Fencing Plan	--
BIO-24	Focused survey and avoidance of impacts on burrowing owl within the Bridge Street BSA	--
BIO-25	Preconstruction burrowing owl survey and monitoring plan	--
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List of Abbreviated Terms

B.A.	Bachelor of Arts
B.S.	Bachelor of Science
BMP	best management practice
BSA	biological study area
BUOW	burrowing owl
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNPS	California Native Plant Society
County	County of Riverside Transportation Department
DBESP	Determination of Biologically Equivalent or Superior Preservation
ED	environmental document
FESA	Federal Endangered Species Act
FTIP	Federal Transportation Improvement Program
GPS	global positioning system
JPR	Joint Project Review
HUC	hydrologic unit code
LAPM	Los Angeles pocket mouse
LOD	limits of disturbance
M.S.	Master of Science
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
NES(MI)	Natural Environment Study (Minimal Impacts)
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
P/QP	Public/Quasi-Public
project	Gilman Springs Median and Shoulder Improvements Project
RWQCB	Regional Water Quality Control Board
SBKR	San Bernardino kangaroo rat
SCAG	Southern California Association of Governments
SKR	Stephens' kangaroo rat
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
U.S.C.	U.S. Code
U.S.E.O.	U.S. Executive Order
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCRCA	Western Riverside County Regional Conservation Authority

Chapter 1 Introduction

The County of Riverside Transportation Department (County), in cooperation with the California Department of Transportation (Caltrans), proposes to widen the median and shoulders along Gilman Springs Road from approximately 1.3 miles north of Jack Rabbit Trail to approximately one mile south of Bridge Street and add an approximately 6,900-foot-long passing lane in the westbound direction. Gilman Springs Road is currently a two-lane, undivided road with one 12-foot lane in each direction and shoulder widths varying from one to four feet.

1.1 History

1.1.1 Project Purpose and Need

1.1.1.1 Purpose

The purpose of this project is to improve safety and traffic operations by eliminating the hazards associated with narrow, undivided roadways, and improving driver awareness on Gilman Springs Road.

1.1.1.2 Need

The current roadway configuration on Gilman Springs Road consists of two lanes of undivided traffic and narrow shoulders; tthe County would like to improve these conditions for both directions of traffic and those intending to turn onto the road from Kennedy Hills Materials, Eden Hot Springs Road/Central Avenue, and Jack Rabbit Trail/Curtis Street/Knoch Road.

1.2 Project Description

The proposed Gilman Springs Median and Shoulder Improvements Project (project) is located in Riverside County, California (Figures 1 and 2) within the U.S. Geological Survey (USGS) 7.5-minute El Casco and Lakeview quadrangles in Sections 21, 22, 26, and 27 of Township 3 South, Range 2 West, and Sections 31 and 36 of Township 3 South, Range 1 West. The proposed project is entirely located within the Plan Area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Dudek 2003).

The proposed project is located on Gilman Springs Road from approximately 1.3 miles north of Jack Rabbit Trail to approximately one mile south of Bridge Street. The proposed project would reconstruct the existing roadway to a configuration that includes 5-foot graded shoulders, 5-foot paved shoulders with rumble strips, a 12-foot lane in each direction, and a 4-foot double yellow striped median with rumble stripes and impact resistant channelizers in the median. The proposed project would also include one approximately 6,900-foot long passing lane in the northbound direction from approximately 1,350 feet north of Bridge Street to approximately 1,200 feet north of Eden Springs. Additionally, the proposed project would replace the existing reinforced concrete box culvert near the Gilman Springs Road intersection with Bridge Street with a single-span concrete slab bridge that would be used to create a wildlife crossing. An eight-foot high wildlife fence, which would also extend an additional two feet below grade, would be installed at the same location and jumpouts would be integrated into the fencing to allow wildlife to escape from the right of way. Three retaining walls, approximately 10 to 16 feet high

and approximately 100 to 320 feet long, are proposed to prevent grading into an adjacent channel.

The work would include vegetation and tree removal, grading along adjacent properties, driveway and street tie-in reconstruction, and other associated work as needed. The existing culvert crossings and drainage structures would be extended and/or reconstructed. Traffic devices such as striping, reflective markers, and signage would be relocated to the new roadway configuration. Lighting systems would be added for intersections at Kennedy Hills Materials, Eden Hot Springs Road/Central Avenue, and Jack Rabbit Trail/Curtis Street/Knoch Road. The proposed project design is shown in Appendix A, Figure 3.

Utility relocations and adjustments would be made to power poles, gas valves, and any other utilities determined to be present. Any affected utilities would be relocated in accordance with state law and regulations and County policies. Permanent acquisition of right of way, along with temporary construction easements, are expected to be necessary at various locations along the proposed project.

The proposed project is included in Southern California Association of Government's (SCAG's) 2019 financially constrained Federal Transportation Improvement Program (FTIP) as project ID FTIP No. SCAG015. This project ID is for grouped projects for safety improvements. Within that listing the proposed project has the unique project ID H8-08-021.

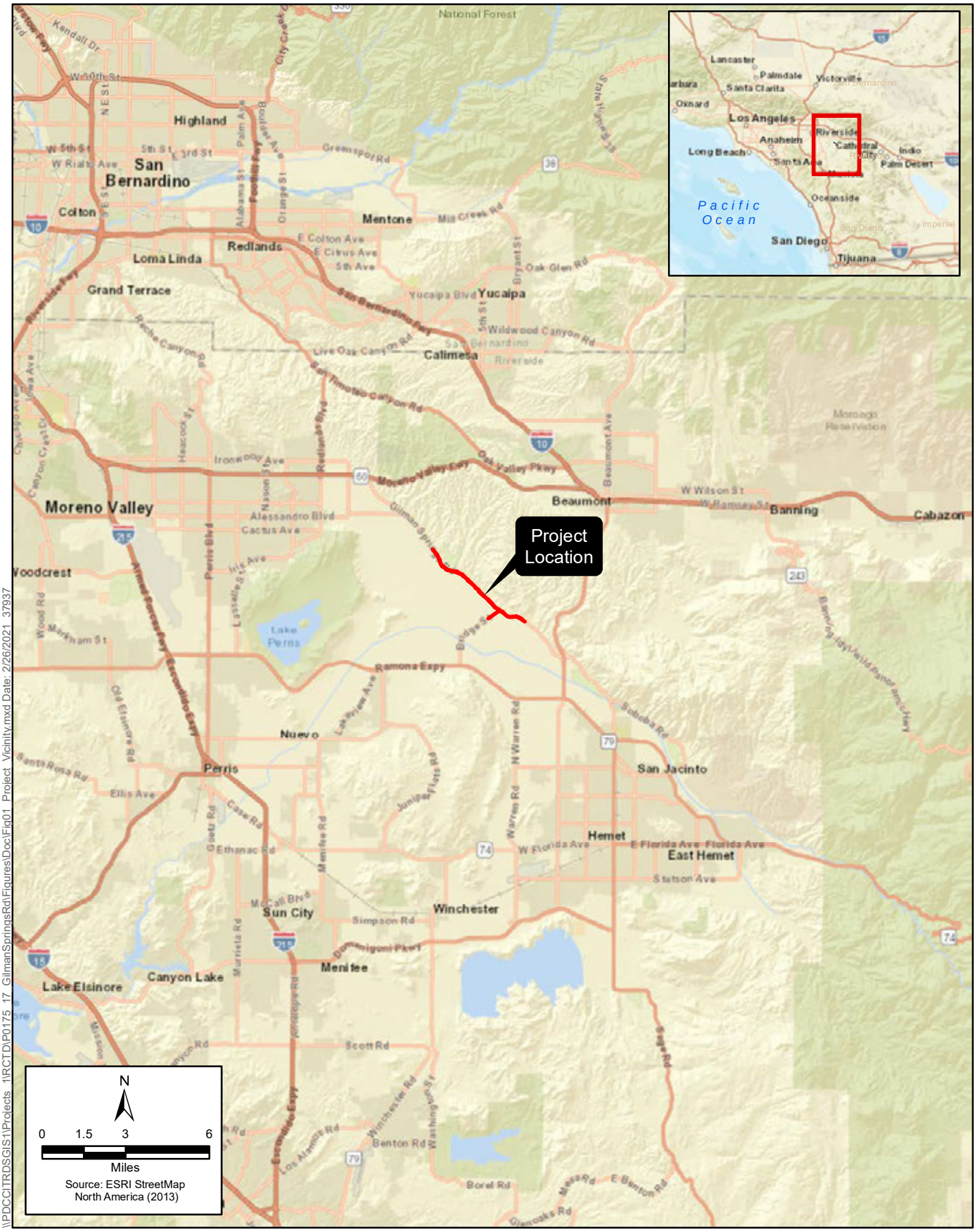

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Figure 1
Regional Vicinity Map
Gilman Springs Median and Shoulder Improvements Project

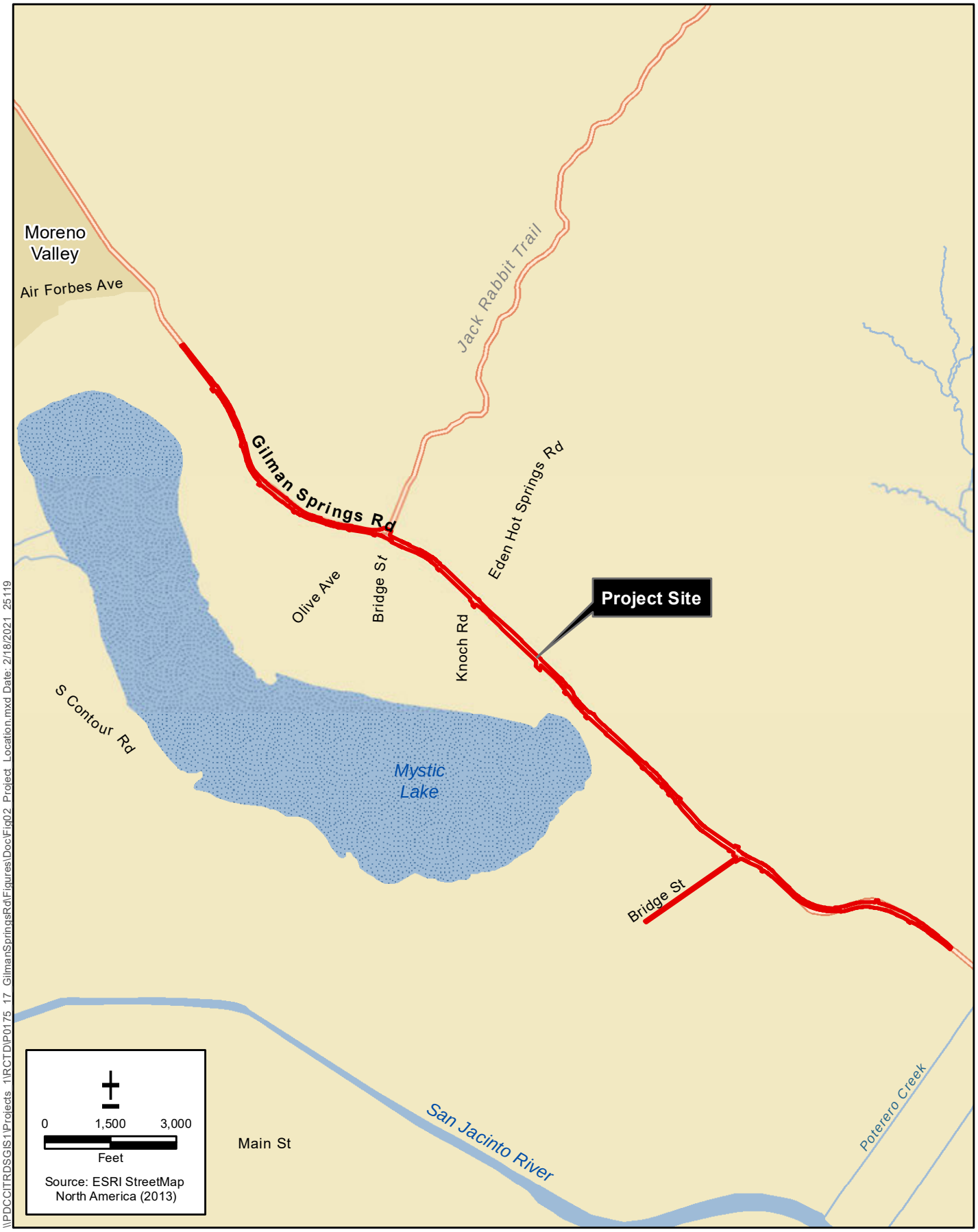

Figure 2
Project Location
Gilman Springs Median and Shoulder Improvements Project

Chapter 2 Study Methods

This section provides the regulatory framework under which the biological resources were reviewed for the proposed project and the methods used to determine the likelihood of biological resources being present.

2.1 Regulatory Requirements

This section lists the applicable regulations for protecting biological resources that are pertinent to the proposed project. Refer to Appendix B for a full description of each of these regulations.

2.1.1 Federal Requirements

- National Environmental Policy Act
- Federal Endangered Species Act (FESA) of 1973 (16 U.S. Code [U.S.C.] § 1531 et seq.)
- Clean Water Act (33 U.S.C. § 1251 et seq.)
- U.S. Fish and Wildlife Coordination Act (16 U.S.C. § 661–666c)
- Migratory Bird Treaty Act (16 U.S.C. § 703–712)
- Bald and Golden Eagle Protection Act (16 U.S.C. § 668–668(d); 50 Code of Federal Regulations Part 22)
- Protection of Wetlands (U.S. Executive Order [U.S.E.O.] 11990)
- Protection of Migratory Bird Populations (U.S.E.O. 13186)
- Invasive Species (U.S.E.O. 13112)

2.1.2 State Requirements

- California Environmental Quality Act
- California Endangered Species Act (Fish and Game Code §§ 2050–2085)
- California Fish and Game Code Sections 3503, 3503.5, and 3513 (Bird Protections); 3511, 4700, 5050, and 5515 (Fully Protected Species); and 1600 et seq. (Lake and Streambed Alteration)
- California Native Plant Protection Act (Fish and Game Code §§ 1900–1913)
- Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.)

2.1.3 Regional and Local Regulations

- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)
- Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP)

2.2 Studies Required

The term "project footprint" or "limits of disturbance" (LOD) is defined as the area proposed for direct impact, including permanent and temporary impacts. The "biological study area" (BSA) encompasses the proposed project footprint plus a variable buffer (outward from the proposed project footprint) around the LOD. Buffers applied to the BSA around the proposed project footprint include a 500-foot buffer for burrowing owl (*Athene cunicularia*; BUOW); a 300-foot buffer for general reconnaissance, vegetation mapping, and small-mammal trapping; and a 100-foot buffer for the jurisdictional delineation, riparian/riverine resources mapping, and focused surveys for special-status plants. For this Natural Environment Study (Minimal Impacts)

(NES[MI]), "region" is defined as areas depicted on the USGS 7.5-minute quadrangle maps that include the BSA (El Casco and Lakeview) and selected surrounding quadrangles within a 5-mile radius (Yucaipa, Redlands, Forest Falls, Sunnymead, Beaumont, Perris, and San Jacinto). "Special-status species" are defined as those plant and animal species that are candidate, proposed, or state or federally listed as endangered or threatened species; species that have been designated as fully protected or as species of special concern in California by the California Department of Fish and Wildlife (CDFW); species that have been given a rare plant ranking of 1A, 1B, 2A, 2B, or 4; and species that are given take coverage under the MSHCP. Species that do not meet any of these requirements are not analyzed in this report.

The proposed project required several studies, including a comprehensive literature search and both general and focused field surveys. General field surveys included a habitat assessment to determine suitability of the BSA to support special-status plant and wildlife species. The literature search and general habitat assessment determined the need to conduct focused surveys for specific special-status resources. A jurisdictional delineation was also conducted under separate cover. Representative photographs from the various field studies are included in Appendix C.

Based on updates to the proposed project design early in 2021, additional surveys for special-status plants, BUOW, and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; LAPM) will be performed in the spring of 2021 along Bridge Street and a 300-foot buffer. The methods and results of these surveys will be incorporated into the final California Environmental Quality Act (CEQA) document. Refer to Section 2.5 for additional details.

2.2.1 Literature Search

Prior to conducting field surveys, literature and databases relevant to the BSA were reviewed to determine the potential value of the BSA to biological and habitat resources with special-status or resource value. Information reviewed included:

- U.S. Fish and Wildlife Service (USFWS) List of Threatened and Endangered Species for the Gilman Springs Median and Shoulder Improvements Project, Consultation Code 08ECAR00-2021-SLI-0604 (Appendix D; USFWS 2021)
- California Natural Diversity Database (CDFW 2019; updated 2021)
- California Native Plant Society (CNPS) On-Line Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2019; updated 2021)

Database queries were conducted for the following USGS 7.5-Minute topographic quadrangles: Yucaipa, Redlands, Forest Falls, Sunnymead, El Casco, Beaumont, Perris, Lakeview, and San Jacinto. This area encompasses the BSA and a five-mile radius around it, which was deemed commensurate with the proposed project's scope and narrowed down the search area to only those nearby areas that were most likely to have species occurring in similar conditions to the BSA based on topography, habitat types, degree of development, and other environmental factors. The special-status plant and wildlife species and depleted natural communities reviewed for the proposed project from the database queries and literature search are provided in Appendix E. Appendices F and G provide a complete list of the plant and animal species found during field studies. The proposed project is not located within the jurisdiction of the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries); consequently, a record search was not conducted for this agency.

2.2.2 Field Reviews

Field reviews conducted included an initial field reconnaissance survey and subsequent focused surveys for special-status species, including BUOW, LAPM, SBKR, and rare plants. An evaluation was also conducted for potential jurisdictional features that required a jurisdictional delineation. Additional field review of the Bridge Street BSA will be conducted in spring 2021 to address a change in the proposed project design in early 2021 which expanded the BSA requiring study (refer to Section 2.5 for why the BSA was expanded and Section 3.1.1 for additional details for the BSA).

2.2.3 Survey Methods

Specific information to characterize the BSA was developed, in part, through a general field reconnaissance survey across the entire site in March 2017. This reconnaissance allowed the biologists to determine which focused evaluations and surveys were required. Where access was available, the BSA was surveyed on foot. Where access was not available (e.g., no permission to enter), areas were analyzed from accessible property boundaries and public right of way with the aid of binoculars and high-resolution aerial maps (1:200 scale). Vegetation classifications of plant communities were derived from *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed was invasive, non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded according to Baldwin et al. (2012). The presence of a wildlife species was determined through direct observation or wildlife sign (e.g., tracks, burrows, nests, scat, or vocalization). Field guides were used to assist with identification of species during surveys and included the *National Geographic Field Guide to the Birds of North America* (National Geographic 2011), *Western Reptiles and Amphibians* (Stebbins 2003), and *A Field Guide to the Mammals of North America* (Reid 2006). All plant and wildlife species observed during field surveys were noted and are included in Appendices F and G, respectively.

BUOW habitat assessments were conducted by ICF biologists in September 2017 and February 2018. The 2017 habitat assessment was conducted in accordance with the survey area boundaries designated by the MSHCP and as required by the BUOW survey protocol for the MSHCP, which requires a 500-foot buffer from the proposed project footprint. Biologists walked transects spaced from approximately 16 to 100 feet, depending on terrain and particularly on vegetative ground cover. All accessible land was surveyed by ICF biologists, and inaccessible land (i.e., private property for which access was not granted) was evaluated from public rights-of-way. A second habitat assessment was conducted in February 2018 prior to the commencement of focused surveys in order to determine if any areas or vegetation within the BSA that had previously been eliminated from the focused survey area in the fall had instead been managed over the winter and might now provide suitable habitat for BUOW. Focused BUOW surveys were conducted in March 2018 in the 500-foot BSA in areas of suitable habitat within the designated MSHCP BUOW survey area. These areas were scattered throughout the entire project area. Surveys conformed to the MSHCP survey methodology. Accessible areas were surveyed on foot, whereas inaccessible areas were surveyed from a distance with binoculars.

Focused LAPM and SBKR trapping was conducted over two separate trapping sessions in late September and mid-October 2017 in areas that are designated by the MSHCP as small mammal survey areas. Trap lines were located along the length of the BSA. The trapping program used for this survey included 12 trap lines in September and 13 trap lines in October,

each consisting of 10 Sherman live traps, set within the habitat determined to be the most suitable within the proposed project footprint and a 300-foot buffer. Traps were systematically checked near midnight and again at dawn for five consecutive nights. Overnight temperatures did not drop below 50 degrees Fahrenheit for the duration of the trapping. Each captured animal was identified to species.

Focused rare plant surveys were conducted from May through June 2017 in accordance with protocols established by USFWS (2000), CNPS (2001), and CDFW (CDFG 2009). Prior to conducting the surveys, ICF biologists visited reference sites on May 11, 2017 near the BSA to verify the phenology and detectability of target special-status plant species. Reference site locations were attained from the California Natural Diversity Database (CDFW 2019; updated 2020). Surveys were completed by walking meandering transects throughout suitable habitat within the proposed project footprint and a 100-foot buffer. The distance between transects was adjusted when necessary to provide adequate coverage and to account for ground surface visibility, terrain, vegetation density, and access. Surveys focused heavily on areas where the 100-foot buffer overlapped with the MSHCP Narrow Endemic Plant Survey Area and the Criteria Area Species Survey Area.

A field evaluation for vernal pools and seasonal ponding areas was performed in March 2018. Surface layer of silty soils, presence of algal crusts, and surface cracking are examples of conditions looked for during the habitat evaluation. The field evaluation occurred within four days of a local rain event to determine whether any ponding occurred within the 100-foot buffer. Vegetation within the study area was also documented to determine whether vernal pool-associated plants are present. The 100-foot buffer of Gilman Springs Road was also evaluated for potential suitable habitat for fairy shrimp and followed the USFWS Survey Guidelines for Listed Large Branchiopods (USFWS 2017). No focused surveys for fairy shrimp took placed due to lack of suitable ponding.

A jurisdictional delineation was conducted in November 2017 and February 2018 in areas that were identified during project-wide reconnaissance surveys and through aerial imagery as having potentially jurisdictional features. The area surveyed for the delineation included the proposed project footprint and a 100-foot buffer. Detailed survey methodology can be found in the Jurisdictional Delineation Report prepared for the proposed project, provided in Appendix H.

2.3 Personnel Survey Dates

Table 2-1 lists the personnel and dates for all surveys conducted for this project, as well as the qualifications for all field staff.

Table 2-1. Dates and Personnel for Biological Surveys

Date	Survey Type	Personnel[1]
General/Reconnaissance Surveys		
3/31/2017	General reconnaissance	Paul Schwartz, Phillip Richards
7/20/2017	Vegetation mapping	Phillip Richards, Eric Willems
9/13/2017	Burrowing owl habitat assessment	Ryan Winkleman, William Kohn
2/20/2018	Burrowing owl habitat assessment	Ryan Winkleman, Phillip Richards
2/8/2018	Wildlife corridor mapping	Paul Schwartz, Dennis Miller
3/1/2018	Wildlife corridor mapping	Phillip Richards, Kolby Olson
BUOW Focused Surveys		
3/1/2018	Protocol survey 1	Phillip Richards, Kolby Olson
3/8/2018	Protocol survey 2	Phillip Richards, Ryan Winkleman
3/13/2018	Protocol survey 3	Phillip Richards, Ryan Winkleman
3/27/2018	Protocol survey 4	Phillip Richards, Ryan Winkleman
LAPM/SBKR Trapping		
9/26/2017	Trapping night 1	Phillip Richards, Kolby Olson
9/27/2017	Trapping night 2	Phillip Richards, Kolby Olson
9/28/2017	Trapping night 3	Phillip Richards, Kolby Olson
9/29/2017	Trapping night 4	James Hickman, Kolby Olson
9/30/2017	Trapping night 5	James Hickman, Kolby Olson
10/10/2017	Trapping night 1	James Hickman, Kolby Olson
10/11/2017	Trapping night 2	Phillip Richards, Kolby Olson
10/12/2017	Trapping night 3	Phillip Richards, Kolby Olson
10/13/2017	Trapping night 4	James Hickman, Kolby Olson
10/14/2017	Trapping night 5	James Hickman, Kolby Olson
Rare Plants		
5/11/2017	Reference site visit and special-status plant survey	Phillip Richards, Lance Woolley
5/12/2017	Special-status plant survey	Kristen Klinefelter, Phillip Richards, Cara Snellen, Lance Woolley
6/6/2017	Special-status plant survey	Glen Kinoshita, Kristen Klinefelter, Lance Woolley
Vernal Pool Mapping		
3/1/2018	Check for ponded water	Phillip Richards, Kolby Olson
3/8/2018	Check for ponded water	Phillip Richards, Ryan Winkleman
3/13/2018	Check for ponded water	Phillip Richards, Ryan Winkleman
3/27/2018	Check for ponded water	Phillip Richards, Ryan Winkleman
Jurisdictional Delineation		
12/27/2017	Jurisdictional delineation	Paul Schwartz, Dennis Miller, Marissa Maggio
2/8/2018	Jurisdictional delineation	Paul Schwartz, Dennis Miller

Date	Survey Type	Personnel[1]

[1]**Staff Qualifications**

James Hickman, Senior Biologist. Bachelor of Arts (B.A.) Environmental Studies, B.A. Geography, California State University, San Bernardino. 15 years of experience conducting biological surveys and writing environmental documents. Contribution: small mammal trapping.

Glen Kinoshita, Biologist. Master of Science (M.S.) Biology, San Diego State University. 13 years of experience in biological field work. Contribution: rare plant surveys.

Kristen Klinefelter, Research Assistant. B.A. Biology, University of California at Santa Barbara. M.S. Applied Environmental Science, University College Dublin, Ireland. 7 years of experience in biological field work and document preparation. Contribution: rare plant surveys.

Will Kohn, Senior Biologist. Bachelor of Science (B.S.) Zoology, Humboldt State University. 26 years of experience in biological field work and document preparation. Contribution: burrowing owl habitat assessment.

Marissa Maggio, Associate Biologist. B.A. Environmental Studies, University of California at Santa Cruz. 7 years of experience in biological field work and document preparation. Jurisdictional delineation training at Wetland Training Institute in April 2017. Contribution: jurisdictional delineation survey.

Dennis Miller, Biologist. M.S. Biology, California State University Long Beach. 11 years of experience in biological field work and document preparation. Contribution: wildlife corridor mapping and jurisdictional delineation survey.

Kolby Olson, Biologist. B.S. Natural Resources, University of Stevens Point, Wisconsin. 15 years of experience conducting biological surveys. Contribution: wildlife corridor mapping, burrowing owl focused surveys, and small mammal trapping.

Phillip Richards, Senior Biologist. B.A. Biological Sciences, California State University, Fullerton. 18 years of experience in biological field work and document preparation. Contribution: general reconnaissance and habitat assessment, vegetation mapping, small mammal trapping, burrowing owl focused surveys, and rare plant surveys.

Paul Schwartz, Senior Biologist. B.A. Biology, Idaho State University. 16 years of experience in post-graduate biological field work and document preparation. Contribution: reconnaissance and constraints mapping, wildlife corridor mapping, and jurisdictional delineation survey.

Cara Snellen, Biologist. M.S. Biology, California State University Long Beach. 10 years of experience in biological field work and document preparation. Contribution: rare plant surveys.

Eric Willems, Environmental Biologist. B.A. Biology, Tabor College in Hillsboro, KS. 7 years of experience in biological field work and document preparation. Contribution: vegetation community mapping, assistance with NES(MI) Appendix E.

Ryan Winkleman, Senior Biologist. B.S. Ecology and Evolutionary Biology, University of California at Irvine. 14 years of experience in biological field work and document preparation. Contribution: burrowing owl habitat assessment, burrowing owl focused surveys, and NES(MI) author.

Lance Woolley, Biologist. M.S. Botany, Humboldt State University. 13 years of experience in biological field work and document preparation. Contribution: rare plant surveys.

2.4 Agency Coordination and Professional Contacts

No agency coordination was initiated during the survey period for this project other than to obtain authorization to conduct focused surveys in restricted areas. Coordination with the Western Riverside County Regional Conservation Authority (WRCRCA) occurred regarding MSHCP survey requirements/consistency. This included several meetings with representatives of the WRCRCA, CDFW, and USFWS to discuss wildlife crossings under Gilman Springs Road to facilitate the Joint Project Review (JPR). A draft JPR application was submitted to the WRCRCA on March 13, 2019, and comments on the Determination of Biologically Equivalent or Superior Preservation (DBESP) and MSHCP Consistency Analysis Report were provided to the County on April 3, 2019. Subsequent to comments from the WRCRCA, there were several meetings with the WRCRCA and the wildlife agencies (included in the summarized table below), and the proposed project design was modified such that a JPR, along with supporting documentation, will be reinitiated. Table 2-2 summarizes the coordination and agency representatives present during the meetings.

Table 2-2. Summary of Agency Coordination at the WRCRCA

Date	Agency Coordination Summary
6/21/2018	Meeting Summary: Brian Calvert (ICF) presented the proposed project, including a description of the culvert extensions (not widened). The culvert analysis was then presented to the resource agencies and included existing openness and constructed openness ratios. It was pointed out that the ratios needed to be calculated in meters, not feet. County/ICF described each culvert area and identified the highest priority/feasible wildlife crossing locations for the proposed project. The existing culverts provide limited wildlife movement capabilities. However, the proposed project is not a capacity-increasing project; therefore, it was determined that the proposed project is not required to improve wildlife crossings. In addition, the proposed project has funding constraints that would not accommodate the construction of wildlife crossings as part of this safety improvement project. USFWS and CDFW requested wildlife-vehicle collision data, wildlife directional fencing, and proposed mitigation for areas within and adjacent to the conservation area. Laurie Correa (WRCRCA) acknowledged that although the project is not capacity enhancing, it is known that the County has plans for a future capacity-enhancing project, and wildlife crossings will be incorporated in compliance with the MSHCP. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Jan Bulinski (County), Alfredo Martinez (County), Russell Williams (County), Laurie Correa (WRCRCA), Karin Cleary-Rose (USFWS), John Taylor (USFWS), Brittany Stattenmier (Dudek), Wendy Worthey (Dudek), Heather Pert (CDFW), Carly Beck (CDFW), and Michael Crull (NCM)
4/18/2019	Meeting Summary: This meeting was a follow-up to cover comments the WRCRCA provided for the DBESP and MSHCP Consistency Analysis Report. The WRCRCA identified the need for a Memorandum of Understanding with the County from this point forward to provide guarantees that the future capacity-enhancing improvements would incorporate wildlife crossings, as required under the MSHCP. Charlie Landry (USACE) also requested inclusion of a culvert analysis in the MSHCP/DBESP report. CDFW requested a field meeting to review project impacts within CDFW-owned conservation area lands. There was an in depth group discussion regarding the mitigation proposed in the DBESP. Refinements of the mitigation will be incorporated into the DBESP. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Jan Bulinski (County), Tricia Campbell (WRCRCA), Karin Cleary-Rose (USFWS), Wendy Worthey (Dudek), Joanna Gibson (CDFW), and Charlie Landry (USACE)
5/10/2019	Field Meeting: The County's team performed a site walk with CDFW. The goal of the site visit was to review CDFW lands; observe the undercrossings at Bridge Street, Jackrabbit Trail, and other culvert extension areas; and discuss the parcel data review being conducted by CDFW for potential mitigation and lands replacement options. Michael Crull (NCM) described the permanent and temporary impacts that would occur along the road alignment. Discussions were focused on the improvements at Bridge Street, Jackrabbit Trail, and a series of multiple culverts at Station 396+50. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Emily Hoyt (ICF), Jan Bulinski (County), Michael Crull (NCM), Alma Carillo (NCM), Joanna Gibson (CDFW), Heather Pert (CDFW), and Richard Kim (CDFW)
6/13/2019	Conference Call Summary: A conference call was held to discuss the field meeting. CDFW indicated they would continue to perform their parcel review for potential replacement lands. Michael Crull (NCM) described that the proposed project centerline was shifting one foot north to align with the existing centerline. This shift would alter

Date	Agency Coordination Summary
	several cut/fill slope areas; therefore, the proposed project would be undergoing revisions to the footprint design. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Emily Hoyt (ICF), Daniela Sanaryan (ICF), Jan Bulinski (County), Michael Crull (NCM), Alma Carillo (NCM), Joanna Gibson (CDFW), and Richard Kim (CDFW)
6/20/2019	Meeting Summary: The County provided a project design update to the resource agencies. Rather than installing two-foot rumble strips in the median, the proposed project would incorporate plastic delineators along the existing centerline. Marisa Flores (ICF) described the culvert analysis and the openness index associated with each culvert, including rationale for not incorporating wildlife crossings within Drainage 11/12 (Jackrabbit Trail), 17/18, and 39/40 (Bridge Street). Based on clarification needs by CDFW, the County/ICF will prepare a memorandum detailing the construction activities and equipment associated with temporary impact areas. WRCRCA, CDFW, and USFWS informed the County's team about the Riverpark mitigation site and its use for MSHCP riparian/riverine mitigation. CDFW agreed to perform an internal review of CDFW-owned lands to assist with the equivalency analysis. WRCRCA, CDFW, and USFWS identified the Riverpark Mitigation Bank as a viable option for MSHCP riparian/riverine and potential jurisdictional aquatic resources. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Jan Bulinski (County), Tricia Campbell (WRCRCA), Karin Cleary-Rose (USFWS), Wendy Worthey (Dudek), and Joanna Gibson (CDFW)
11/21/2019	Meeting Summary: The County provided an update on the proposed project design and described the activities which would occur during construction and during maintenance that would be a permanent impact, and the actions taking place within the temporary construction easement. The potential downstream scour impacts associated with the culvert extension of Bridge Street were also discussed, and CDFW stated that scour would also need to be addressed in the environmental document. An in-depth conversation was also held over the mitigation strategy for impacts on riparian/riverine resources and P/QP lands (which would be replaced at a ratio which is not less than 1:1). CDFW also provided information on advance mitigation options; this would be available for P/QP lands replacement but would not be available for replacement of jurisdictional resources under the Lake and Streambed Alteration Agreement. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Jan Bulinski (County), Alfredo Martin (County), Tricia Campbell (WRCRCA), Betsy Dionne (WRCRCA), John Taylor (USFWS), Karin Cleary-Rose (USFWS; call-in), Wendy Worthey (Dudek), Joanna Gibson (CDFW), one unidentified CDFW representative, and one unidentified additional participant.
3/19/2020	Meeting Summary: The County presented the revised project design and described the passing lane and wildlife crossing structure that will be added at Bridge Street. The height and width of the Bridge Street undercrossing will be increased. The USFWS said they would provide some input on wildlife fencing placement associated with this undercrossing area. The USFWS also asked whether the 100-year storm event was reviewed for this crossing, and the County verified that the 100-year storm data was reviewed specifically to ensure the new undercrossing facility was adequate. The County also demonstrated why a wildlife crossing at Jackrabbit Trail was infeasible: 1) upstream boulder riprap is a current hindrance to wildlife movement but cannot be removed because of highly erodible soils and severe instability and 2) the downstream outlet has a wall that has an almost 90° bend; it is expected that it would not be approached by wildlife. It was explained that importing soil and placing it on top of riprap may change the hydrological characteristics of the channel. During the meeting,

Date	Agency Coordination Summary
	the County verified that the passing lane is not capacity enhancing. CDFW recommended a cost-benefit analysis be prepared for replacement land options. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Emily Czaban (ICF), Jan Bulinski (County), Alfredo Martin (County), Tricia Campbell (WRCRCA), Betsy Dionne (WRCRCA), John Taylor (USFWS), Karin Cleary-Rose (USFWS), Wendy Worthey (Dudek), Joanna Gibson (CDFW)
10/15/2020	Meeting Summary: This meeting focused on determining what triggers a project to be considered capacity enhancement. The proposed project is not increasing capacity of traffic coming or leaving the segment. Alfredo Martinez (County) provided clarification that capacity, as defined by Caltrans, is the number of vehicles that reach the maximum peak efficiency/day. The peak efficiency of Gilman Springs Road has been reduced by the trucks in the area. The goal of the passing lane is to return the road to peak efficiency. The WRCRCA and wildlife agencies have expressed repeated concern over the safety improvements meeting the safety issues on the road and the objectives and goals of the MSHCP. The WRCRCA acknowledged that the passing lanes project as proposed is not capacity-enhancing; rather, it is for efficiency and safety. A minor road amendment is likely not going to move forward but the agencies want to ensure they have a consistent understanding of capacity enhancement. USFWS acknowledged that a Safety Operations and Maintenance project needs to be able to accommodate wildlife movement and make MSHCP conservation strategy whole. Based on the discussion with the resource agencies, wildlife fencing would need to be integrated into the wildlife crossing design at Bridge Street and they would be looking for 0.5 mile in each direction of the crossing. The wildlife agencies pointed out during the meeting that they have not reviewed any of the design specifications or reports and will not commit to a final determination until the MSHCP consistency analysis and DBESP are submitted to the agencies. The activities within the temporary impact areas were also discussed. Details for soil compaction, reseeding, and measures to ensure soils are returned to original conditions need to be incorporated. A habitat mitigation and monitoring plan (HMMP) would need to be prepared for this project, and the WRCRCA, USFWS, and CDFW will need to review and approve. The HMMP does not need to be provided until the proposed project goes to permitting, but the details of what is necessary for the HMMP will need to be incorporated into the proposed project's measures. Attendees: Tricia Campbell (WRCRCA), Karin Cleary-Rose (USFWS), Betsy Dionne (WRCRCA), Anna Cassady (Dudek/WRCRCA), Wendy Worthy (Dudek/WRCRCA), John Field (WRCRCA), Eric Chan (CDFW), Heather Pert (CDFW), John Taylor (USFWS), Alfredo Martinez (County), Jan Bulinski (County), Dennis Acuna (County), Brian Calvert (ICF), Namrata Cariapa (ICF), Greg Hoisington (ICF), Marisa Flores (ICF), Meagan Flacy (ICF)
12/17/2020	Meeting Summary: County/ICF presented the proposed project to resource agencies. The discussion focused on the location and length of wildlife fencing and the need for wildlife escape options. The agencies suggested that the County propose a frequency that would sufficiently allow animals to move out, given the topography, and other factors. Fence length is supposed to extend to 0.5 mile in each direction of the wildlife crossing; however, there are flooding concerns along Bridge Street and, with flow capacity, a potential to cause fence integrity to fail. The County agreed to maintenance and removal of debris from the fence; however, there was also group consensus from

Date	Agency Coordination Summary
	the WRCRCA, USFWS, and CDFW that ending the fence just before the concrete portion of the roadway would be acceptable. Attendees: Brian Calvert (ICF), Marisa Flores (ICF), Greg Hoisington (ICF), Jan Bulinski (County), Alfredo Martinez (County), Tricia Campbell (WRCRCA), Aaron Huke (WRCRCA). Betsy Dionne (Dudek/WRCRCA), John Taylor (USFWS), Karin Cleary-Rose (USFWS), Wendy Worthey (Dudek), Carly Beck (CDFW), Heather Pert (CDFW)
3/18/2021	Meeting Summary: The County presented the location and design of the jumpouts and design of the wildlife fencing. The design of the fencing and jumpouts was modeled on what was done on the SR-60 Truck Climbing Lanes project as provided by John Taylor (USFWS). WRCRCA, USFWS, and CDFW agreed that the jumpout and fencing as proposed appear to be a good strategy, and the County would send them the materials presented during the meeting to review. Attendees: Tricia Campbell (RCA), Karin Cleary-Rose (USFWS), Jan Bulinski (RCTD), Mary Zambon (RCTD), Kelsey Shockley (RCA), Carly Beck (CDFW), Heather Pert (CDFW), Alfredo Martinez (RCTD), Wendy Worthey (Dudek/RCA), John Taylor (USFWS), Greg Hoisington (ICF), Brian Calvert (ICF), Marisa Flores (ICF)

Additional meetings with the WRCRCA, CDFW, USFWS, Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (USACE) will occur after approval of the NES(MI) but prior to adoption of the CEQA environmental document and approval of the JPR application. This coordination will be documented in the CEQA document, as appropriate.

2.5 Limitations That May Influence Results

Standard MSHCP, USFWS, CDFW, CNPS, and USACE survey protocols were used for all biological field surveys. There were no limitations that would have influenced survey results other than limited permission to access some properties beyond the right of way; however, these areas constituted a small percentage of adjacent properties and were easily visible from areas in the public right of way. These access limitations did not materially affect the results presented in this NES(MI).

On January 23, 2020, the Navigable Waters Protection Rule (NWPR) was finalized, which changed the definition of federal and state waters jurisdictional under USACE and RWQCB. Based on the new rule, the ephemeral drainages and wetland identified within the BSA may no longer be considered federally jurisdictional. The methods used to delineate all potential jurisdictional waters would not differ under the NWPR; therefore, the results of the jurisdictional delineation remain valid, with the exception that many of the ephemeral drainages and wetland within the 100-foot buffer may no longer be federally jurisdictional. The NWPR has reduced the number of potential USACE jurisdictional water resources that are affected within the proposed project site from when the delineation was completed. The changes to the federal and state regulations would not change any compensatory requirements for the proposed project on aquatic resources, because the mitigation required for MSHCP riparian/riverine resources is far greater than for federal and state waters. In addition, because the extended proposed project footprint on Bridge Street would remain within the existing right of way limits, there are no additional impacts on potential jurisdictional aquatic resources that would occur. Therefore, this regulatory change will not pose a limitation to the proposed project.

During coordination meetings with the WRCRCA, USFWS, and CDFW in late 2020, it was determined that wildlife fencing needs to extend 0.5 mile in each direction of the wildlife crossing and associated jumpouts incorporated into the proposed project design. Although the majority of the design adjustments occur within the original BSA, the fencing extension along the north side of Bridge Street occurs outside of the original BSA. An additional BSA was added around Bridge Street (refer to Appendix A, Figures 4 through 8); however, to date, no additional biological studies have occurred within this Bridge Street BSA. Habitat evaluations and subsequent focused studies for BUOW, LAPM, criteria area plant species, and narrow endemic plants will take place in spring 2021 (refer to measures **BIO-18**, **BIO-23**, and **BIO-25** in Appendix I). Final results from the habitat evaluations/focused studies for sensitive species will be incorporated into the CEQA document prior to adoption. All project impacts associated with fence installation along Bridge Street will occur within the existing road right of way and no impacts on sensitive biological resources are anticipated given County maintenance activities of the right of way (i.e., mowing, grading on the shoulder), existing soil compaction, and disturbances within the road shoulder. In addition, the right of way does not appear to have long-term conservation value for special-status species given this disturbed nature and because it does not occur within conserved lands. Because proposed measures will address all potential effects on sensitive species, should they be found within the LOD along Bridge Street, no limitations are anticipated.

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Chapter 3 Results: Environmental Setting

This section describes the existing biological and physical conditions of the BSA.

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 Study Area

The BSA consists of the proposed project footprint and a 300-foot buffer; individual surveys used different buffers, including 500 feet (BUOW) and 100 feet (rare plants and jurisdictional delineation). Much of the BSA consists of open land, consisting of some areas that are densely vegetated and show little or no signs of routine disturbance or management, such as within conservation areas, some areas that are routinely disked by landowners, and some areas that are used as agricultural fields. There are only a few isolated developed properties within the BSA. All of the drainages in the BSA are disturbed and have been modified to accommodate development in the area, including the roadway.

All fieldwork that has occurred to date is based on a 300-foot buffer BSA of the original project footprint around Gilman Springs Road (Gilman Springs Road BSA). This BSA was selected to accommodate minor revisions to the proposed project footprint should they occur. However, an expansion of the BSA along Bridge Street (Bridge Street BSA) was incorporated in February 2021 to address wildlife fencing that was added within the right of way of this segment. The proposed project LOD along Bridge Street is limited to the existing road right of way. The study areas along Bridge Street follow the same parameters that are described above.

Within this document, the term BSA refers to the overall project BSA, with the exception of the BSA expansion to address the Bridge Street wildlife fencing. This portion of the BSA related to the Bridge Street wildlife fencing is referred to in this document as Bridge Street BSA to differentiate between the two.

3.1.2 Physical Conditions

The BSA is located mostly in conservation lands and sparsely developed rural areas in Moreno Valley.

3.1.2.1 Topography

The BSA is located within the El Casco and Lakeview, California USGS 7.5-Minute topographic quadrangles between 1,430 and 1,560 feet above mean sea level. The topography within the BSA consists of foothills associated with the “Badlands” to the north and east of the BSA and the relatively flat lands to the south and west of the proposed project associated with the ephemeral Mystic Lake and various agricultural practices.

3.1.2.2 Soils

Soils in the BSA consist of clays, loams, and sands ranging from silty clay to silt loam to fine sandy loam to rocky fine sandy loam to sandy loam to coarse sandy loam to gravelly sandy loam to loam to loamy sand. Soil series, which are groups of soils with similar profiles, mapped within the BSA include Badland, Chino, Friant, Gravel Pits, Greenfield, Hanford, Metz, Riverwash, San Emigdio, San Timoteo, Vista, and Willows (Figure 4 in Appendix A) (USDA/NRCS 2006).

3.1.2.3 Hydrology

The BSA is located within the San Jacinto watershed 8-digit hydrologic unit code (HUC), which covers 780 square miles and drains into the Santa Ana River and eventually into the Pacific Ocean. The BSA also occurs within the Middle San Jacinto River 10-digit HUC. The watershed contains several lakes and reservoirs including Lake Elsinore, Canyon Lake, Lake Perris, and Mystic Lake. Major tributaries in the watershed are San Jacinto River, Bautista Creek, Strawberry Creek, Fuller Mill Creek, Canyon Creek, Stone Creek, Salt Creek, Poppet Creek, and Potrero Creek. The headwaters of the HUC 8 San Jacinto watershed originate in the San Jacinto Mountains and pass through Riverside and Orange counties before emptying into the Pacific Ocean.

3.1.3 Biological Conditions in the Study Area

3.1.3.1 Vegetation Communities

A total of 94 plant species within 12 vegetation communities/land cover types were identified to species or subspecies within the BSA during the habitat assessment and rare plant surveys, as listed in Appendix F (Figure 5 in Appendix A). Vegetation communities within the Bridge Street BSA were mapped based on aerial imagery. Table 3-1 provides the total acreage for each vegetation community and land use type within the BSA and Bridge Street BSA.

Table 3-1. Vegetation Communities/Land Use Types in the Biological Study Areas

Vegetation Community/Land Use Types	Total within the BSAs (acres)
Developed	65.13
Disturbed	210.24
Emory's and Broom Baccharis Scrub	15.28
Fourwing Saltbush Scrub	6.58
Disturbed Fourwing Saltbush Scrub	40.52
Desert Willow – Smoketree Woodland	0.71
Goodding's Willow – Red Willow Riparian Woodland and Forest	1.50
Mule Fat Thickets	1.12
Brittle Bush Scrub	32.89
Disturbed Brittle Bush Scrub	3.21
Scale Broom Scrub	0.36
Wild Oats and Annual Brome Grasslands	41.53
Tamarisk Thickets	1.61
Total[1]	**420.38**

Developed

Developed land cover exists throughout the BSA and Bridge Street BSA in several forms including paved and dirt roadways with associated road shoulders, paved and dirt parking lots, agricultural buildings, cattle lots, vacant fields, commercial buildings, and ornamental landscaping. Commonly occurring trees and shrubs associated with these areas included Mexican fan palm (*Washingtonia robusta*), Peruvian pepper tree (*Schinus molle*), Jerusalem thorn (*Parkinsonia aculeate*), saltcedar (*Tamarix ramosissima*), athel (*Tamarix aphylla*), eucalyptus (*Eucalyptus* spp.), pine (*Pinus* sp.), and honey mesquite (*Prosopis glandulosa*). Several ruderal herbaceous plant species associated with these areas included stinknet

(*Oncosiphon piluliferum*), Russian thistle (*Salsola tragus*), short podded mustard (*Hirschfeldia incana*), fiddleneck (*Amsinckia intermedia*), slim oat (*Avena barbata*), hairy leaved sunflower (*Helianthus annuus*), and prickly lettuce (*Lactuca serriola*).

Disturbed

Disturbed vegetation is found throughout the BSA, especially adjacent to developed areas and roadways. These areas are dominated by bare ground or disturbance-tolerant plant species. Plant species in these areas included stinknet, Russian thistle, short podded mustard, fiddleneck, barley (*Hordeum* sp.), ripgut brome (*Bromus diandrus*), foxtail brome (*Bromus madritensis* ssp. *rubens*), alkali weed (*Cressa truxillensis*), hairy leaved sunflower, five horn bassia (*Bassia hyssopifolia*), fourwing saltbush (*Atriplex canescens*), prickly lettuce, slim oat, and annual burrweed (*Ambrosia acanthicarpa*).

Emory's and Broom Baccharis Scrub

Emory's and broom baccharis scrub (*Baccharis emoryi - Baccharis sergiloides* Shrubland Alliance) is found in the northwestern portion of the BSA. The community is co-dominated by willow baccharis (*Baccharis salicina*) and fourwing saltbush. Other shrubs found included brittlebush (*Encelia farinosa*), tree tobacco (*Nicotiana glauca*), Jerusalem thorn, blue elderberry (*Sambucus nigra* ssp. *caerulea*), pinebush (*Ericameria pinifolia*), and five horn bassia. Dominant herbaceous species included stinknet, Russian thistle, alkali weed, short podded mustard, hairy leaved sunflower, fiddleneck, prickly lettuce, annual burrweed, and Chinese parsley (*Heliotropium curassavicum* var. *oculatum*). Dominant grasses included barley, slim oat, and salt grass (*Distichlis spicata*).

Fourwing Saltbush Scrub

Fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance) is found infrequently throughout the BSA and is dominated by fourwing saltbush. Other woody shrubs included California sagebrush (*Artemisia californica*), brittlebush, Jerusalem thorn, and tree tobacco. Dominant herbaceous species included stinknet, short-podded mustard, Russian thistle, hairy leaved sunflower, fiddleneck, and prickly lettuce. Dominant grasses included barley and slim oat.

Disturbed Fourwing Saltbush Scrub

Disturbed fourwing saltbush scrub is found throughout the BSA. The community is dominated by the same species as the fourwing saltbush scrub, but with more invasive species and fewer woody native species.

Desert Willow - Smoketree Wash Woodland

Desert willow - smoketree wash woodland (*Chilopsis linearis - Psorothamnus spinosus* Woodland Alliance) is found in a wash located northwest of Olive Avenue. The community is dominated by desert willow (*Chilopsis linearis* ssp. *arcuate*). Other woody shrubs included fourwing saltbush, castor bean (*Ricinus communis*), and Jerusalem thorn. Dominant herbaceous species included stinknet, short podded mustard, and Russian thistle.

Goodding's Willow - Red Willow Riparian Woodland and Forest

Goodding's willow - red willow riparian woodland and forest (*Salix gooddingii - Salix laevigata* Forest and Woodland Alliance) is found in a wash in the northwestern portion of the BSA. The

community is dominated by a low cover of black willow (*Salix gooddingii*) and other willow species (*Salix* spp.). Other woody shrubs included saltcedar and mule fat (*Baccharis salicifolia*). Dominant herbaceous species included short podded mustard, Russian thistle, and fiddleneck.

Mule Fat Thickets

Mule fat thickets (*Baccharis salicifolia* Shrubland Alliance) is found in the central portion of the BSA. The community is dominated by mule fat and an occasional black willow. Dominant herbaceous species found included stinknet, Russian thistle, and fiddleneck. The dominant grass within this community was barley.

Brittle Bush Scrub

Brittle bush scrub (*Encelia farinosa* Shrubland Alliance) is found prominently in the southeastern half of the BSA. The community is dominated by brittlebush. Other woody shrubs included California buckwheat (*Eriogonum fasciculatum*), California sagebrush, laurel sumac (*Malosma laurina*), white sage (*Salvia apiana*), fourwing saltbush, California cholla (*Cylindropuntia californica*), coastal prickly pear (*Opuntia littoralis*), and inland scrub oak (*Quercus berberidifolia*). Dominant herbaceous species included stinknet, Russian thistle, short podded mustard, fiddleneck, and prickly lettuce. Dominant grasses included barley, ripgut brome, foxtail brome, and slim oat.

Disturbed Brittle Bush Scrub

Disturbed brittle bush scrub is found in the southeastern portion of the BSA. The community is dominated by the same species as the disturbed brittle bush scrub, but with more invasive species and fewer woody native species.

Scale Broom Scrub

Scale broom scrub (*Lepidospartum squamatum* Shrubland Alliance) is found in a wash at the southeastern end of the BSA. The community is co-dominated by California broomsage (*Lepidospartum squamatum*) and brittlebush. Other woody shrubs included California buckwheat, California sagebrush, laurel sumac, white sage, and fourwing saltbush. Dominant herbaceous species found here included stinknet, Russian thistle, short podded mustard, fiddleneck, and prickly lettuce. The dominant grass was slim oat.

Wild Oats and Annual Brome Grasslands

Wild oats and annual brome grasslands (*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance) is found in the central portion of the BSA. The community is co-dominated by barley, ripgut brome, and foxtail brome. Slim oat is also supported, but less frequently. This community also supports other non-native and invasive herbaceous species, including Russian thistle, fiddleneck, prickly lettuce, short podded mustard, and stinknet.

Tamarisk Thickets

Tamarisk thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance) is found in the central portion of the BSA. This community is characterized by dense stands dominated with saltcedar and athel.

Mesquite Thickets

Mesquite thickets (*Prosopis glandulosa - Prosopis velutina - Prosopis pubescens* Woodland Alliance) are infrequent within the BSA. This community is characterized by dense stands dominated with honey mesquite.

3.1.3.2 Wildlife

A total of 69 wildlife species were recorded in the BSA during the habitat assessment and associated focused surveys. Birds were the most commonly detected wildlife group, and many of the wildlife species are common to the region and adapted to habitats disturbed by humans. Coastal California gnatcatcher was incidentally detected within the BSA during habitat assessments, but no other state or federally listed wildlife species were detected within the BSA during project surveys. A complete list of identified wildlife species is provided in Appendix G.

3.1.3.3 Jurisdictional Resources

A jurisdictional delineation was conducted in winter 2017–2018 between December and February (Appendix H). A total of 23 features were observed and documented within the jurisdictional study area (project footprint plus 100-foot buffer). Together, these add up to 1.066 acres of non-wetland Waters of the U.S. (USACE/RWQCB), 0.059 acre of wetland Waters of the U.S., 3.599 acres of unvegetated streambed (CDFW), and 0.840 acre of riparian habitat (CDFW).

3.1.3.4 Invasive Species

A total of 35 plant species non-native to California, including 21 that are classified as invasive by the California Invasive Plant Council (CAL-IPC 2006), were observed within the BSA. Certain species of eucalyptus are also considered invasive by the California Invasive Plant Council, but eucalyptus trees within the BSA were not identified to species. Refer to Appendix F for a list of plants identified in the BSA, including invasive plants.

3.1.4 Habitat Connectivity

Because the BSA is bisected by Gilman Springs Road, habitat to the east and west of the existing road right of way is fragmented, with subgrade culverts and washes serving as the primary available safe travel routes between the two areas. A total of 20 subgrade crossings are present across Gilman Springs Road within the BSA, ranging from 24-inch-wide culverts to 15-foot-wide box culverts. Outside of these established crossings, there are generally few impediments to overland travel across either the northern or southern parts of the BSA, with occasional barbed wire and other fences at property lines and a few low-traffic roads serving as the primary restrictions to wildlife movements across the landscapes. However, overland travel between the eastern and western parts of the BSA is generally not safe for terrestrial wildlife due to narrow shoulders, high velocities, and high levels of vehicular traffic throughout the day on Gilman Springs Road.

3.1.5 Regional Species and Habitats and Natural Communities of Concern

The proposed project is within the boundaries of the MSHCP Conservation Area, and portions of the proposed project footprint and BSA are within areas for which additional biological surveys are required for certain species if suitable habitat is present.

In the general region surrounding the proposed project, 56 special-status wildlife species, 82 special-status plant species, and 10 sensitive depleted natural communities are reported to occur based on the literature review. A comprehensive review of these search results is presented in Appendix E. Determinations of the likelihood of occurrence are based on the presence of suitable habitat, quality of habitat, geographic range, elevation range, and tolerance to disturbance. Species that require additional surveys and analysis under the MSHCP are addressed in Sections 4.4.4 and 4.4.5.

Chapter 4 Results: Biological Resources, Discussion of Impacts & Mitigation

4.1 Habitats and Natural Communities of Special Concern

Habitats and natural communities are of concern if they are protected by state, federal, or local laws; if they are of limited distribution; or if they are of key importance to special-status species. Based on these criteria, there are four natural communities of special concern that would be affected by the proposed project: black willow thicket, desert willow woodland, mule fat thickets, and Emory's and broom baccharis scrub (Figure 5 in Appendix A). Jurisdictional aquatic resources are also considered sensitive and could be affected by the proposed project.

4.1.1 Goodding's Willow - Red Willow Riparian Woodland and Forest

Goodding's willow - red willow riparian woodland and forest is found in a wash in the northwestern portion of the BSA. According to Sawyer et al. (2009), this community corresponds to southern willow scrub as defined by Holland (1986) and is protected by CDFW.

4.1.1.1 Survey Results

A total of 1.50 acres of Goodding's willow - red willow riparian woodland and forest is present within the BSA (Figure 5 in Appendix A).

4.1.1.2 Project Impacts

Construction of the proposed project is expected to permanently affect 0.09 acre of Goodding's willow - red willow riparian woodland and forest and temporarily affect 0.06 acre. There is potential for indirect effects to occur during construction activities, including increased dust, chemical spills, an increased risk of fire, and the introduction of invasive plants; however. measures will be implemented to ensure these are minimized and/or fully avoided.

4.1.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation

With the implementation of minimization measures and best management practices (BMPs) required under the MSHCP (**BIO-1** through **BIO-12**) as described in full in Appendix I, no further measures would be necessary to address this habitat type. With implementation of these measures, the proposed project would be consistent with the MSHCP in this regard.

4.1.2 Desert-Willow - Smoketree Wash Woodland

Desert willow - smoketree wash woodland is found in a wash running northwest of Olive Avenue along the south side of Gilman Springs Road. According to Sawyer et al. (2009), this community corresponds to Mojave wash scrub as defined by Holland (1986) and is protected by CDFW.

4.1.2.1 Survey Results

A total of 0.71 acre of desert willow - smoketree wash woodland is present within the BSA (Figure 5 in Appendix A).

4.1.2.2 Project Impacts

Construction of the proposed project is expected to permanently affect 0.02 acre of desert willow woodland, and temporarily affect 0.06 acre.

4.1.2.3 Avoidance and Minimization Efforts/Compensatory Mitigation

With the implementation of minimization measures and BMPs required under the MSHCP (**BIO 1** through **BIO-12**) as described in full in Appendix I, no further measures would be necessary to address this habitat type. With implementation of these measures, the proposed project would be consistent with the MSHCP in this regard.

4.1.3 Mule Fat Thickets

Mule fat thickets is found in the central portion of the BSA on the south side of Gilman Springs Road. According to Sawyer et al. (2009), this community corresponds to mulefat scrub as defined by Holland (1986) and is protected by CDFW.

4.1.3.1 Survey Results

A total of 1.12 acres of mule fat thickets is present within the BSA (Figure 5 in Appendix A).

4.1.3.2 Project Impacts

Construction of the proposed project would not have a temporary or permanent impact on mule fat thickets. Although there is potential for indirect effects on this community adjacent to the proposed project limits (e.g., increased dust, risk of fire), the measures being implemented for other natural vegetation communities would ensure that these effects would be fully avoided.

4.1.3.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Because there would be no impacts on mule fat thickets, there would be no additional required avoidance and minimization measures.

4.1.4 Emory's and Broom Baccharis Scrub

Emory's and broom baccharis scrub is found in the northwestern portion of the BSA. According to Sawyer et al. (2009), this community corresponds to coastal sage scrub as defined by Holland (1986) and is protected by CDFW.

4.1.4.1 Survey Results

A total of 15.28 acres of Emory's and broom baccharis scrub is present within the BSA (Figure 5 in Appendix A).

4.1.4.2 Project Impacts

Construction of the proposed project is expected to permanently affect 0.45 acre of Emory's and broom baccharis scrub and temporarily affect 0.50 acre.

4.1.4.3 Avoidance and Minimization Efforts/Compensatory Mitigation

With the implementation of minimization measures and BMPs required under the MSHCP (**BIO-1** through **BIO-12**) as described in full in Appendix I, no further measures would be

necessary to address this habitat type. With implementation of these measures, the proposed project would be consistent with the MSHCP in this regard.

4.1.5 Jurisdictional Waters

The following discussion of impacts on jurisdictional waters is based on field data obtained in 2017 and 2018 presented in the Jurisdictional Delineation Report (Appendix H). A 100-foot buffer was placed around the proposed project's LOD for mapping of jurisdictional features.

4.1.5.1 Survey Results

A total of 23 features were delineated within the 100-foot buffer, including concrete channels, earthen channels, and wetland waters; their total acreage and linear feet under the USACE, RWQCB, and CDFW are summarized in Table 4-1 below.

Table 4-1. Summary of Potential USACE, RWQCB, and CDFW Jurisdiction within the Study Area

	USACE/RWQCB		CDFW	
	Non-Wetland WoUS/WoS[1]	**Wetland WoUS/WoS**	**Streambed**	**Riparian**
Total acres	1.07[2]	0.06	3.60[2]	0.84
Total linear feet	**6,149**		**6,722**	

[1] WoS = waters of the state; WoUS = waters of the United States

[2] Based on a review of aerial imagery, there is an ephemeral drainage north of the Bridge Street right of way (Google Earth 2021). This feature is not included in the total in this table but will be provided in the final CEQA report.

4.1.5.2 Project Impacts

Temporary and permanent impacts on jurisdictional features would occur as a result of the proposed project construction. Generally, most features would have temporary impacts in order to accomplish construction activities. Permanent impacts would consist of culvert extensions, headwall modifications, and permanent drainage easements. Affected jurisdictional features are generally located within the footprint of the expanded shoulder and thus would need to be culverted where the new shoulder extends over them and culvert extensions are required. For the most part, these would be areas within the existing subgrade culverts under Gilman Springs Road; the culverts would be extended under the expanded roadway.

Impacts on potential USACE, RWQCB, and CDFW jurisdictional aquatic resources are provided in Table 4-2 below (Figures 6A and 6B in Appendix A), and that Section 404, Section 401, and Section 1600 permits, respectively, would need to be obtained (see Appendix H for additional details).

Table 4-2. Summary of Potential USACE, RWQCB, and CDFW Impacts (Acres/Linear Feet)

Feature	USACE/RWQCB[1]		CDFW			
	Non-Wetland		Riparian		Unvegetated Streambed	
	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
Feature 1	0.00/44	0.03/313	<0.01/12	0.01/41	0.02/32	0.06/272
Feature 2	< 0.01/153	< 0.01/135	0.05/58	0.05/11	0.01/153	0.01/135
Feature 3	0.01/24	0.01/21	0.01/0	0.02/20	0.08/24	0.31/21
Feature 4	--	--	--	--	--	--
Feature 5[2]	--	--	--	--	--	--
Feature 6	0.17/805	0.04/175	0/0	0.01/33	0.25/805	0.06/175
Feature 7	< 0.01/16	<0.01/6	--	--	0.01/18	<0.01/6
Feature 7A	0.03/264	--	--	--	0.05/262	--
Feature 8[2]	--	--	--	--	--	--
Feature 9	0.01/137	0.01/39	--	--	0.02/137	0.01/39
Feature 10	--	--	--	--	--	--
Feature 11	--	--	--	--	--	--
Feature 12	--	--	--	--	--	--
Feature 13[2]	--	--	--	--	--	--
Feature 14	< 0.01/11	< 0.01/45	--	--	< 0.01/11	<0.01/45
Feature 15	--	< 0.01/28	--	--	--	< 0.01/28
Feature 16	--	--	--	--	--	--
Feature 17	0.02/124	0.01/40	--	--	0.09/124	0.03/40
Feature 18	< 0.01/9	0.01/65	--	<0.01/1	< 0.01/9	0.01/64
Feature 19	< 0.01/15	0.02/72	--	--	<0.01/15	0.02/72
Feature 20	< 0.01/24	< 0.01/18	--	--	0.01/24	< 0.01/18
Feature 21	< 0.01/3	--	--	--	< 0.01/3	--
Feature 22	--	--	--	--	--	--
Total[3]	**0.24/1,629[3]**	**0.13/957[3]**	**0.06/70[3]**	**0.09/106[3]**	**0.54/1,617**	**0.54/914**

[1] No USACE/RWQCB jurisdictional wetlands would be affected by the proposed project.
[2] Features 5, 8, 12, and 13 are swales and are not considered jurisdictional. Therefore, they do not have any impacts under any of the three regulatory agencies listed in this table.
[3] Impact totals may not match exactly with individual impact amounts by Feature due to rounding.

Based on the proposed project impacts listed in Table 4-2, the proposed project qualifies to be permitted through Nationwide Permit 14, Linear Transportation Projects.

4.1.5.3 Avoidance and Minimization Efforts/Compensatory Mitigation

With the implementation of minimization measures and BMPs required under the MSHCP (**BIO-8** through **BIO-12**) as described in full in Appendix I, no further measures are anticipated to be needed to address impacts on jurisdictional features. The proposed project would be consistent with the MSHCP regarding the protection of riparian habitat and temporary impacts and permanent loss related to jurisdictional resources would be addressed as discussed in measures **BIO-11** and **BIO-12**.

4.2 Special-Status Plant Species

Special-status plants are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on site.

The proposed project occurs within the following MSHCP Survey Area for plants and requires habitat evaluations for these species (Figure 7A in Appendix A):

- Narrow Endemic Plant Survey Area 3: Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*).
- Criteria Area Species Survey Area 3: San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), round leaved filaree (*California macrophyllum*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), little mousetail (*Myosurus minimus*), and mud nama (*Nama stenocarpum*).

Focused surveys were conducted for special-status plant species with suitable habitat present within the BSA (Appendix E).

4.2.1 Survey Results

Of the 82 special-status plant species within the literature search results, 33 species were determined to have a potential to occur within the BSA.

Gilman Springs Road: Only one special-status plant was found during rare plant surveys: smooth tarplant. All other special-status plant species are determined to be absent because the proposed project is out of their known range, there is no suitable habitat, and/or the species was not observed during rare plant surveys conducted in 2017 within the BSA.

Bridge Street: The Wild Oats and Annual Brome Grasslands within the Bridge Street BSA provide suitable habitat for several special-status plant species. Suitable habitat for special-status plants within the existing right of way is marginal due to the disturbed habitat, soil compaction, and maintenance activities by the County for fire/weed abatement and safety. No focused studies for special-status plants have occurred along this section to date; focused surveys will be performed for this area in spring 2021 (**BIO-18**). Given that the conserved area

north of Bridge Street will be fully avoided, and based on existing disturbances and condition of the roadside, narrow endemic and criteria area plants are not expected to be present.

4.2.2 Project Impacts

Gilman Springs Road: Because smooth tarplant was only found outside of the Criteria Area Species Survey Area (see Figure 7A in Appendix A), impacts on this species are fully covered. Additional discussion for smooth tarplant as it pertains to the MSHCP is provided in Section 4.4.4.1. No impacts on other special-status plant species would occur along Gilman Springs Road, as there are no species present that could constrain the proposed project.

Bridge Street: If, based on the results of the spring 2021 focused surveys that shall be conducted, special-status plants are determined to be present within the Bridge Street BSA, there would be the potential for direct and indirect effects to result. If a narrow endemic or criteria area species would be affected, the proposed project must avoid impacts on 90 percent of lands that provide long-term conservation value for the species. Impacts on a narrow endemic or criteria area plant are not anticipated, given that the LOD is composed of disturbed habitat and compact soils within a dirt shoulder area that is maintained by the County and the very narrow disturbance area for installation of the wildlife fence on Bridge Street. Based on this, the LOD along Bridge Street is not expected to provide long-term conservation value for narrow endemic or criteria area species. Similarly, non-MSHCP special-status species are not expected to be found based on the existing disturbances and degraded habitat along the Bridge Street right of way.

Special-status plants that may be present within conserved lands to the north of the existing right of way on Bridge Street could potentially be indirectly affected by construction activities associated with the fence installation. There is a potential risk of generation of dust, and increased risk of fire, spread of invasive species, or toxics into areas outside of the right of way. The avoidance and minimization measures identified in Section 4.2.1.3 will ensure these indirect effects would not occur, should any special-status plant species be present.

4.2.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Implementation of minimization measures and BMPs required under the MSHCP (**BIO 1** through **BIO-5**, **BIO-9**, **BIO-10**, **BIO-13** through **BIO-17**) are described in full in Appendix I and would ensure that there are no indirect effects on special-status plants. If any non-MSHCP special-status plants, criteria area or narrow endemic plant species within the plant survey areas along Bridge Street are found during the spring 2021 focused studies, **BIO-18** will be implemented.

The focused study in **BIO-18** will take place prior to adoption of the CEQA document and the results and impacts will be incorporated into the CEQA document.

4.3 Special-Status Animal Species Occurrences

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. Of the 56 special-status animal species within the literature search results, 34 were determined to be present or to have potential to occur within the BSA. Cooper’s hawk, tricolored blackbird, BUOW, California horned lark, loggerhead shrike, coastal California gnatcatcher, yellow warbler, northwestern San Diego pocket mouse, San

Diego black-tailed jackrabbit, and San Diego desert woodrat were all found to be present within the BSA. Nine of these species are fully covered for take under the MSHCP, whereas BUOW has specific requirements that must be met if found during focused surveys. An additional 24 special-status animals have the potential to be found within the BSA, 11 of which have no take coverage under the MSHCP. MSHCP species are analyzed for impacts in Section 4.4.5.

4.3.1 Discussion of Non-MSHCP Species

Special-status wildlife species not covered under the MSHCP that could occur within the BSA include California legless lizard (*Anniella pulchra pulchra*), California glossy snake (*Arizona elegans occidentalis*), Crotch's bumble bee (*Bombus crotchii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), yellow-headed bat (*Xanthocephalus xanthocephalus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western yellow bat (*Lasiurus xanthinus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), and southern grasshopper mouse (*Onychomys torridus ramona*).

4.3.1.1 Survey Results

All of these species have a low potential to occur in the BSA and, as a result, focused surveys were not conducted. Most of the habitat throughout the BSA is highly disturbed with non-native vegetation, with very few areas within the BSA that are relatively undisturbed with intact native habitat. The BSA between Jackrabbit Trail and Bridge Street is particularly disturbed, with almost no intact native vegetation. California legless lizard may occur in sandy washes, but there are few if any of these within the BSA that are likely to support this species by providing shade and subsurface moisture. California glossy snake and coast patch-nosed snake may occur in areas of brittle bush scrub, which is generally on the southern end of the BSA; however, this habitat is nearly entirely outside of the proposed project footprint. The six bat species may forage within the BSA over open vegetation but roosting habitat within the BSA is generally limited, as most of the trees are located within the Quail Ranch Golf Course, and there are no suitable culverts and very few buildings that are not in active use or that could otherwise accommodate bat maternities. There is little, if any, roosting habitat for any of these species within the proposed project footprint. Southern grasshopper mouse could occur in marginally suitable habitat within the proposed project area but was not captured during small mammal trapping surveys in summer 2017.

4.3.1.2 Project Impacts

The proposed project is unlikely to have direct impacts on any of these species because of the lack of high-quality suitable habitat and proximity to the existing right of way. A total of 9.57 acres of undeveloped land would be permanently affected by project construction, primarily related to the extension of existing culvert/wildlife crossings and cut/fill associated with the shoulder widening. An additional 13.40 acres would be temporarily affected. Most of this land is highly disturbed, with very little of it constituting intact native habitat.

4.3.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation

With the implementation of minimization measures and BMPs required under the MSHCP (**BIO-1** through **BIO-5**, **BIO-9**, **BIO-10**, **BIO-13** through **BIO-17**) as described in full in Appendix I, no further measures would be necessary for these species.

4.4 Western Riverside County MSHCP

The entire BSA is located within the boundaries of the MSHCP (Figure 8 in Appendix A). The proposed project is classified as a safety operations and maintenance project (Section 7.2.1 of the MSHCP Volume I), and is therefore a covered activity; however, because the proposed project occurs in an area considered highly sensitive by the WRCRCA and resource agencies, and is located in a wildlife core/linkage of the MSHCP and directly adjacent to Public/Quasi-Public (P/QP) and other conserved lands areas, the County has incorporated siting and design criteria, and general avoidance guidelines (MSHCP Volume I, Sections 7.5.1, 7.5.2, and 7.5.3 and Appendix C) into the proposed project. This would ensure wildlife passage is protected through the area. Guidelines from Section 7.5.3 and Appendix C of the MSHCP have also been incorporated, as applicable, into this project's avoidance and minimization measures (listed in Appendix I of this report).

The proposed project is in the Reche Canyons/ Badlands Area Plan and the San Jacinto Valley Area Plan. It is located in Criteria Cells 1478 (Cell Group F); 1584 (Cell Group G); 1652 and 1666 (Cell Group H); 1762, 1880, 1881, 1977 (independent cells); 1763 and 1978 (Cell Group H); 1882 and 1979 (Cell Group I), and 1982 (Cell Group J), but it does not fall within areas that are intended for preservation by the Criteria Cells and does not conflict with their conservation goals. However, any effects on P/QP lands would require replacement. The MSHCP fully addresses impacts under CEQA on the majority of the biological resources that have been identified as being potentially affected by the proposed project. To ensure consistency with the MSHCP, measures are presented in this section, where appropriate, that follow the MSHCP requirements in Volume I, Sections 6.1.2 through 6.1.4, 6.3, and 7.5. For compliance with the MSHCP, a consistency review will be required from the WRCRCA, USFWS, and CDFW with concurrence that the proposed project is consistent with the requirements of the MSHCP.

4.4.1 Discussion of MSHCP Conservation Area

The MSHCP has developed a region-wide approach to ensuring that connections between natural lands are maintained. P/QP lands have been assessed for their long-term conservation value and provide functions and values to species and/or habitat that is considered valuable to the MSHCP. In addition, the MSHCP has established a system for acquiring Additional Reserve Lands, which contribute to Reserve Assembly. Criteria Cells are approximately 160-acre square areas that have been established throughout the Conservation Area and that together make up the Criteria Area; these Criteria Cells help to guide the assembly of the Additional Reserve Lands by establishing conservation goals for each particular cell.

The proposed project is also located within the general fee area for the Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP), a program implemented by the Riverside County Habitat Conservation Agency to allow incidental and management-related take of Stephens' kangaroo rat (SKR). This habitat conservation plan is contained within but separate from the MSHCP. A portion of the proposed project at its northern end is located within the San Jacinto-Lake Perris Core Reserve, as designated under the SKR HCP for the preservation of SKR habitat (Figure 8 in Appendix A).

4.4.1.1 Survey Results

The BSA overlaps within existing conservation lands, which have been designated as P/QP lands and Additional Reserve Lands associated with the San Jacinto Wildlife Area (Figure 8 in Appendix A) and owned by CDFW and other private entities. Within the BSA, P/QP lands are

located along the southern edge of Gilman Springs Road at different points along the BSA. P/QP lands overlap with both core areas at different parts of the BSA. In addition, there are other Additional Reserve Lands under conservation and owned by the WRCRCA. Conservation lands are located within Criteria Cells 1478, 1584, 1587, 1666, 1762, 1880, and 1881 of the Reche Canyon/Badlands Area Plan and Cells 1977, 1978, 1979, 1882, 1885, and 1982 of the San Jacinto Valley Area Plan.

A portion of the San Jacinto/Lake Perris Core Reserve also occurs within the San Jacinto Wildlife Area. These P/QP lands are part of the SKR Core Reserve, which was established under the SKR HCP for the preservation of SKR habitats.

4.4.1.2 Project Impacts

The proposed project would have both temporary and permanent impacts on areas designated as P/QP lands and other MSHCP Additional Reserve Lands (Table 4-3). These impacts would generally be in areas associated with the existing road right-of-way that are considered to be disturbed or developed, with minimal impacts in areas that are vegetated with native vegetation. Permanent impacts are related to the cut and fill required for shoulder widening, slopes, extension of culverts and drainage easements necessary for County maintenance of the drainages and culverts, new bridge near Bridge Street, wildlife fencing, and jumpouts (**BIO-19**) (Section 4.4.2 below). Temporary impacts are associated with temporary construction easements, slope easements (the area used for access to and from slopes and to access the drainage easements), and the anticipated staging areas needed to construct the proposed project. All temporary impact areas would be restored to pre-project conditions, including decompaction of soils and hydroseeding that will be detailed in the habitat mitigation and monitoring plan (**BIO-20**). Conserved lands in the vicinity of the proposed project are owned by multiple entities, including CDFW and the WRCRCA. Impacts on all CDFW lands will require 1:1 replacement at a minimum with lands contiguous to the existing conservation area so that the San Jacinto Wildlife Area remains whole and complete (**BIO-13**). Proposed project construction would not affect or conflict with the conservation goals of the Criteria Area, nor would they exceed the allowable road width for Gilman Springs Road through the conservation area.

Of the total impacts on P/QP lands (refer to Table 4-3), there would be permanent impacts on 0.78 acre and temporary impacts on 0.98 acre of undeveloped lands within the San Jacinto-Lake Perris Core Reserve.

4.4.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Impacts on P/QP lands would be mitigated at no less than a 1:1 ratio as required by the MSHCP and as described in mitigation measure **BIO-12** (Appendix I). In addition, purchase of replacement lands for permanent impacts on the San Jacinto Wildlife Area will ensure the conservation area remains whole and complete (**BIO-21**). Avoidance and minimization measures **BIO-1** through **BIO-3**, **BIO-5** through **BIO-11**, and **BIO-14** would provide additional protection to P/QP lands and MSHCP Additional Reserve Lands. Areas that are temporarily affected would be scarified and hydroseeded with native seed mix (**BIO-20**). **BIO-11** would require a DBESP analysis for temporary impacts or loss of P/QP and riparian/riverine lands. P/QP lands to be mitigated may include areas that also qualify as riparian/riverine resources, which also require mitigation as described in **BIO-12**. Approximately 0.06 acre of permanent impacts and 0.19 acre of temporary impacts on riparian/riverine areas are located on P/QP lands, and will be excluded from mitigation-related calculations of P/QP lands in the DBESP to avoid mitigating for the same area twice.

Impacts on the San Jacinto-Lake Perris Core Reserve would require a minimum 1:1 replacement ratio for compliance. These lands are entirely within the area that is already considered for potential mitigation, as shown in Table 4-3. The purchase of 0.78 acre of land within an area adjacent to an existing SKR Core Reserve would serve as replacement for areas permanently lost from the San Jacinto-Lake Perris Core Reserve, while the 0.98 acre that would be temporarily affected would be required to be restored on-site. In addition, because P/QP lands and the Additional Reserve Lands compose a portion of the MSHCP Conservation Area, the proposed project must conform to the Urban/Wildlands Interface Guidelines, which are intended to minimize indirect/edge effects associated with locating development in proximity to the MSHCP Conservation Area. These guidelines are listed in MSHCP Section 6.1.4 and must be properly addressed and implemented through project design to ensure that project-related impacts on the Conservation Area are avoided or minimized. These guidelines, as discussed below, would be incorporated into the proposed project design to ensure that indirect, project-related impacts on the Conservation Area are minimized.

Table 4-3. Impacts on State and WRCRCA Lands

Vegetation Community	CDFW Conserved Lands – San Jacinto Wildlife Area				WRCRCA Conserved Lands		Conserved Lands Total Impact	
	Existing P/QP		MSHCP Conserved Lands[1]		MSHCP Conserved Lands[1, 2]			
	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
Goodding's Willow - Red Willow Riparian Woodland and Forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brittle Bush Scrub	0.00	0.00	0.00	0.00	0.03	0.26	0.03	0.26
Desert Willow - Smoketree Wash Woodland	0.01	0.05	0.00	0.00	0.00	0.00	0.01	0.05
Developed	0.00	<0.01	0.24	0.04	3.42	0.43	3.66	0.47
Disturbed	0.10	0.23	0.12	0.21	0.17	0.54	0.39	0.98
Disturbed Brittle Bush Scrub	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Disturbed Fourwing Saltbush Scrub	0.02	0.24	0.92	1.04	0.32	0.52	1.26	1.80
Fourwing Saltbush Scrub	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Mule Fat Thickets	0.00	< 0.01	0.00	0.00	0.00	0.00	0.00	0.00
Wild Oats and Annual Brome Grasslands	0.00	0.01	0.02	0.04	0.00	0.00	0.02	0.05
Tamarisk Thickets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emory's and Broom Baccharis Scrub	0.03	0.03	0.00	0.00	0.00	0.00	0.03	0.03
Total Affected Acreage	**0.16[3]**	**0.56**	**1.30**	**1.33**	**3.94**	**1.96**	**5.23**	**3.85[3]**
Total Affected Acreage Proposed for Mitigation	**0.16**	**0.56[3]**	**1.06**	**1.29[4]**	**0.00[2]**	**0.00[2]**	**1.21**	**1.86[3]**

[1] The MSHCP Conserved Lands affected by the proposed project are Additional Reserve Lands under the MSHCP (Volume I, Section 3), which would help achieve assembly of the MSHCP reserve.

[2] Planned covered roads (Table 7-1) within the MSHCP allow take of Additional Reserve Lands owned by the WRCRCA, as long as the maximum road right of way width is not exceeded. Because the road improvements through Additional Reserve Lands owned by the WRCRCA would not exceed the maximum allowable right of way width, no mitigation for impacts on WRCRCA-owned lands is proposed.

[3] Impact totals may not match exactly with individual impact amounts by Vegetation Community due to rounding.

[4] The temporary impact areas would be restored on-site, decompacted, and hydroseeded with a native seed mix.

[5] Developed was excluded from the area that would require replacement mitigation.

Drainage

The proposed project would incorporate measures, including any measures required through the National Pollutant Discharge Elimination System requirements and aquatic resource permits, to ensure that the amount and quality of runoff from the proposed project into the Conservation Area is equal to or better than existing conditions. In particular, measures would be incorporated to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other harmful elements into the Conservation Area.

Toxics

The proposed project has little, if any, potential to subject the Conservation Area to the release of toxic materials in excess of current conditions. Current toxic materials may include roadway/vehicle-related chemicals such as oils, grease, hydraulic fluid, and trash that likely enter the conservation area following precipitation. To further avoid this possibility during construction, any required staging areas would be situated to the farthest extent practicable away from the Conservation Area boundary and would be kept clean of debris and trash during construction, as described in measure **BIO-4**.

Lighting

Lighting systems would be added for intersections at Kennedy Hills Materials, Eden Hot Springs Road/Central Avenue, and Jack Rabbit Trail/Curtis Street/Knoch Road. As described in measure **BIO-14** the lighting would be directed downward and would incorporate baffles as feasible in order to reduce excess light from shining out the sides and spilling into adjacent areas.

Noise

The Urban/Wildlands Interface Guidelines prohibit projects from creating noise that would subject the Conservation Area to noise levels exceeding standard residential levels. The proposed project may occasionally result in temporary louder noises during the construction phase, when grading and other use of heavy equipment is necessary. However, roadway operation following project construction is not expected to result in any increase in noise levels, as the proposed project is not adding capacity. Rumble strips would be placed on the shoulders that may occasionally result in briefly louder noise, but this is expected to be infrequent and for very short durations and on average the proposed project is expected to conform to its current, accepted noise level.

Invasives

Measures **BIO-6** and **BIO-7** would reduce the likelihood of project equipment spreading invasive weed seeds on site.

Barriers

The majority of the proposed project would not incorporate any barriers to separate the proposed project area from the Conservation Area. Wildlife fencing will be installed north and south of the Bridge Street undercrossing on both sides of Gilman Springs Road and would guide wildlife to the wildlife crossing. This would ensure safe passage of wildlife between the Conservation Area on either side of the road and through Proposed Core 3. Standard asphalt concrete (AC) dikes would be incorporated along the proposed project edge, but these are

mountable and would not prevent the ingress or egress of wildlife between the proposed project footprint and the Conservation Area.

Grading/Land Development

The proposed project would regrade existing slopes within the vicinity of the Conservation Area to provide adequate elevation for the roadway and shoulder expansion. Lands within the San Jacinto- Lake Perris Reserve west of Gilman Springs Road that are affected by this expansion will be fully replaced through off-site mitigation of PQP lands/conserved lands (**BIO-21**) or on-site restoration (**BIO-12**). Reconstructed slopes and all other temporarily impacted lands along Gilman Springs Road will be revegetated with native plant species (**BIO-20**).

4.4.2 Discussion of MSHCP Wildlife Corridors

Wildlife corridors are landscape features that facilitate connectivity and the movement of wildlife between two or more habitat areas (Soulé and Gilpin 1991; Beier and Loe 1992). In a developing and fragmented landscape, the connectivity of wildlife populations and habitats is critical for the conservation of plant and animal species, and wildlife corridors and habitat connectivity are important elements of a landscape's ecological value and function. Wildlife corridors facilitate habitat and population connectivity, species movement, seasonal migration and dispersal, genetic interchange, and access to food, shelter, and other resources. Effective wildlife corridors are crucial to the movement of wildlife between blocks of habitat where manmade features have created habitat fragmentation. In a developing landscape, connections often occur as linear features through human-made structures. Areas beneath overpasses or within culverts are examples of such connections. Regional and local corridors and habitat areas that facilitate wildlife movement and connectivity exist within the proposed project vicinity. These are discussed in detail below, along with localized wildlife movement conditions.

In addition to linkages, the MSHCP has identified *core areas*, which are blocks of habitat with the appropriate size, configuration, and vegetation characteristics to support the life history requirements of one or more MSHCP Covered Species. Cores often provide a linkage for some species across habitat blocks. Within the BSA, Gilman Springs Road bisects MSHCP Proposed Core 3 and Existing Core H. Subgrade culverts or other passages can be used to safely allow wildlife movement under the road.

4.4.2.1 Survey Results

Surveys were conducted in early 2018 to document the locations and dimensions of circular, rectangular, or box culverts that could serve as wildlife undercrossings along Gilman Springs Road. A total of 23 undercrossings were mapped within the BSA. Based solely on the culvert sizes, the majority of the undercrossings could support small to medium mammals. However, most of these undercrossings are currently obstructed by vegetation and debris inside the culvert, and several have riprap that would impede wildlife usage. In addition, there are limited topographical features that would direct wildlife to these structures; because most of the right of way also lacks substantial fencing, there are no existing barriers to wildlife movement across the road surface. Thus, most undercrossings do not provide substantial crossing opportunities.

The undercrossing at Jackrabbit Trail (MSHCP Core 3) could support the movement of larger wildlife, based on the culvert size, but because of the placement of riprap within a highly erosional upstream area and a 90° bank curve at the downstream end, there is high potential for wildlife being deterred from this undercrossing structure. The existing undercrossing just north of Bridge Street (also MSHCP Core 3) could also support some small to large wildlife

movement; however, there is no fencing or structures in the area that would direct wildlife through the drainage. Based on the descriptions of the undercrossings, these structures have low existing function for wildlife movement. Refer to Appendix J for the existing dimensions and analysis of each culvert location.

4.4.2.2 Project Impacts

Most of the culverts within the BSA would be extended in length to accommodate the wider lanes and shoulder. During construction, wildlife may avoid the proposed project site because of human presence and activities. In addition, project activities may result in underpasses being temporarily blocked, which would result in wildlife crossing over the roadway and potentially cause an incremental increase in vehicle strikes. Figure 8 shows the location and impacts on the MSHCP Core areas.

Post-construction, the volume of vehicles is expected to remain the same. The extended culverts would further increase the risk of wildlife crossing over the roadway. Although current usage of the existing culverts is expected to be low (based on existing obstructions, low openness, and topographical relief), there could be a decrease in usage of the culverts post-construction. Specifically, if these underpasses are obstructed, wildlife would cross over the roadway, and there may be an incremental increase in vehicle strikes. However, the existing culverts currently provide little value for wildlife crossing. Implementation of **BIO-19** in Section 4.4.2.3 would ensure that the culverts would remain accessible post-construction and minimize the incremental increase in wildlife vehicle strikes.

One of the underpasses would be specifically improved for wildlife crossing as a result of the proposed project. The underpass at Bridge Street would be expanded from a 12-foot-wide by 6-foot-high culvert to a single-span bridge would be 26 feet wide by 7.5 feet high, with a dry bench for wildlife to cross during high flows and smaller tube on the dry bench for small mammal passage. In addition, wildlife fencing would be installed north and south of the crossing, along a portion of Gilman Springs Road and Bridge Street, to direct wildlife to the crossing area. It is anticipated that these enhancements would encourage wildlife to move through the undercrossing rather than across the roadway within this segment of the Gilman Springs Road improvements, which is anticipated to support movement of key populations of species within the MSHCP for Proposed Core 3. In addition, jumpouts will be installed to ensure wildlife do not get trapped within the right of way. Appendix J lists the dimensions of each undercrossing after the proposed project is complete. Table 4-4 provides the impacts on each MSHCP core area.

Table 4-4. Impacts on the MSHCP Corridors

Core Area	MSHCP Conservation Area Impacts (acres)	
	Permanent	Temporary
Proposed Core 3	7.34	4.25
Existing Core H	4.08	1.53
Total Impacts	**11.42**	**5.79[2]**

[1] These acreages remove areas that are considered developed (e.g., the existing paved roadways, buildings) to provide a more realistic total of what may constitute usable habitat that may contribute to wildlife movement.

[2] Impact totals may not match exactly with individual impact amounts by Core Area due to rounding.

4.4.2.3 Avoidance and Minimization Measures/Compensatory Mitigation

The implementation of **BIO-21**, as described in Appendix I, is expected to adequately address project-related impacts on these undercrossings. Measure **BIO-19** and **BIO-22** in Appendix I would ensure all culverts are routinely cleaned out pre- and post-construction. Measure **BIO-23** will develop a Wildlife Fencing Plan that will provide the details for fence design and wildlife escape opportunities.

4.4.3 Discussion of MSHCP Riparian/Riverine Resources, Vernal Pools, and Fairy Shrimp Habitat

The MSHCP provides protection for all riparian/riverine resources, vernal pools, and fairy shrimp habitat that occur within the MSHCP area under Section 6.1.2 of the MSHCP. In addition, the MSHCP protects riparian bird species that are dependent on riparian/riverine habitat, as listed in Section 6.1.2 of the MSHCP. If any of these resources are present and impacts are unavoidable, then a DBESP must be prepared for the proposed project.

4.4.3.1 Survey Results

Riparian/Riverine

A total of 23 features were delineated during the jurisdictional delineation (Appendix H). Based on the results of the delineation, it was determined that 19 of these features qualify as riparian/ riverine areas, with five features providing both riparian and riverine habitat, one feature providing only riparian habitat, and 13 features providing only riverine habitat. These features variably provide riparian vegetation, riverine flows during a portion of the year (i.e., ephemeral), and functions and values either instream or downstream to Mystic Lake or are natural features. The remaining four features that do not qualify as riparian/riverine areas are all manmade features that, while water flows through them on an ephemeral basis via runoff, have no functions and values for wildlife, do not make any contribution to downstream habitat values for covered species, and have no functions as or connections to wetland habitats (WRCRCA 2007).

Vernal Pools and Fairy Shrimp Habitat

Surveys for vernal pool habitat were conducted in March 2018, which coincided with the only significant rainfall events that the region experienced in winter 2017/2018. In each case, surveys were conducted within the first few days following rain events, as depicted in Table 4-5 below. However, despite the fact that there are several areas in the BSA that contain soils (Willows-Traver-Domino) that could support vernal pool habitat, no ponded water was ever observed in the BSA, and it was determined that there is no vernal pool habitat present. Because there are no vernal pools or depressions present within the BSA and, therefore, no areas for ponded water to occur for a duration sufficient to support vernal pool species, it was also determined that there is no potential for either Riverside fairy shrimp or vernal pool fairy shrimp to occur within the BSA. Table 4-5 below provides the amount of rainfall in the BSA vicinity prior to each assessment. Rainfall measurements are taken from the San Jacinto RS weather station as documented by the National Oceanic and Atmospheric Administration. This station is approximately 6.7 miles southeast from the eastern edge of the BSA.

Table 4-5. Vernal Pool Survey Dates Compared to Recent Rain Events

Survey Date	Most Recent Previous Rain Event(s)	Total Amount of Rainfall (inches)
3/1/2018	2/27/18	0.43
3/8/2018	3/3/18–3/4/18	0.31
3/13/2018	3/10/18–3/11/18	0.82
3/27/2018	3/22/18–3/23/18	0.52

Source: National Weather Service 2018

Riparian Birds

There is no suitable habitat within riparian/riverine areas in the BSA to support any of the riparian birds listed as required for analysis in Section 6.1.2 of the MSHCP. Therefore, no protocol surveys were conducted.

4.4.3.2 Project Impacts

There would be no impacts on vernal pools, fairy shrimp, or riparian birds as a result of this project, as all are expected to be absent within the BSA. However, there would be 0.61 acre of permanent impacts and 0.62 acre of temporary impacts on riparian/riverine areas within the BSA as shown in Table 4-6. Approximately 0.06 acre of permanent impacts and 0.19 acre of temporary impacts on riparian/riverine areas are located on P/QP lands, which would already require mitigation for permanent impacts.

Table 4-6. Impacts on Riparian/Riverine Habitat

	Impacts (acres)	
Stream Type	**Permanent**	**Temporary**
Riparian	0.07	0.08
Riverine	0.54	0.54
Total	**0.61**	**0.62**

4.4.3.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Because there would be no impacts on vernal pools, fairy shrimp, or riparian/riverine-dependent listed bird species, no avoidance and minimization measures are necessary for these resources. However, implementation of avoidance and minimization measures **BIO-1** and **BIO-4** through **BIO-11,** mitigation measure **BIO-12,** and those elements that are required for compliance with the Urban/Wildlands Interface Guidelines (Section 6.1.4 of the MSHCP) as discussed in Section 4.4.1 above would ensure that the proposed project is consistent with the MSHCP in this regard for impacts on riparian/riverine areas. As noted in **BIO-11**, a DBESP would be required.

4.4.4 Discussion of MSHCP Plant Species

Based on an analysis of the required criteria area and narrow endemic plant survey areas within the BSA, as well as results of 2017 focused rare plant surveys, it was determined that smooth tarplant is the only MSHCP plant species present within the BSA (Figure 7A of Appendix A). Focused surveys for San Diego ambrosia, Munz's onion, San Jacinto crownscale, round-leaved filaree, and California Orcutt grass, which are otherwise covered under the MSHCP but require surveys in suitable habitat, were negative and these species were determined to be absent. Any

remaining potential for MSHCP special-status plants to occur within the Bridge Street BSA are discussed in Section 4.2.

4.4.4.1 Discussion of Smooth Tarplant

Surveys for smooth tarplant are required in areas designated by the MSHCP. This is a List 1B.1 species (CNPS 2019) and a Criteria Area plant species under Section 6.3.2 of the MSHCP.

Survey Results

A total of 355 smooth tarplant plants were counted within or immediately outside of the 100-foot BSA for special-status plants. These were present in two locations: in a scattered grouping west of Gilman Springs Road between stations 379+00 and 382+00, and in a condensed group southwest of the road between stations 258+00 and 260+00 (Figure 7A of Appendix A). All occurrences were located outside of the Criteria Area Plant Survey Area, as shown in Figure 7A of Appendix A.

Project Impacts

Direct impacts on this species are likely, as many of the individuals that were identified during the focused surveys are present within the proposed project footprint. As such, these individuals would be removed from their current locations. Plants that are nearby, but are outside of the footprint, may still be affected by indirect impacts from construction dust and additional competition from non-native weed species that may propagate into the area.

Avoidance and Minimization Efforts/Compensatory Mitigation

When conditionally covered species are found within designated survey areas, take of these species is subject to the conditions that are described in the MSHCP. All of the instances of smooth tarplant that were found within the BSA were located outside of the designated survey area for smooth tarplant (the Criteria Area Species Survey Area as shown in Figure 7A of Appendix A). The take conditions for this species are not applicable to the proposed project because all plants were outside of the area that has been designated as suitable habitat worth preserving under the MSHCP. Therefore, no additional avoidance and minimization or compensatory mitigation would be required for the take of this species within the BSA other than those measures that are already required for MSHCP consistency. The proposed project would be considered consistent with the MSHCP in this regard.

4.4.5 Discussion of MSHCP Wildlife Species

4.4.5.1 Discussion of Fully Covered Species

A total of 21 special-status wildlife species are fully covered under the MSHCP and could or do occur within the BSA: western spadefoot (*Spea hammondii*), orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), red-diamond rattlesnake (*Crotalus ruber*), coast horned lizard (*Phrynosoma blainvillii*), Cooper's hawk, tricolored blackbird, Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), golden eagle (*Aquila chrysaetos*), Bell's sage sparrow (*Artemisiospiza belli belli*), ferruginous hawk, Swainson's hawk, white-tailed kite, California horned lark, loggerhead shrike, coastal California gnatcatcher, yellow warbler, northwestern San Diego pocket mouse, SKR, San Diego black-tailed jackrabbit, and San Diego desert woodrat.

Survey Results

Cooper's hawk, tricolored blackbird, ferruginous hawk, Swainson's hawk, white-tailed kite, California horned lark, loggerhead shrike, coastal California gnatcatcher, yellow warbler, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, and San Diego desert woodrat were all found to be present within the BSA. The remaining nine species generally have low potentials to occur within the BSA due to the high levels of disturbance in the immediate surrounding area, although soaring raptors may have slightly higher potential to occur due to their abilities to generalize habitat preferences more than passerines. Although surveys were not conducted for SKR, none were incidentally captured during LAPM/SBKR trapping sessions; however, suitable habitat is present outside of the trapping areas and there are records of this species occurring on both sides of Gilman Springs Road in this area.

Project Impacts

Project construction and operation may result in direct or indirect take of these species. Where animals (particularly reptiles and small mammals) are inside of burrows or are under vegetation for shelter, they may be crushed by construction equipment or vehicles, resulting in injury or mortality. Birds nesting in the area may be disturbed by construction noise, human presence, and general disturbance during the construction period, and any increase in long-term use of the road may reduce nesting opportunities within the BSA. Small amounts of habitat may be lost, but this is generally habitat that is highly disturbed and already contains an abundance of invasive species.

Avoidance and Minimization Efforts/Compensatory Mitigation

Because all of these species are fully covered under the MSHCP, no compensatory mitigation or avoidance efforts are necessary other than what is required to maintain consistency with the MSHCP's conservation goals. With the implementation of minimization measures and BMPs that are required under the MSHCP (**BIO-1**, **BIO-4, BIO-5**, **BIO-9**, **BIO-10**, **BIO-13, BIO-14**, **BIO-16**, and **BIO-17**) as described in full in Appendix I, no further measures would be necessary for these species. Nest clearance surveys as described in measure **BIO-16** would reduce the potential for nesting birds to be affected during construction. With implementation of these measures, the proposed project would be consistent with the MSHCP in this regard.

4.4.5.2 Discussion of Burrowing Owl

BUOW is found in predominantly open areas including grassland, agricultural areas, playas, sparse coastal sage scrub and desert scrub, rangelands, prairies, dune, deserts, golf courses, vacant lots, and irrigation ditches. Within mapped habitat, additional surveys for this species are required for compliance with the MSHCP.

Survey Results

Gilman Springs Road: Focused surveys were conducted for BUOW in discrete areas of suitable habitat in 2018. Across the entire length of the BSA, not a single burrow suitable for BUOW was found in the footprint (hypothesized to be due to a high level of raptor perching activity on the transmission lines west of Bridge Street). One BUOW was found in the BSA in the first three surveys, but the owl could not be found during the final survey. This owl used several burrows located just under 500 feet away from the LOD, as shown in Figure 7B of Appendix A.

Bridge Street: The grassland and disturbed area along Bridge Street provide suitable habitat for BUOW. A burrow survey and focused survey to be performed in spring 2021 will determine whether the species is present or absent. The results of the spring 2021 focused surveys within the Bridge Street BSA will be reported in the final CEQA document prior to adoption (**BIO-24**). The WRCRCA, USFWS, and CDFW will be immediately notified if this species is found. Information regarding whether potentially suitable burrows are present will be reported to these same agencies.

Project Impacts

Project construction would result in the removal of approximately 8.68 acres of suitable BUOW habitat within the species MSHCP Survey Area. An additional 12.20 acres of suitable habitat would be temporarily affected within the LOD. The suitable habitat that would be affected in the LOD is low-quality habitat because of the high level of disturbance in the vegetation along the roadway from fire/weed abatement practices.

Gilman Springs Road: The proposed project would not remove or directly affect BUOW or the burrows that it uses because they occurred well outside the proposed project LOD. Due to its distance from the proposed impact areas, no direct impacts would be expected on the owl or future owls at this burrow location. There may be some temporary visual and aural disturbances as a result of project-related construction activities, but the construction would not directly affect this area and, with the generally constant traffic on Gilman Springs Road, project-related construction in the vicinity of the owl would be generally consistent with existing high levels of ambient disturbance and no direct impacts on the owl(s) itself would be expected. These areas are all subject to the expected edge effects of being adjacent to a high-traffic road (e.g., continuous noise, air pollution, trash, the spread of exotic weed seeds via windborne or vehicular sources, and deposition of toxic vehicular fluids, particularly after rain events). In addition, in the western half of the BSA and in particular southwest of Gilman Springs Road, patches of extant vegetation within the footprint are wedged between the pavement and dirt shoulder to the north and a 75-foot-wide area immediately to the south that is generally disked and kept clear of vegetation, further lowering the value of the on-site habitat due to fragmentation.

It is worth noting that the only BUOW that was found in the BSA in 2018 was located just under 500 feet from the proposed project footprint, in the only part of the entire 500-foot BSA that had multiple suitable burrows, and in the only part of the BSA that had an open cover of Riversidian sage scrub growing on a gently sloped landform. Finally, the proposed project is surrounded by conserved land, including lands designated as P/QP lands and Additional Reserve Lands, which provide greater suitability for the species.

Bridge Street: If BUOW are determined to be present in the Bridge Street BSA, based on surveys that will be performed in spring 2021, there is a potential for direct effects to occur through either direct removal and mortality, through increased noise and construction activity that could cause a BUOW to abandon its nest burrow, or through vibrations from construction equipment causing an occupied burrow to collapse. Indirect effects that could potentially occur include increased risk of fire, habitat degradation from introduction of weeds, edge effects, or decline in potential prey from project effects.

The direct effects on BUOW, should the species be detected within the Bridge Street BSA during spring 2021 focused surveys, will be documented in the CEQA document prior to

adoption (**BIO-24**). Additional coordination with WRCRCA, USFWS, and CDFW may be necessary should the species be present.

Avoidance and Minimization Efforts/Compensatory Mitigation

Measure **BIO-24** will be completed prior to adoption of the CEQA document to ensure all results and potential impacts on BUOW within the Bridge Street BSA, should they be determined present, are addressed.

To ensure full compliance and consistency with Section 6.3.2 of the MSHCP, and ensure no impacts occur on individuals that may be nesting in the vicinity of the proposed project, measures **BIO-1** through **BIO-5**, **BIO-13, BIO-16** and **BIO-17**, and **BIO-25** shall be implemented, as described in full in Appendix I.

4.4.5.3 Discussion of Small Mammals

The BSA occurs within the MSHCP Survey Areas for LAPM and SBKR. LAPM occurs with open ground (fine sandy soils) and occurs in gravelly washes. SBKR is found in shrubby habitats with intermediate seral stages of alluvial fan sage scrub.

Survey Results

Gilman Springs Road: Focused surveys were conducted for LAPM and SBKR during two trapping sessions within suitable habitat within each species' respective MSHCP survey area. Neither of these species were found during trapping and can be considered absent. Traplines are shown on Figure 7C of Appendix A.

Bridge Street: Suitable habitat for LAPM may be present within the Bridge Street BSA within the species' MSHCP survey area (Appendix A, Figure 7C). A qualified biologist will perform a habitat assessment and subsequent trapping to determine species presence or absence in spring 2021 (**BIO-26**). The results of any spring 2021 trapping effort within the BSA along Bridge Street will be reported in the final CEQA document prior to adoption. The WRCRCA, USFWS, and CDFW will be immediately notified if this species is found.

Based on the results of previous focused studies near Bridge Street within the BSA where similar site conditions are present, this species is not expected to be present.

Project Impacts

Project construction would result in the removal of approximately 8.91 acres of suitable habitat for small mammals. An additional 12.72 acres of suitable habitat would be temporarily affected within the LOD.

Gilman Springs Road: No direct impacts on LAPM or SBKR would occur, as both species are absent from the BSA.

Bridge Street: If LAPM is determined to be present within the Bridge Street BSA, based on focused surveys to be conducted in spring 2021, there is a potential for direct effects to occur through either direct removal and mortality or through vibrations from construction equipment potentially causing an occupied burrow to collapse. Indirect effects that could potentially occur include increased risk of fire, habitat degradation from introduction of weeds, and edge effects.

The avoidance and minimization measures identified below will ensure any potential indirect effects would not occur, if SBKR is determined to be present.

If species impacts would occur, the proposed project must avoid impacts on 90 percent of lands that provide long-term conservation value for LAPM. However, based on the existing disturbances within the right of way, soil compaction, maintenance activities by the County for fire/weed abatement and safety, and the potential collapse of burrows from vehicles driving on the shoulder, it is expected that the right of way along Bridge Street lacks long-term conservation.

The results of the focused survey (**BIO-26**) and any direct impacts on LAPM will be documented in the CEQA document prior to adoption. Additional coordination with the WRCRCA, USFWS, and CDFW may be necessary should the species be present.

Avoidance and Minimization Efforts/Compensatory Mitigation

Measure **BIO-26** will be implemented prior to finalization of the CEQA document to ensure all results and potential impacts on LAPM along Bridge Street are addressed.

If the species is present, indirect effects would be addressed through the implementation of measures **BIO-1** through **BIO-5**, **BIO-13, BIO-16** and **BIO-17**, as described in full in Appendix I. This would ensure full compliance and consistency with Section 6.3.2 of the MSHCP.

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Chapter 5 Conclusions and Regulatory Determination

5.1 Federal Endangered Species Act Consultation Summary

On March 21, 2018, an official USFWS List of Proposed, Threatened, and Endangered Species, and Critical Habitats was obtained through the Information, Planning, and Conservation System database; this list was updated on February 10, 2021 (Appendix D; USFWS 2021). Based on the species' presence within the 300-foot BSA but general lack of suitable habitat within the proposed project footprint, Caltrans has determined that the proposed project *may affect, but is not likely to adversely affect* coastal California gnatcatcher. Although not captured during trapping surveys, suitable habitat for SKR is present within the 300-foot small mammal BSA, and some suitable habitat is present within the proposed project footprint. In addition, there are historic trapping records of this species in the proposed project vicinity. However, SKR is a covered species under the MSHCP and would be avoided as possible under the conditions of the existing MSHCP Biological Opinion; additionally, permanently affected lands falling within the San Jacinto-Lake Perris Core Reserve would be replaced at a minimum 1:1 ratio. Therefore, Caltrans has determined that the proposed project *may affect, but is not likely to adversely affect* SKR. There would be *no effect* on critical habitat for these two species, as no critical habitat is present within the BSA. Section 7 consultation with USFWS will be required for potential impacts on these species. There has been no FESA consultation to date for this project. Consultation will commence once Caltrans approves the NES(MI), and the necessary documents, including the DBESP, are provided to USFWS during the JPR. Because both listed species with potential to be affected are fully covered under the MSHCP, the consultation would be a streamlined process. A Biological Opinion would be issued and take authorization would be provided under the MSHCP. Because this is a covered project under the MSHCP, take of these species because of the proposed project has been anticipated and addressed in the Biological Opinion for the MSHCP; no additional take is expected. Avoidance and minimization measures, compensatory mitigation, and a DBESP (described in **BIO-11**), would provide consistency with the MSHCP.

Caltrans has determined that the proposed project would have *no effect* for all remaining federally listed species (Table 5-1). No further consultation is anticipated for these species.

Table 5-1. Federal Endangered Species Act Effects Determination

Species	Federal Listing Status	Effects Determination
San Bernardino Kangaroo Rat	Endangered	No effect
Stephens' Kangaroo Rat	Endangered	May affect, not likely to adversely affect
Coastal California Gnatcatcher	Threatened	May affect, not likely to adversely affect
Least Bell's Vireo	Endangered	No effect
Southwestern Willow Flycatcher	Endangered	No effect
Riverside Fairy Shrimp	Endangered	No effect
Vernal Pool Fairy Shrimp	Threatened	No effect
San Diego Ambrosia	Endangered	No effect
San Jacinto Valley Crownscale	Endangered	No effect
Santa Ana River Woollystar	Endangered	No effect
Spreading Navarretia	Threatened	No effect
Thread-leaved Brodiaea	Threatened	No effect

This project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects on NOAA Fisheries species are anticipated.

5.2 Essential Fish Habitat Consultation Summary

No consultation has occurred with National Oceanic and Atmospheric Administration Fisheries regarding Essential Fish Habitat and, because the proposed project is not located in or near Essential Fish Habitat, no consultation is required.

5.3 Wetlands and Other Waters Coordination Summary

To date, there has been no coordination with regulatory agencies regarding on-site wetlands and aquatic features. A delineation of Waters of the U.S. and State was completed for the proposed project and is included in the Jurisdictional Delineation Report (Appendix H). The Jurisdictional Delineation Report should be submitted to USACE and the RWQCB as part of the proposed project permitting process to obtain concurrence regarding determinations and to obtain a Nationwide 404 nationwide permit (if applicable), Waste Discharge Requirements under the Porter-Cologne Water Quality Act, and 401 water quality certification, respectively. Based on the proposed project impacts in Table 4-2, the proposed project qualifies to be permitted through Nationwide Permit 14, Linear Transportation Projects. Only the regulatory agencies can conclusively determine jurisdiction and specific permitting requirements.

5.4 Invasive Species

Refer to Appendices F and G for lists of invasive plants and wildlife that were identified during project-related surveys. Measures **BIO-6** and **BIO-7** provided in Appendix I would ensure compliance with U.S.E.O. 13112. No further action is necessary.

5.5 Migratory Bird Treaty Act

There are many species of native birds and raptors that occur within the BSA. Most of these species lack special status, but all are protected under the Migratory Bird Treaty Act. Measures

BIO-16, **BIO-17**, and **BIO-25** (Appendix I) ensure compliance with the Migratory Bird Treaty Act. No further action is necessary.

5.6 Western Riverside County MSHCP

As described in detail in Section 4.4 of this report, several requirements would need to be fulfilled in order to demonstrate consistency with the MSHCP. Focused studies within the MSHCP species survey area along the Bridge Street BSA will be completed in spring 2021 and the results of these surveys will be incorporated into the CEQA document prior to adoption. The County will provide the results to the WRCRCA, USFWS, and CDFW. Measures **BIO-18**, **BIO-24**, and **BIO-26** (Appendix I) will ensure that if any of these species are present or would potentially be affected by the proposed project, that any impacts are fully avoided. The LOD along Bridge Street does not provide long-term conservation value for MSHCP species based on existing disturbed habitat, compaction of soils on the shoulder from County maintenance and past grading activities, and vehicular use of the road shoulder. Compensatory mitigation is not expected to be necessary. The only construction activity along Bridge Street is related to the installation of the wildlife fencing. The wildlife fencing will be constructed in conformance with guidelines in Section 7.5.2 of the MSHCP. Placement of this fencing supports the goals and objectives of the MSHCP, including encouraging wildlife movement through Proposed Core 3.

To minimize impacts on the Conservation Area, the Urban/Wildlands Interface Guidelines would need to be satisfied; these are addressed in Section 4.4.1 of this report. In addition, as addressed in Section 4.4.4 of this report, the proposed project is not required to implement any additional avoidance and mitigation for the take of smooth tarplant because all specimens located during rare plant surveys were found outside of the designated Criteria Area Species Survey Area as shown in Figure 7A of Appendix A.

A DBESP would be required for impacts on P/QP lands and riparian/riverine areas, as described in Sections 4.4.1 and 4.4.3 of this report. Finally, the proposed project would need to implement the Construction Guidelines in Section 7.5.3 of the MSHCP and the Standard BMPs in Appendix C of the MSHCP during construction, which have been incorporated as avoidance and minimization measures in Appendix I.

In addition, the proposed project will comply with MSHCP Sections 6.1.2 (Riparian/Riverine and Vernal Pools), 6.1.3 (Narrow Endemics), 6.1.4 (Urban Wildlands Interface), 6.3.2 (Additional Surveys), and 7.5.1 (Guidelines for Facilities within the Criteria Area and Public\Quasi-Public Lands), and 7.5.2 (Guidelines for Construction of Wildlife Crossings) for the crossing at Bridge Street.

5.7 Stephens' Kangaroo Rat Habitat Conservation Plan

The proposed project falls within the current fee area of the SKR HCP, as well as within the designated San Jacinto-Lake Perris Core Reserve (Figure 8 in Appendix A). A total of 0.78 acres of undeveloped land in the Core Reserve would be permanently affected by the proposed project and would require replacement at a minimum 1:1 ratio (**BIO-21**). An additional 0.98 acre of undeveloped land would be temporarily affected and would be required to be restored on site (**BIO-20**). These lands are entirely located within the area that is already discussed for potential mitigation in Table 4-3.

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Chapter 6 References

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Appendix A Project Figures

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Figure 3 - Sheet 1
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Proposed Drainage Easement
- Proposed Pavement Limits
- Cut/Fill

Temporary Impacts

- New Right-of-Way
- Proposed Slope Easement
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 3 - Sheet 2
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Proposed Drainage Easement
- Proposed Pavement Limits
- Cut/Fill

Temporary Impacts

- New Right-of-Way
- Proposed Construction Stage Areas
- Proposed Slope Easement
- Retaining Wall Footing & Maintenance Easement
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 3 - Sheet 3
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Figure 3 - Sheet 4
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Proposed Drainage Easement
- Proposed Pavement Limits
- Cut/Fill

Temporary Impacts

- New Right-of-Way
- Proposed Slope Easement
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 3 - Sheet 5
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Utility Easement
- Rip Rap
- Proposed Drainage Easement
- Proposed Pavement Limits
- Cut/Fill

Temporary Impacts

- New Right-of-Way
- Proposed Construction Stage Areas
- Proposed Slope Easement
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 3 - Sheet 6
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Rip Rap
- Proposed Drainage Easement
- Proposed Pavement Limits
- Fence Footing
- Wildlife Fencing
- Cut/Fill

Temporary Impacts

- New Right-of-Way
- Proposed Construction Stage Areas
- Proposed Slope Easement
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 3 - Sheet 7
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Utility Easement
- Proposed Drainage Easement
- Proposed Pavement Limits
- Fence Footing
- Wildlife Fencing
- Cut/Fill

Temporary Impacts

- Proposed Construction Stage Areas
- Proposed Slope Easement
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 3 - Sheet 8
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Proposed Drainage Easement
- Proposed Pavement Limits
- Fence Footing
- Wildlife Fencing
- Cut/Fill

Temporary Impacts

- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

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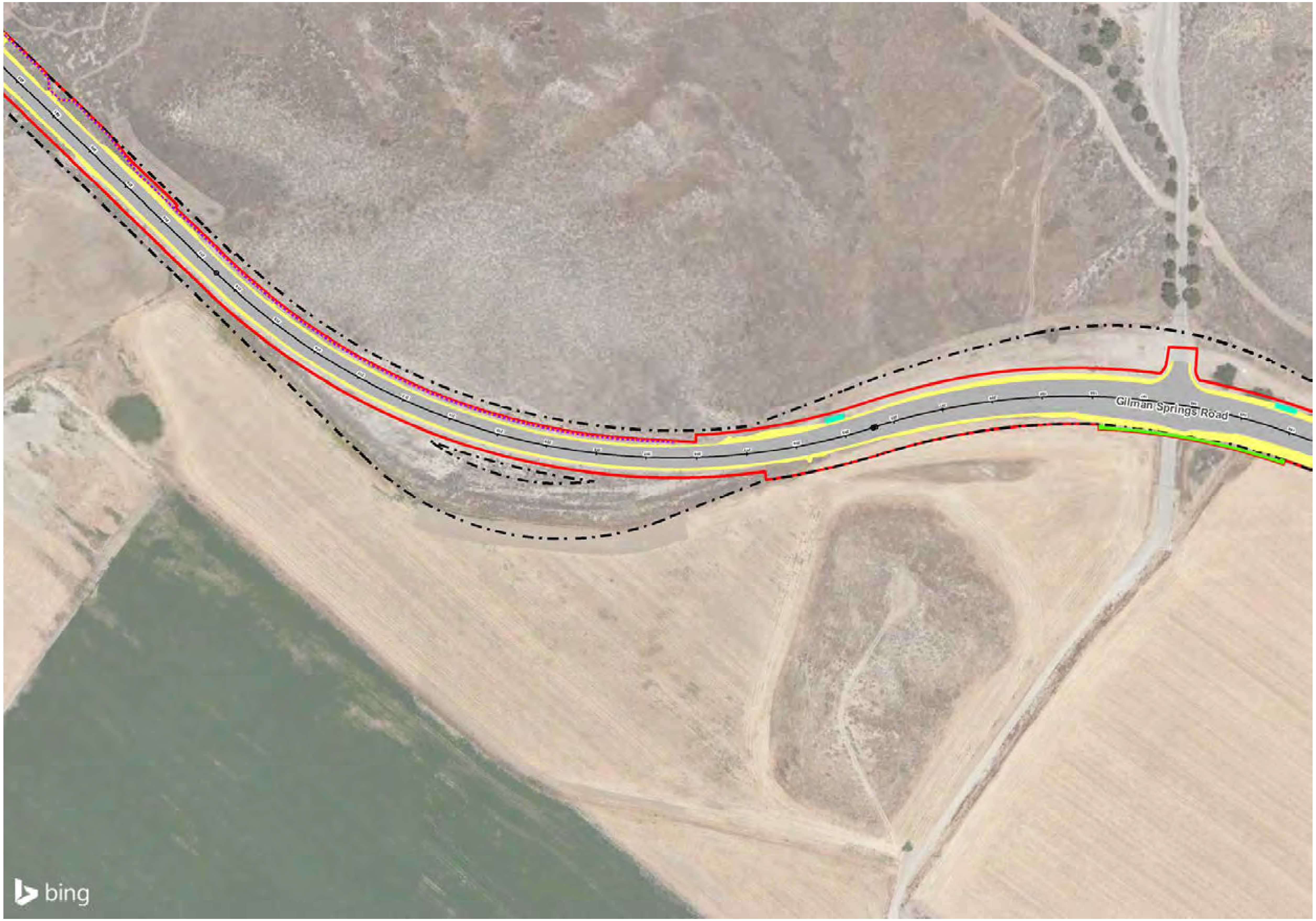
Figure 3 - Sheet 9
Build Alternative
Gilman Springs Median and Shoulder Improvements Project



Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Rip Rap
- Proposed Pavement Limits
- Fence Footing
- Wildlife Fencing
- Cut/Fill

Temporary Impacts

- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

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Figure 3 - Sheet 10
Build Alternative
Gilman Springs Median and Shoulder Improvements Project

Legend

- Existing Right-of-Way
- Limits of Disturbance

Permanent Impacts

- Rip Rap
- Proposed Pavement Limits
- Cut/Fill

Temporary Impacts

- New Right-of-Way
- Proposed Construction Stage Areas
- Proposed Slope Easement
- Roadway Striping
- Temporary Construction Easement

Source: RCTD (2021); ESRI (2017)

N

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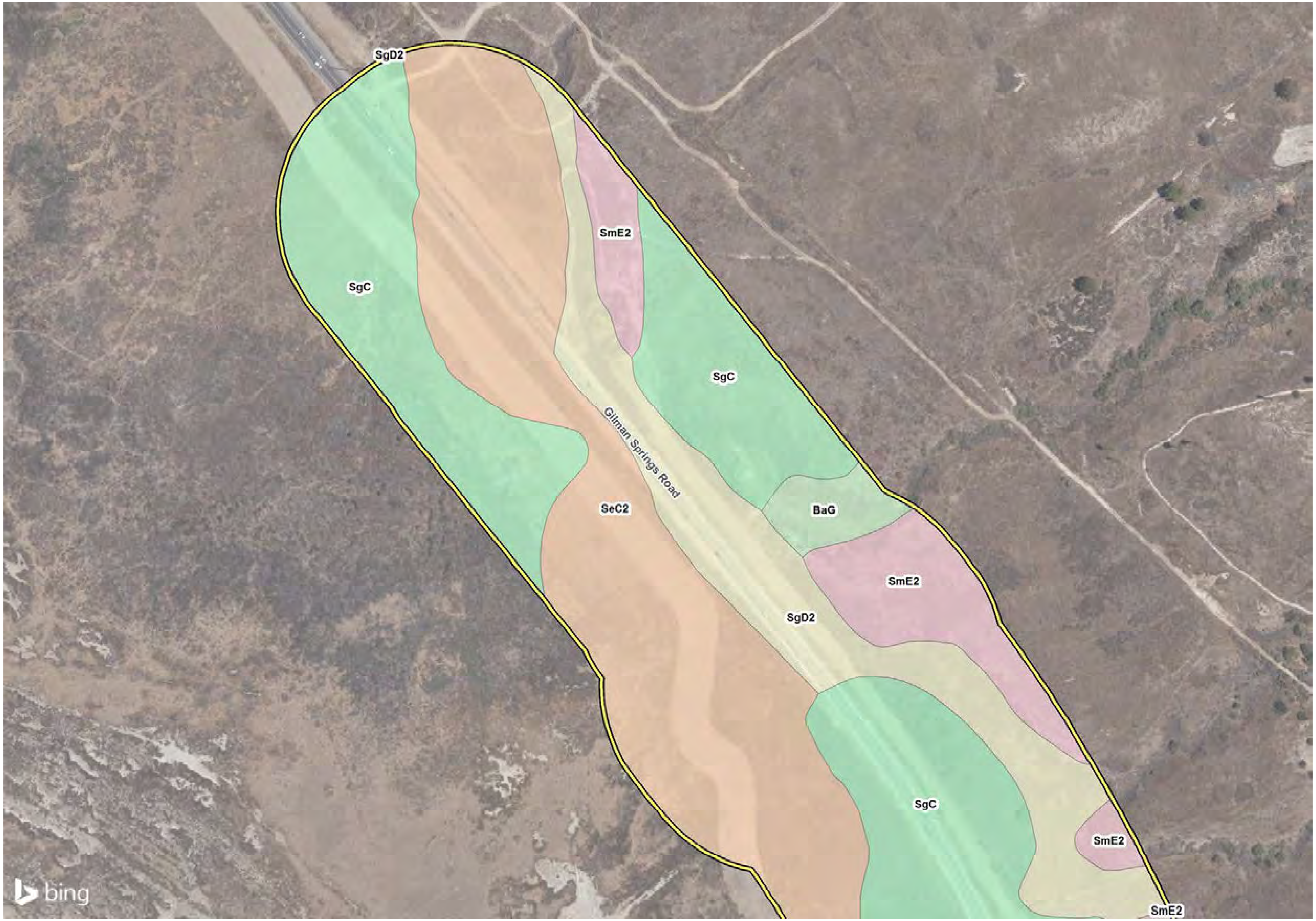
Figure 3 - Sheet 11
Build Alternative
Gilman Springs Median and Shoulder Improvements Project



Legend

Gilman Springs Rd BSA (300-ft Buffer)

Bridge St BSA (300-ft Buffer)*

Soils

BaG- Badland

SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded

SgC- San Emigdio loam, 2 to 8 percent slopes

SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded

SmE2- San Timoteo loam, 8 to 25 percent slopes, eroded

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

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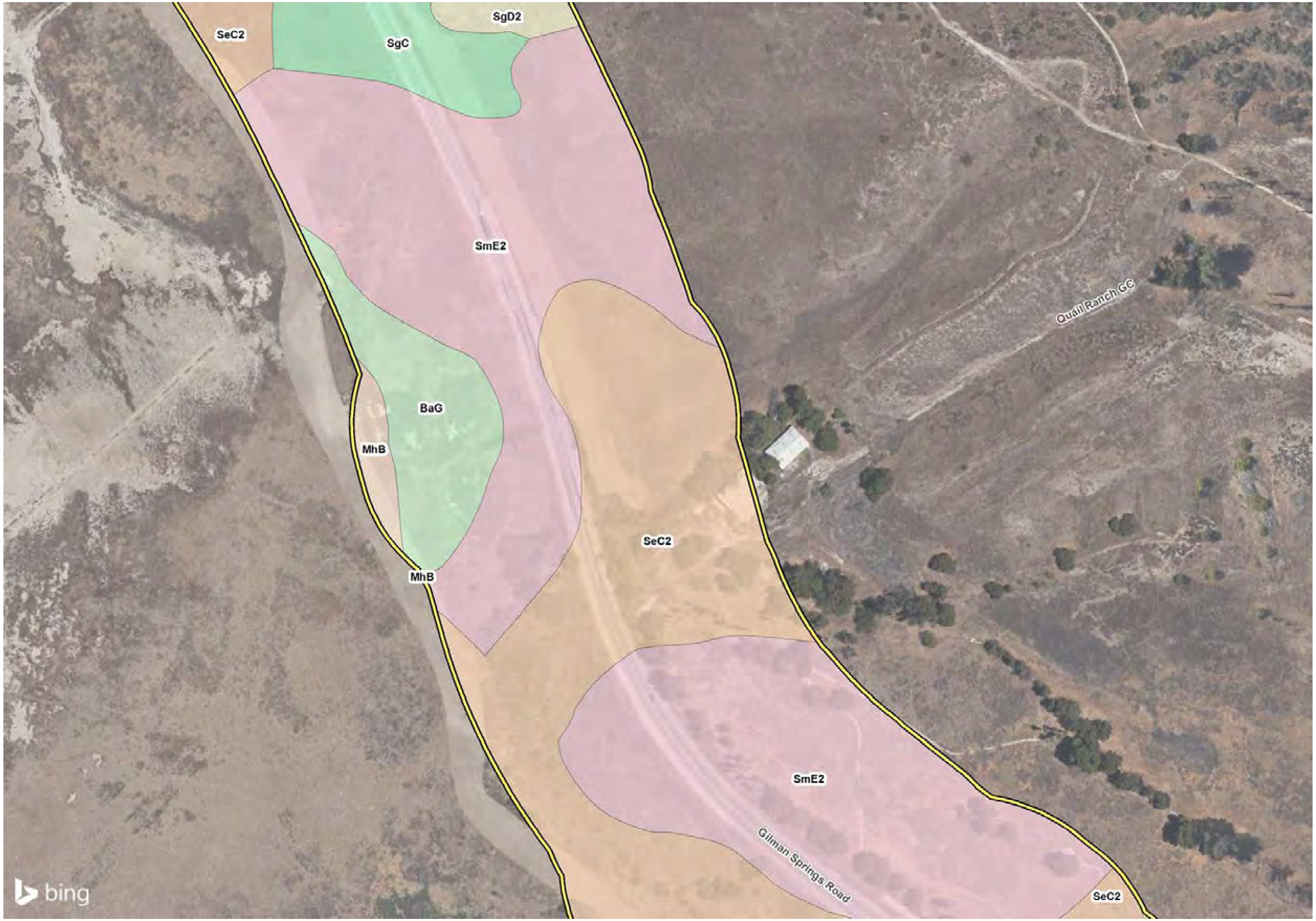
Figure 4 - Sheet 1
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- BaG- Badland
- MhB- Metz loamy fine sand, sandy loam substratum, 0 to 5 per cent slopes
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SgC- San Emigdio loam, 2 to 8 percent slopes
- SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded
- SmE2- San Timoteo loam, 8 to 25 percent slopes, eroded

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

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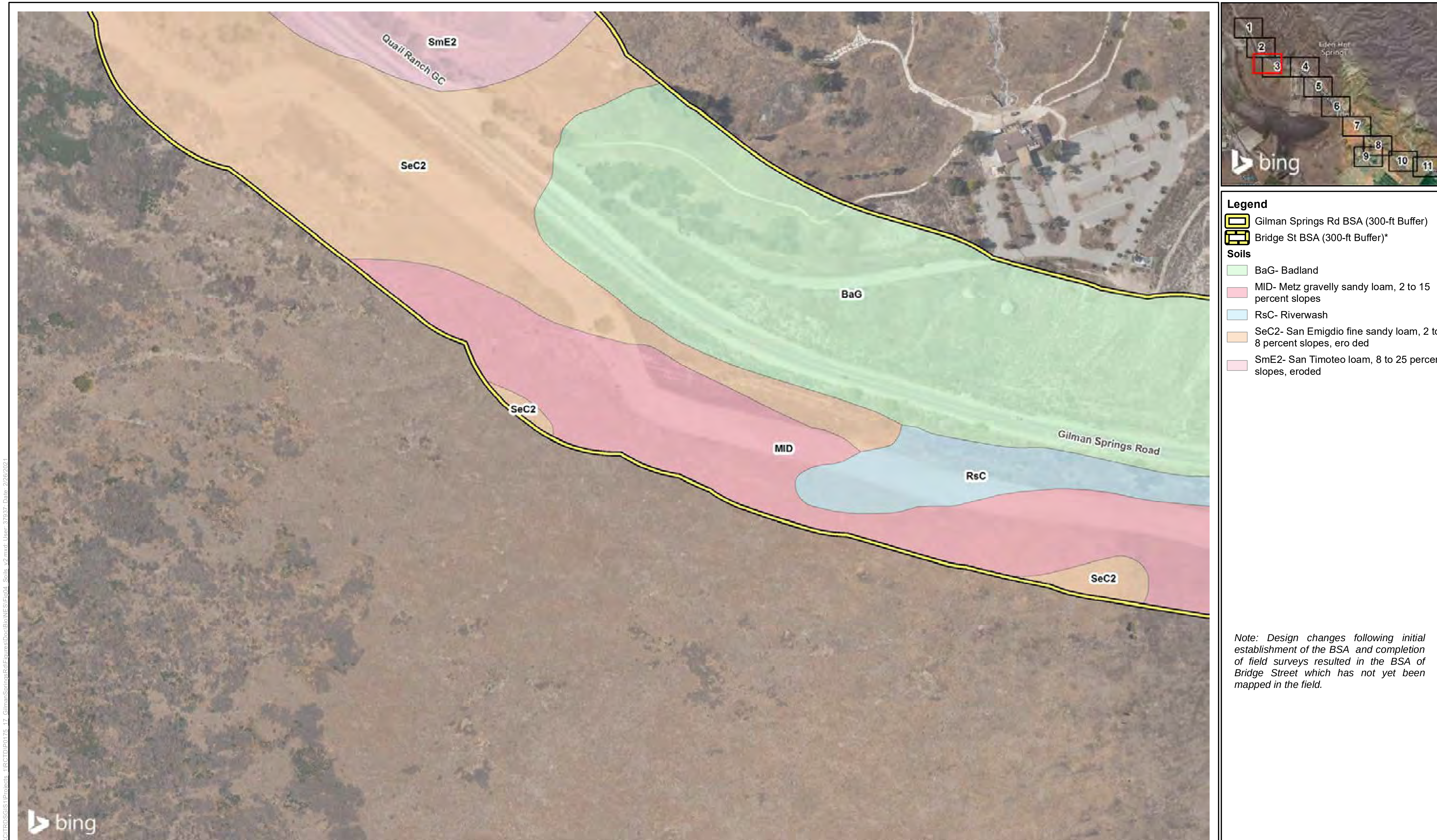
Figure 4 - Sheet 2
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend
Gilman Springs Rd BSA (300-ft Buffer)
Bridge St BSA (300-ft Buffer)*
Soils
BaG- Badland
MID- Metz gravelly sandy loam, 2 to 15 percent slopes
RsC- Riverwash
SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
SmE2- San Timoteo loam, 8 to 25 percent slopes, eroded

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

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Feet
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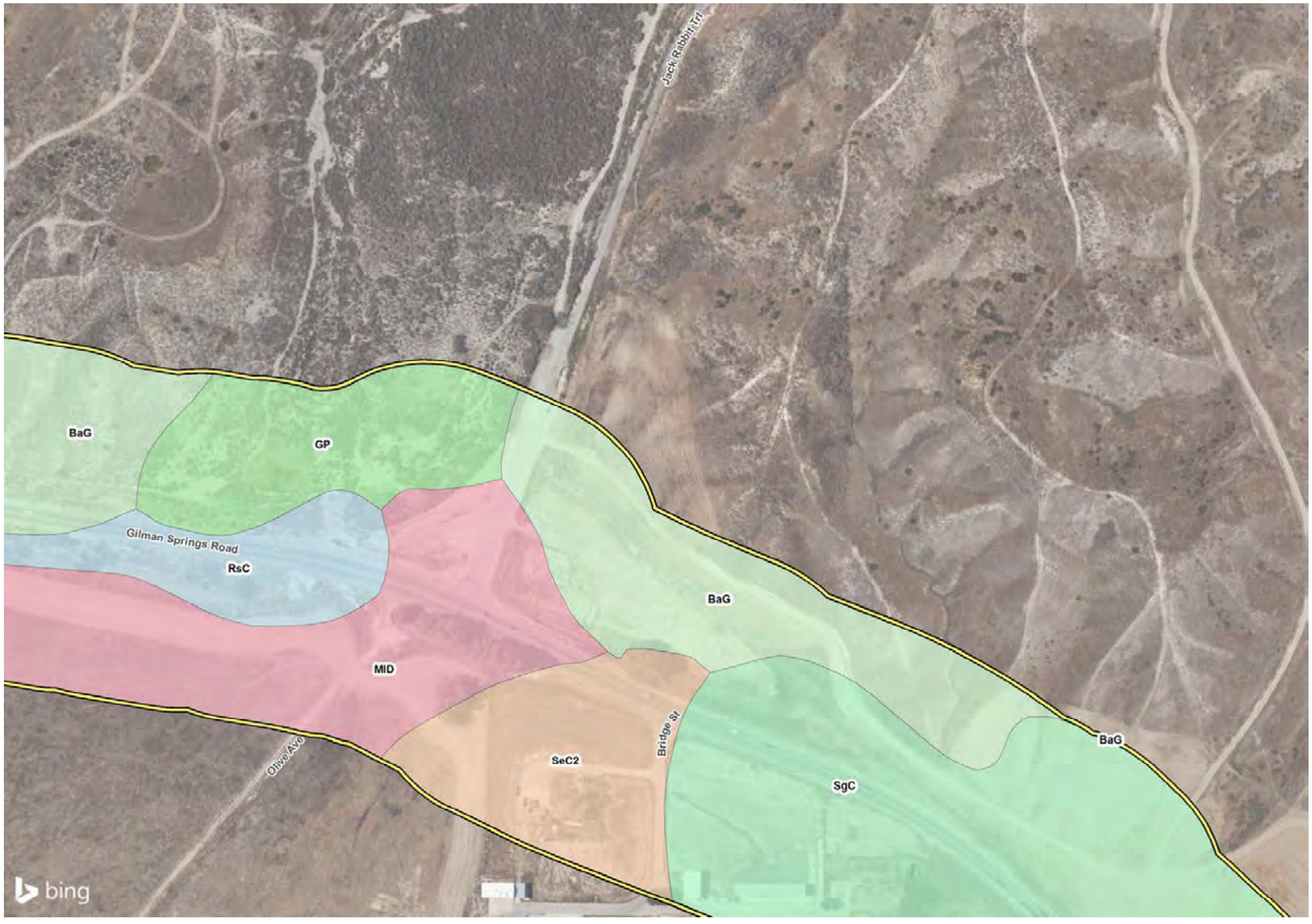
Figure 4 - Sheet 3
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- BaG- Badland
- GP- Gravel pits
- MID- Metz gravelly sandy loam, 2 to 15 percent slopes
- RsC- Riverwash
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SgC- San Emigdio loam, 2 to 8 percent slopes

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

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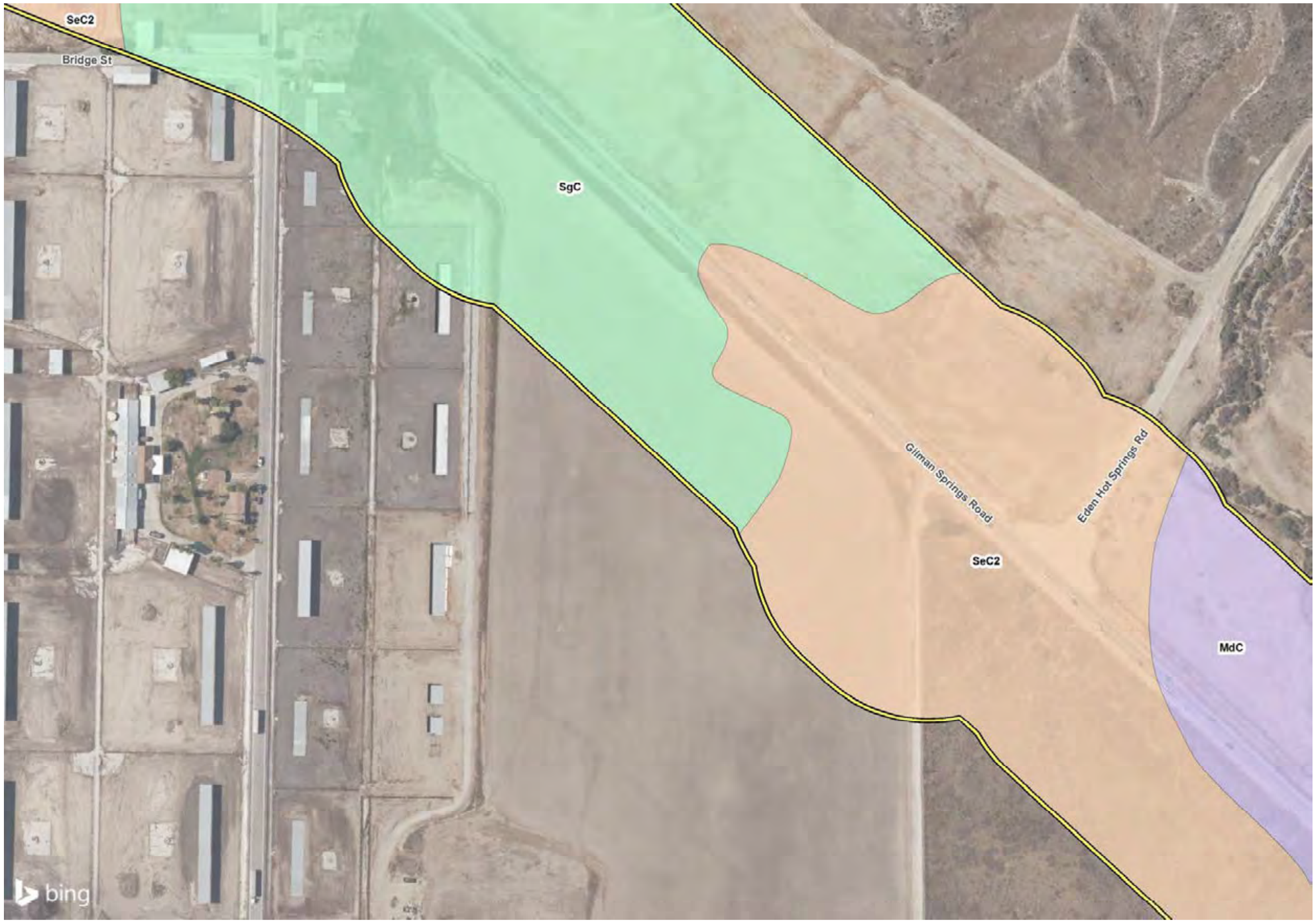
Figure 4 - Sheet 4
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- MdC- Metz loamy sand, 2 to 8 percent slopes
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SgC- San Emigdio loam, 2 to 8 percent slopes

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

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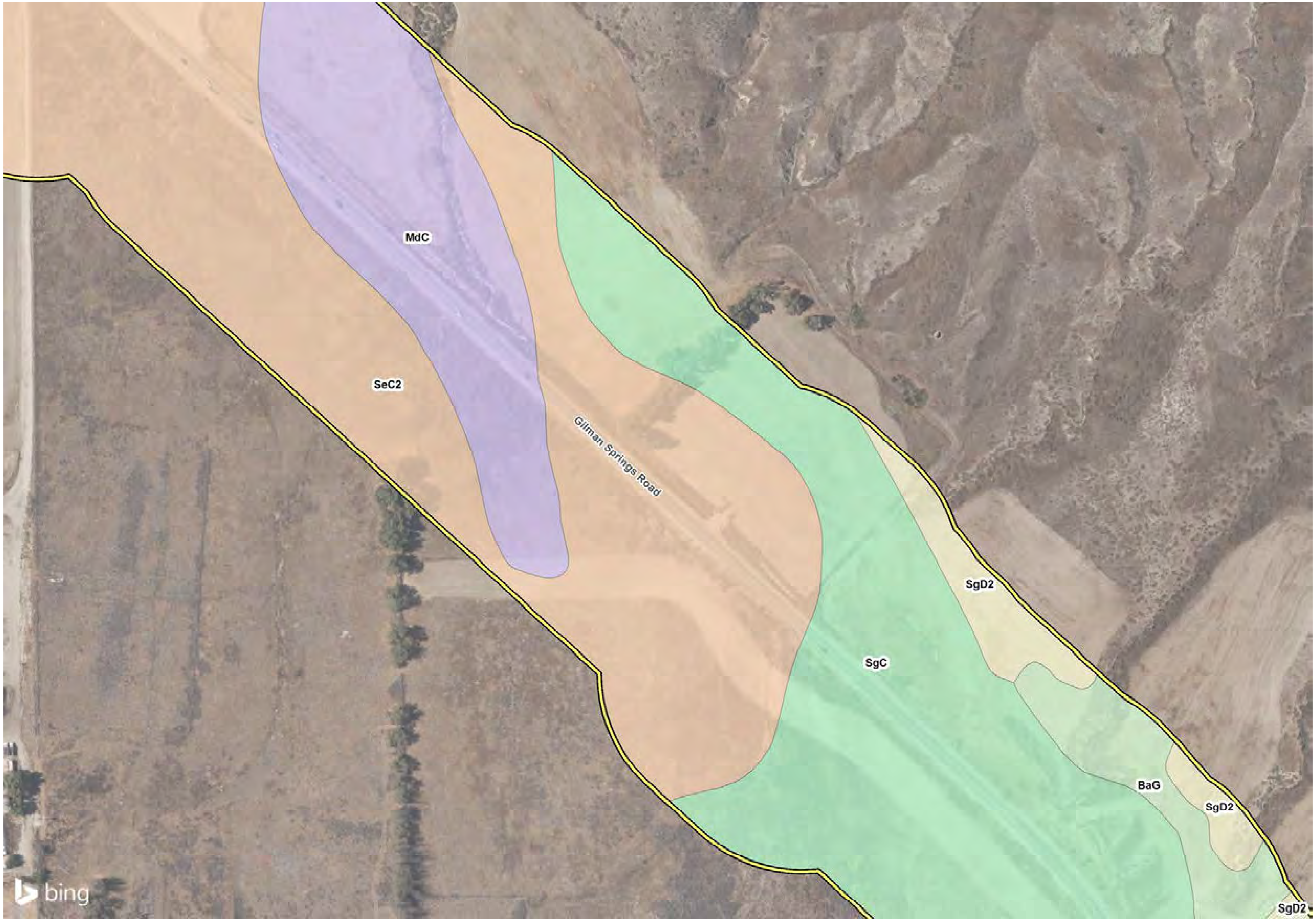
Figure 4 - Sheet 5
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

Gilman Springs Rd BSA (300-ft Buffer)

Bridge St BSA (300-ft Buffer)*

Soils

BaG- Badland

MdC- Metz loamy sand, 2 to 8 percent slopes

SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded

SgC- San Emigdio loam, 2 to 8 percent slopes

SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

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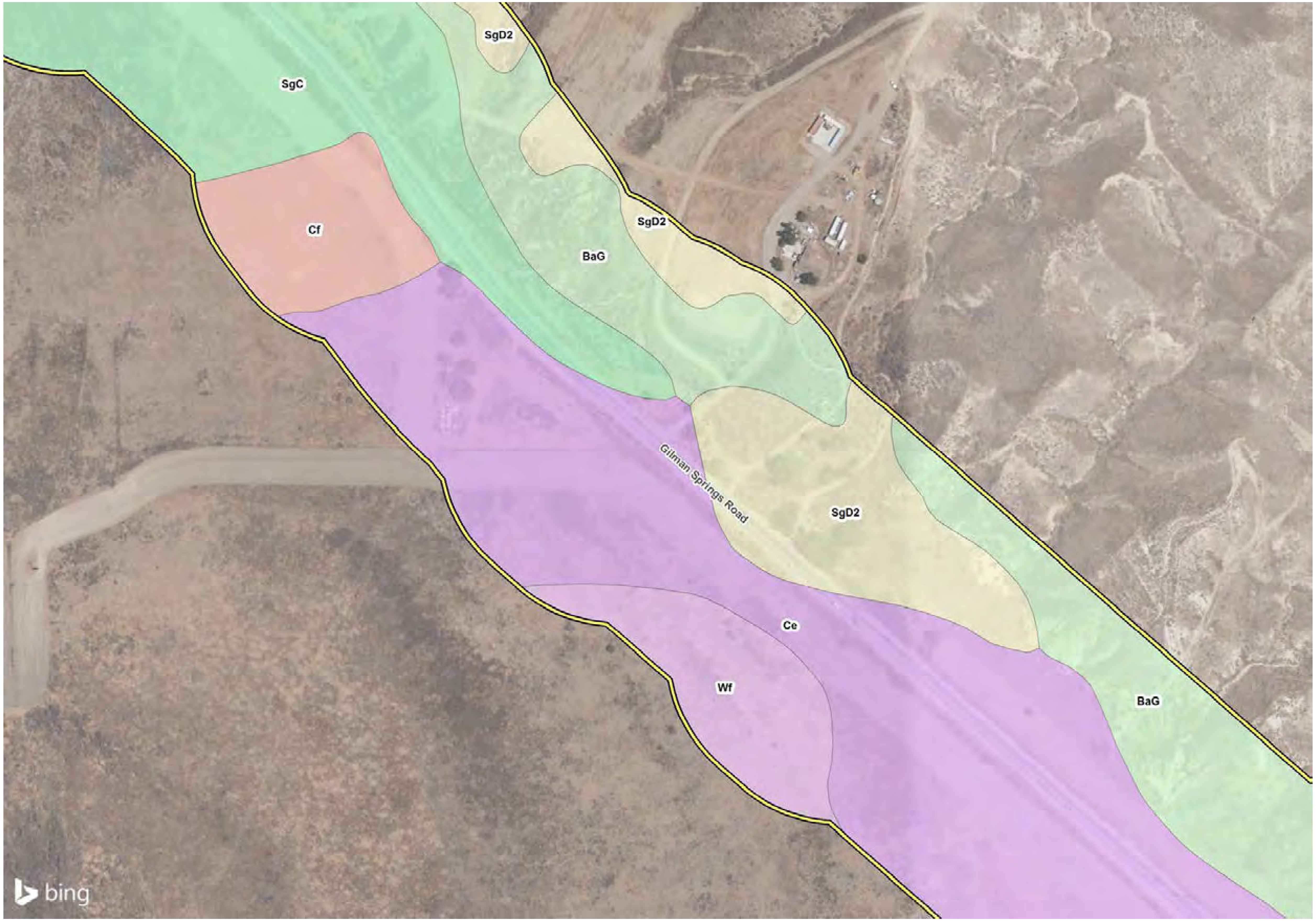
Figure 4 - Sheet 6
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- BaG- Badland
- Ce- Chino silt loam, drained
- Cf- Chino silt loam, drained, saline-alkali
- SgC- San Emigdio loam, 2 to 8 percent slopes
- SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded
- Wf- Willows silty clay

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

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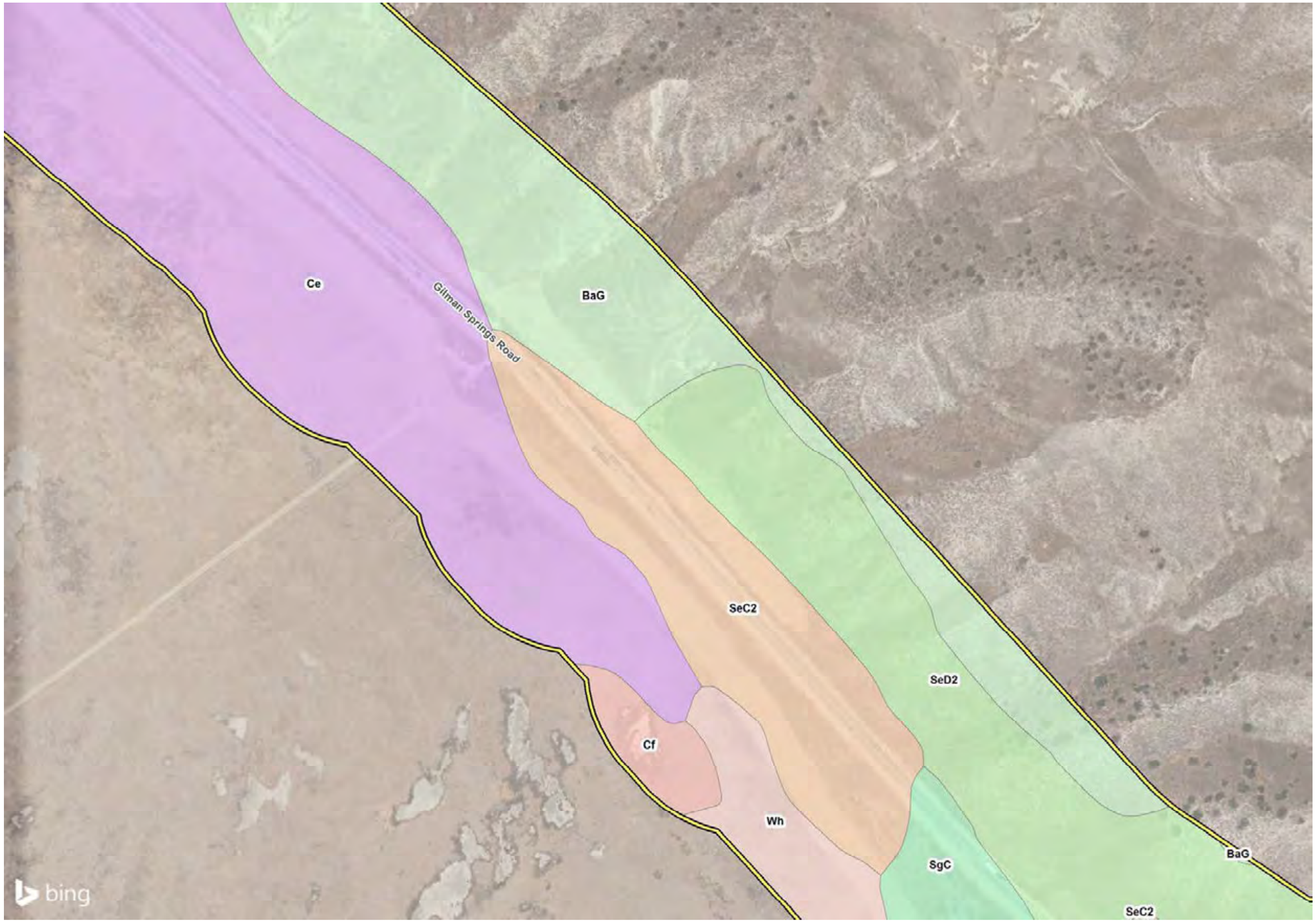
Figure 4 - Sheet 7
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- BaG- Badland
- Ce- Chino silt loam, drained
- Cf- Chino silt loam, drained, saline-alkali
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SeD2- San Emigdio fine sandy loam, 8 to 15 percent slopes, er oded
- SgC- San Emigdio loam, 2 to 8 percent slopes
- Wh- Willows silty clay, strongly saline-alkali

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

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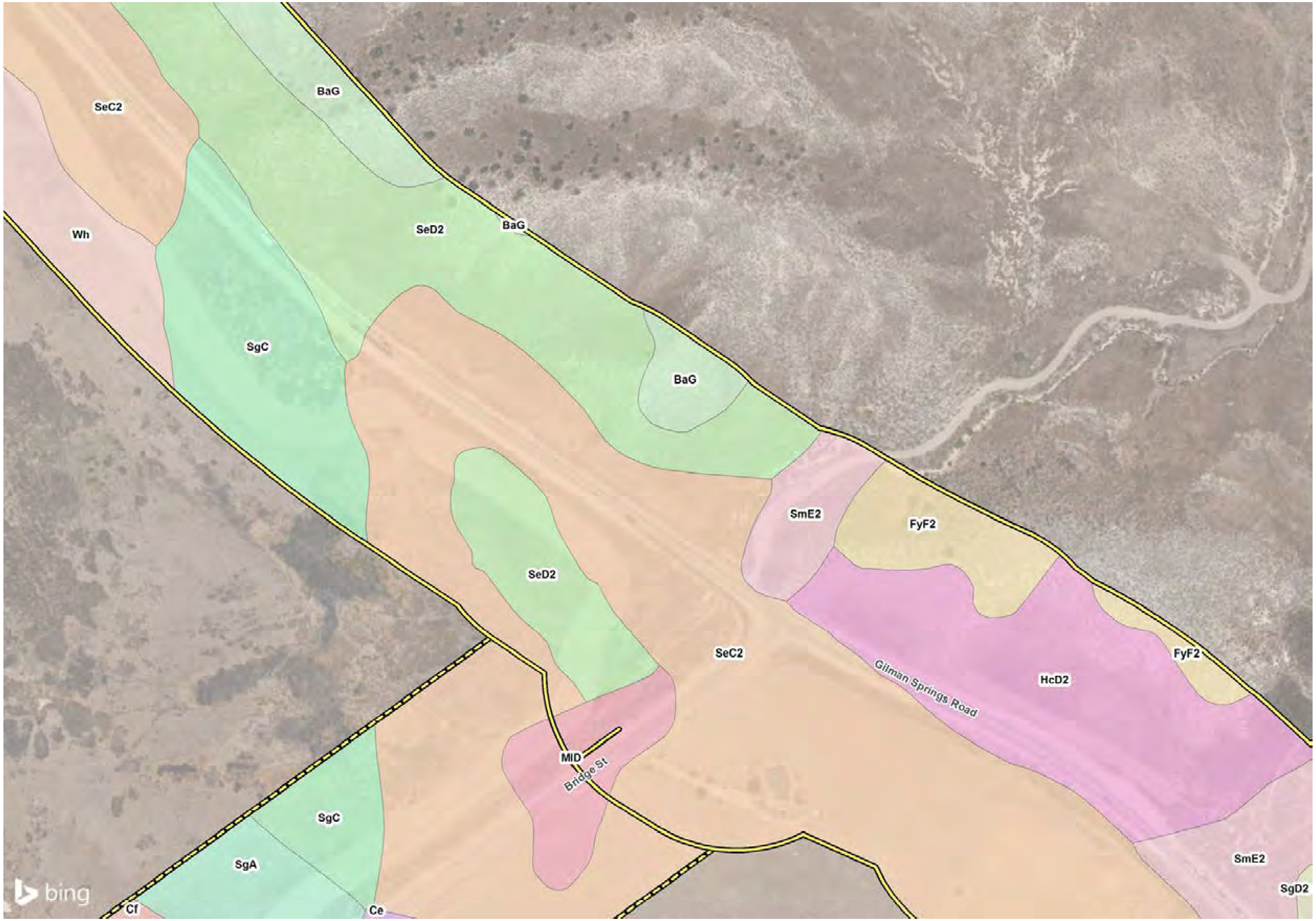
Figure 4 - Sheet 8
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- BaG- Badland
- Ce- Chino silt loam, drained
- Cf- Chino silt loam, drained, saline-alkali
- FyF2- Friant rocky fine sandy loam, 25 to 50 percent slopes, eroded
- HcD2- Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed
- MID- Metz gravelly sandy loam, 2 to 15 percent slopes
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SeD2- San Emigdio fine sandy loam, 8 to 15 percent slopes, er oded
- SgA- San Emigdio loam, 0 to 2 percent slopes
- SgC- San Emigdio loam, 2 to 8 percent slopes
- SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded
- SmE2- San Timoteo loam, 8 to 25 percent slopes, eroded
- Wh- Willows silty clay, strongly saline-alkali

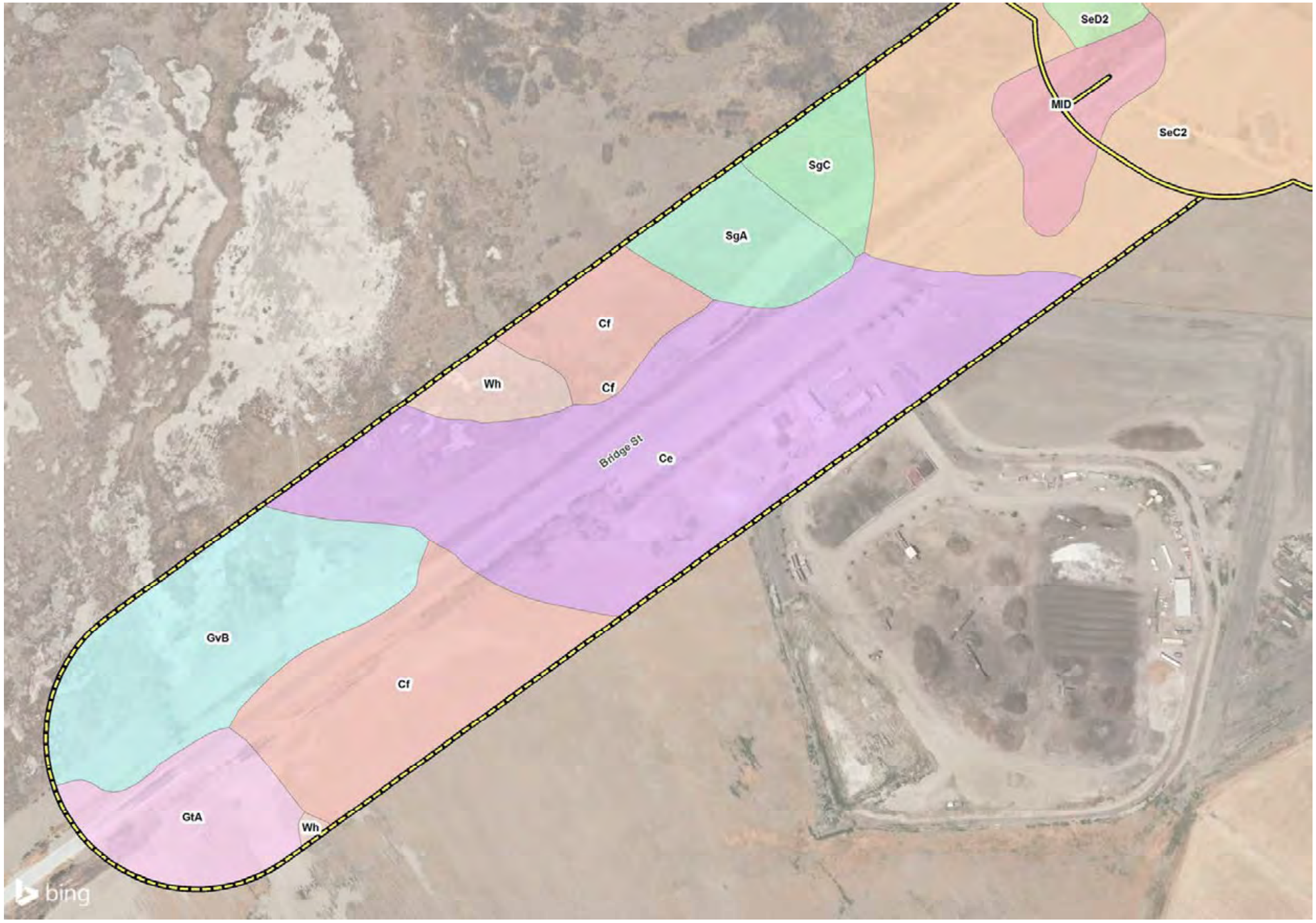
Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 4 - Sheet 9
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- Ce- Chino silt loam, drained
- Cf- Chino silt loam, drained, saline-alkali
- GtA- Grangeville fine sandy loam, drained, 0 to 2 percent sl opes
- GvB- Grangeville fine sandy loam, saline-alkali, 0 to 5 perc ent slopes
- MID- Metz gravelly sandy loam, 2 to 15 percent slopes
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SeD2- San Emigdio fine sandy loam, 8 to 15 percent slopes, er oded
- SgA- San Emigdio loam, 0 to 2 percent slopes
- SgC- San Emigdio loam, 2 to 8 percent slopes
- Wh- Willows silty clay, strongly saline-alkali

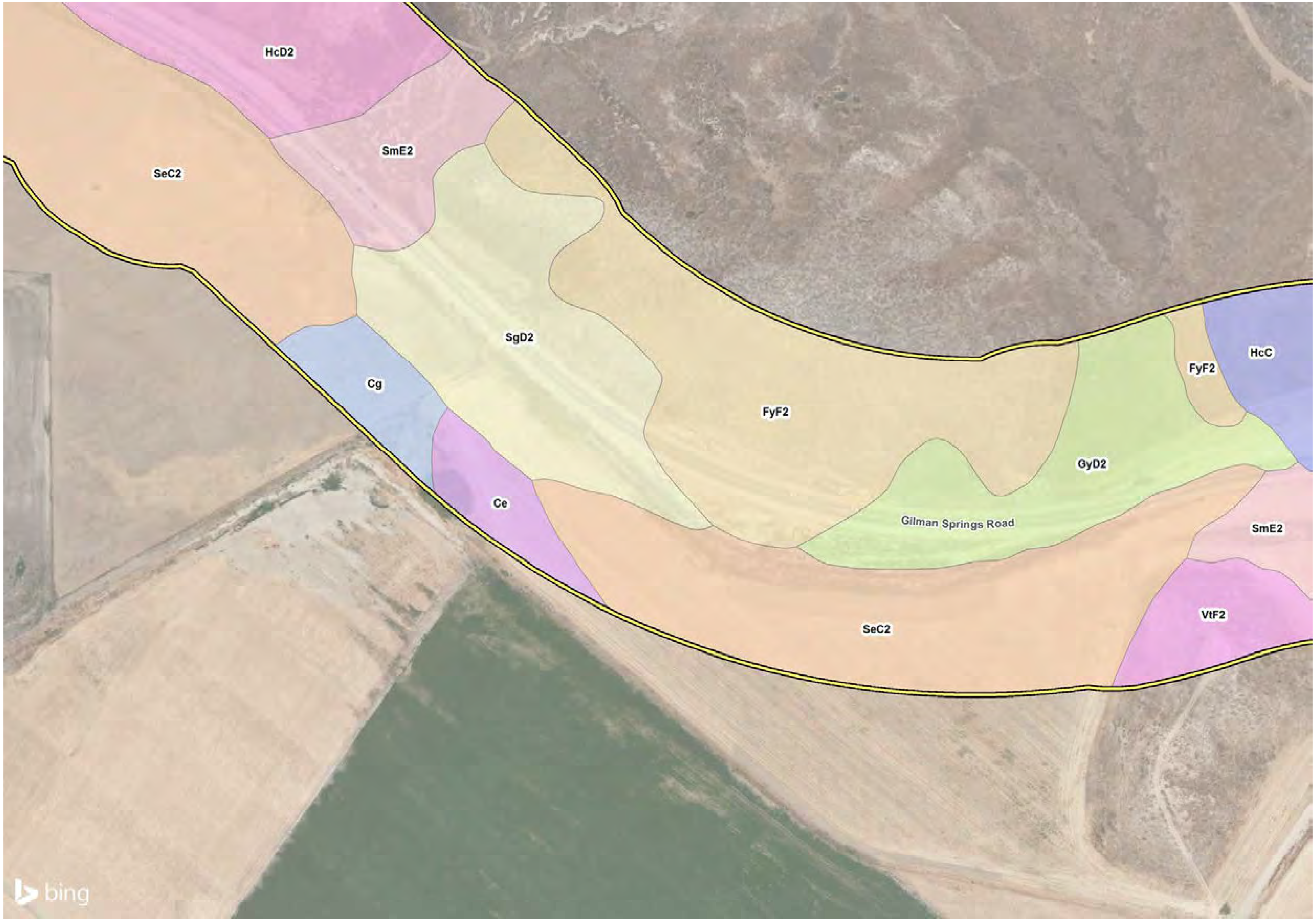
Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 4 - Sheet 10
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- Ce- Chino silt loam, drained
- Cg- Chino silt loam, drained, strongly saline-alkali
- FyF2- Friant rocky fine sandy loam, 25 to 50 percent slopes, eroded
- GyD2- Greenfield sandy loam, 8 to 15 percent slopes, eroded
- HcC- Hanford coarse sandy loam, 2 to 8 percent slopes
- HcD2- Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded
- SmE2- San Timoteo loam, 8 to 25 percent slopes, eroded
- VtF2- Vista rocky coarse sandy loam, 2 to 35 percent slopes, eroded

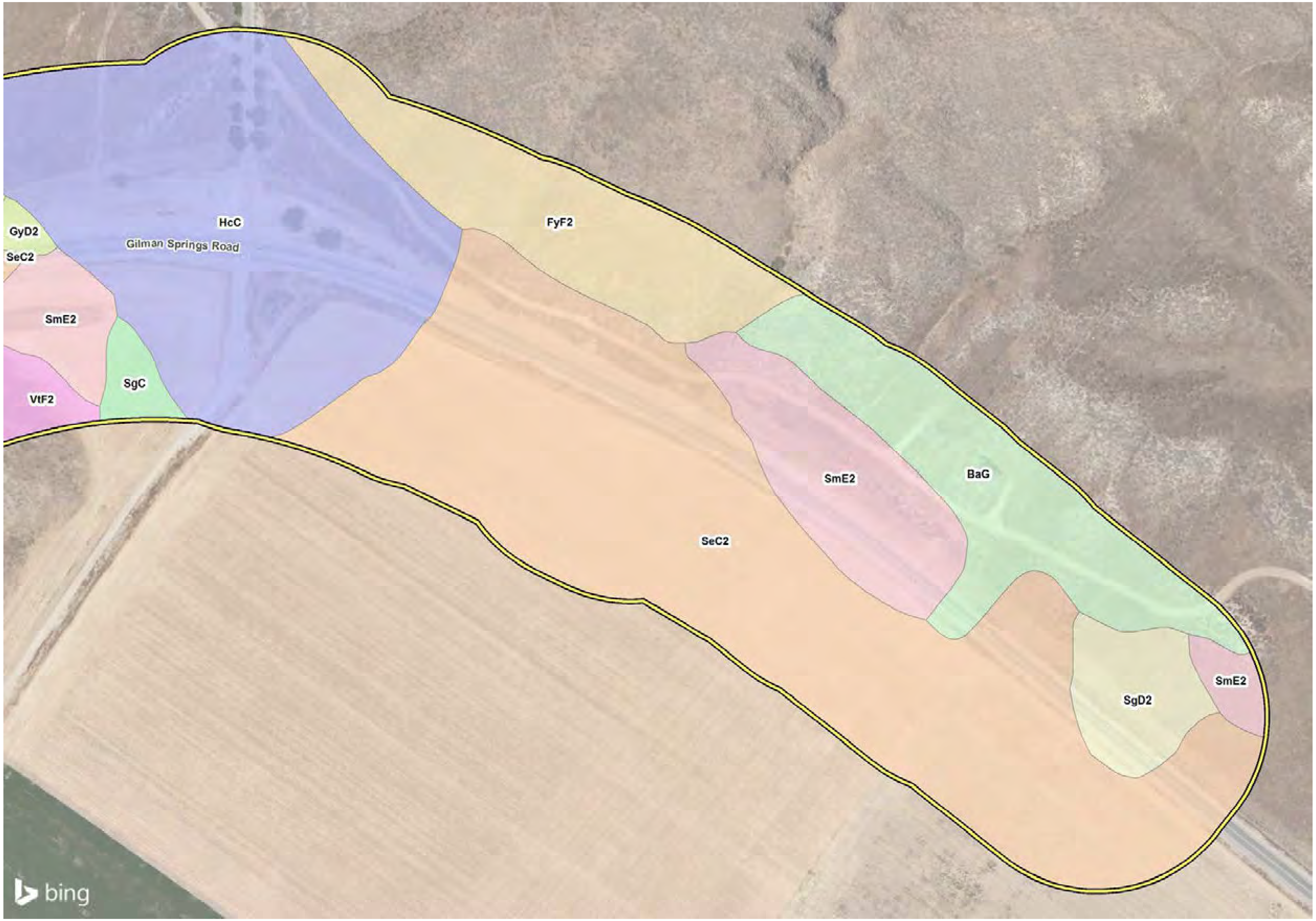
Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 4 - Sheet 11
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*

Soils

- BaG- Badland
- FyF2- Friant rocky fine sandy loam, 25 to 50 percent slopes, eroded
- GyD2- Greenfield sandy loam, 8 to 15 percent slopes, eroded
- HcC- Hanford coarse sandy loam, 2 to 8 percent slopes
- SeC2- San Emigdio fine sandy loam, 2 to 8 percent slopes, ero ded
- SgC- San Emigdio loam, 2 to 8 percent slopes
- SgD2- San Emigdio loam, 8 to 15 percent slopes, eroded
- SmE2- San Timoteo loam, 8 to 25 percent slopes, eroded
- VtF2- Vista rocky coarse sandy loam, 2 to 35 percent slopes, eroded

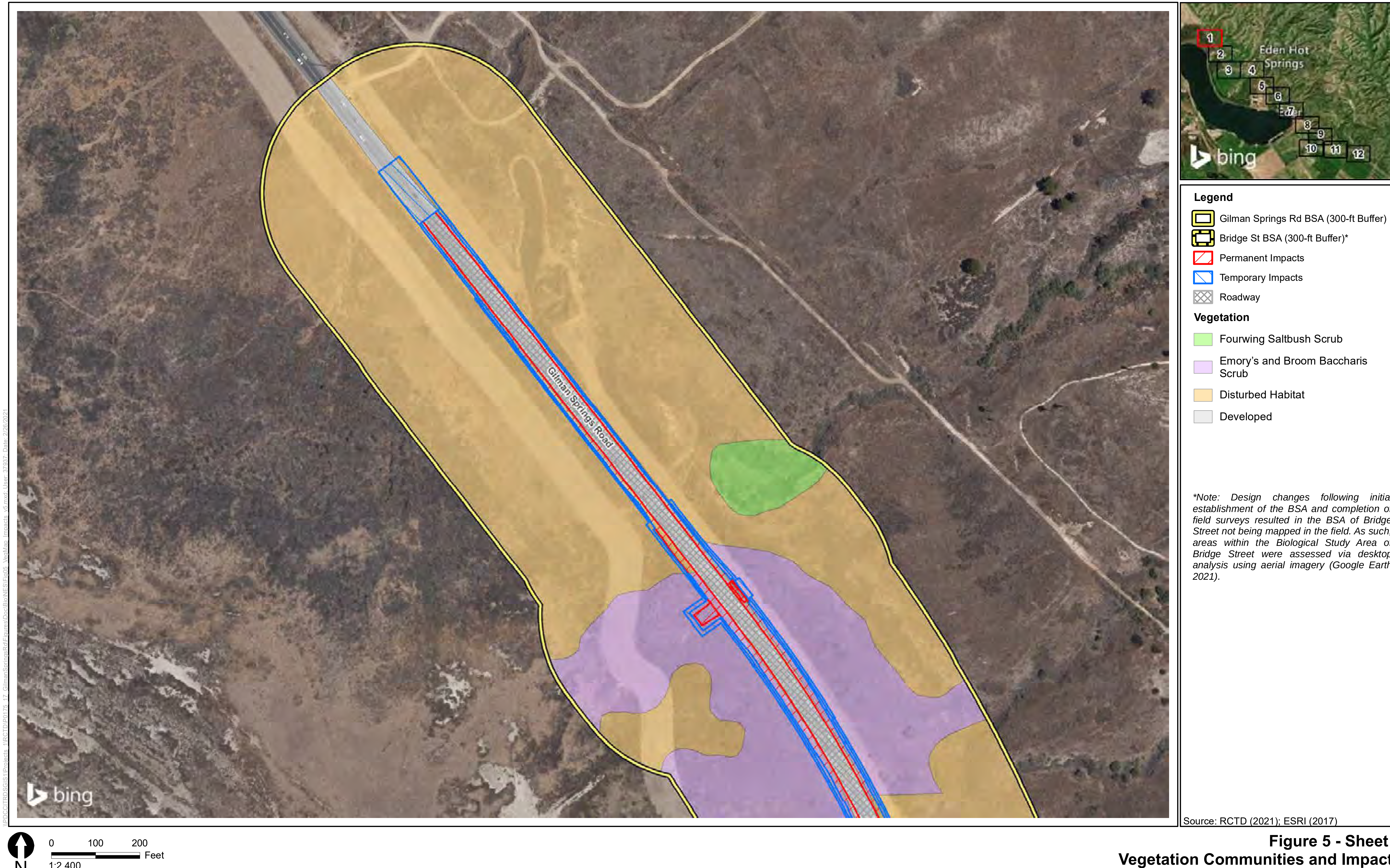
Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 4 - Sheet 12
Soils
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

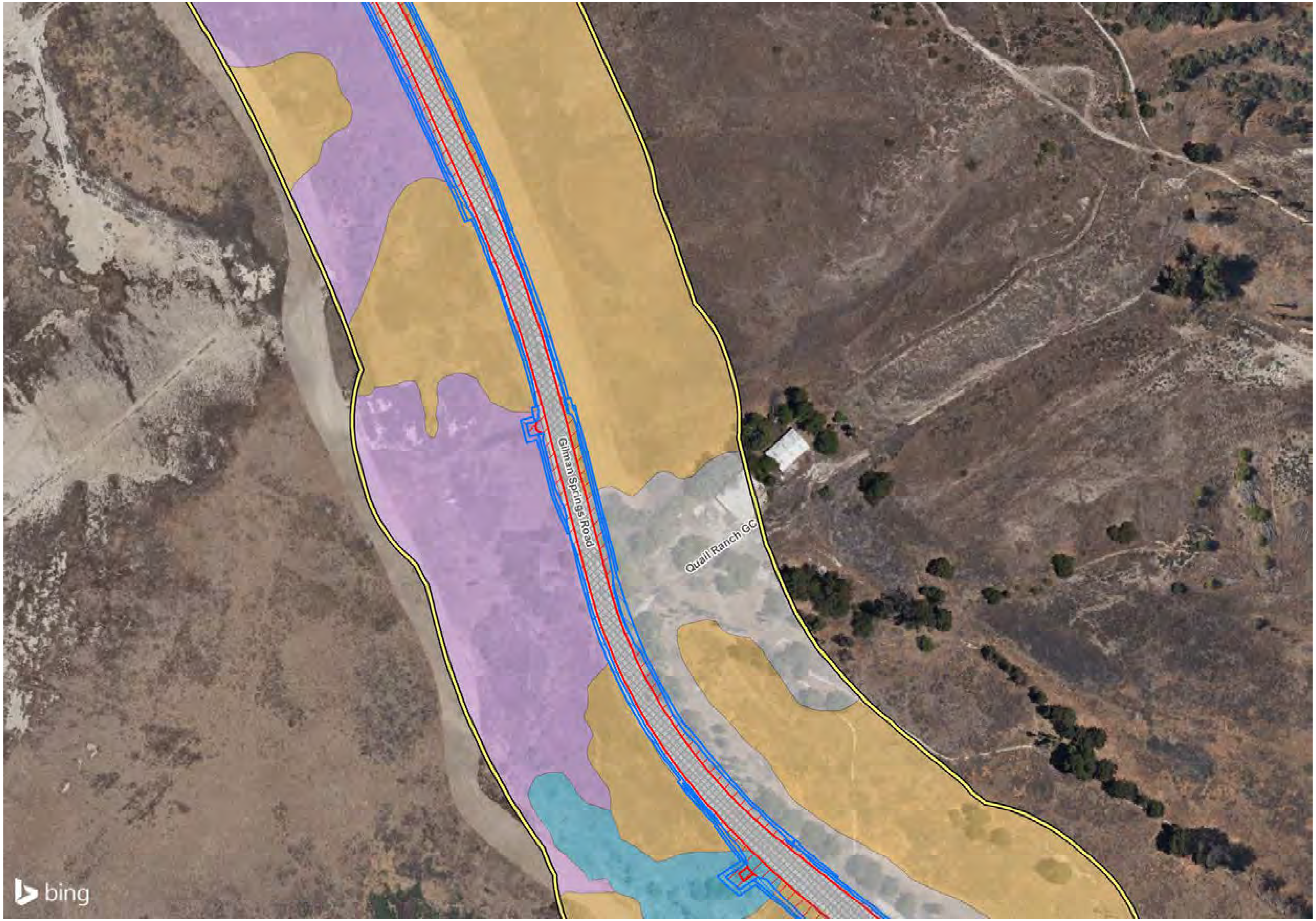
Vegetation

- Fourwing Saltbush Scrub
- Emory's and Broom Baccharis Scrub
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

Figure 5 - Sheet 1
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Goodding's Willow - Red Willow Riparian Woodland and Forest
- Emory's and Broom Baccharis Scrub
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 2
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Goodding's Willow - Red Willow Riparian Woodland and Forest
- Brittle Bush Scrub
- Desert-Willow - Smoketree Wash Woodland
- Disturbed Fourwing Saltbush Scrub
- Emory's and Broom Baccharis Scrub
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 3
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Brittle Bush Scrub
- Desert-Willow - Smoketree Wash Woodland
- Fourwing Saltbush Scrub
- Disturbed Fourwing Saltbush Scrub
- Tamarisk Thickets
- Disturbed Habitat
- Developed

Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).

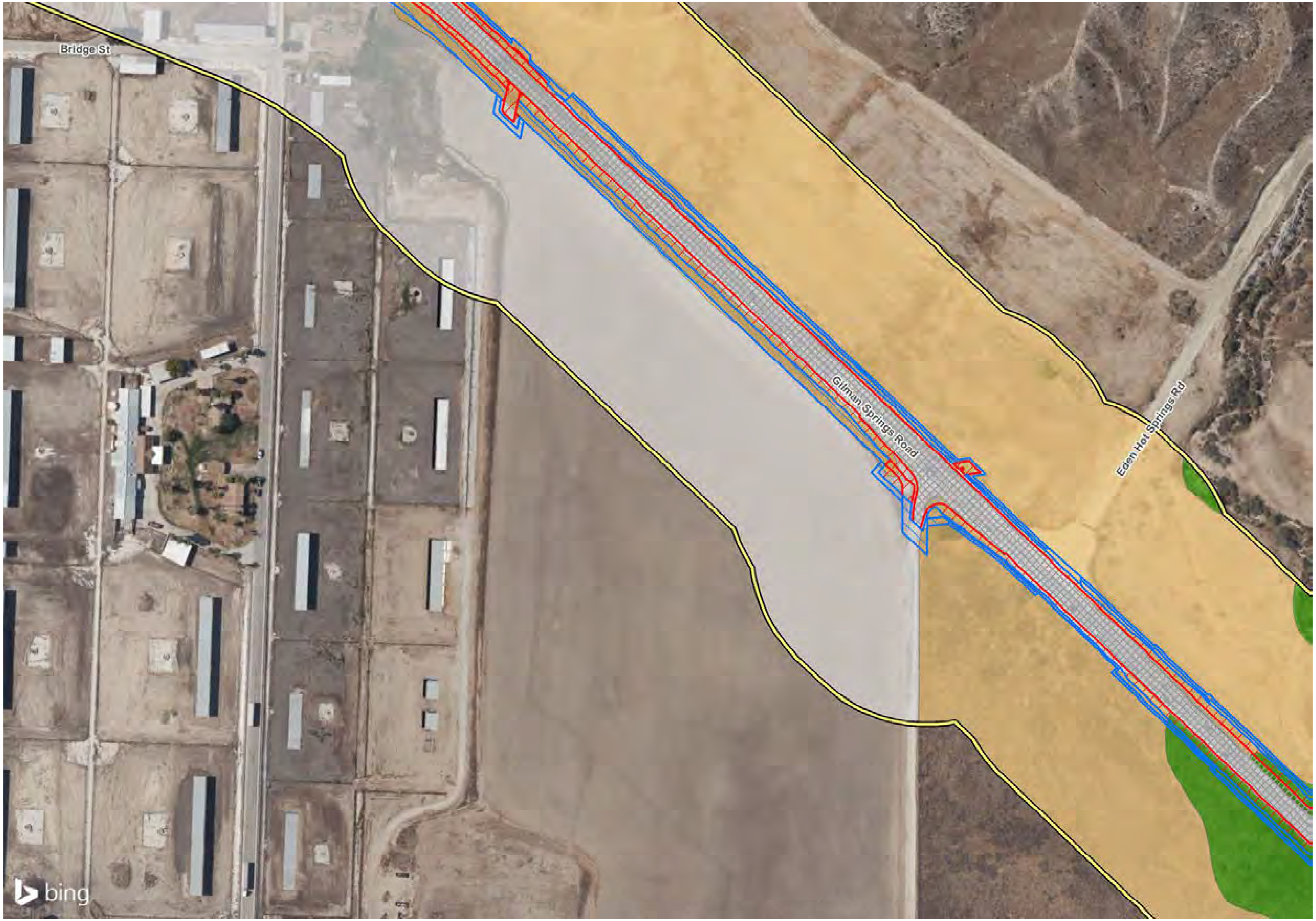
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 4
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Disturbed Fourwing Saltbush Scrub
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

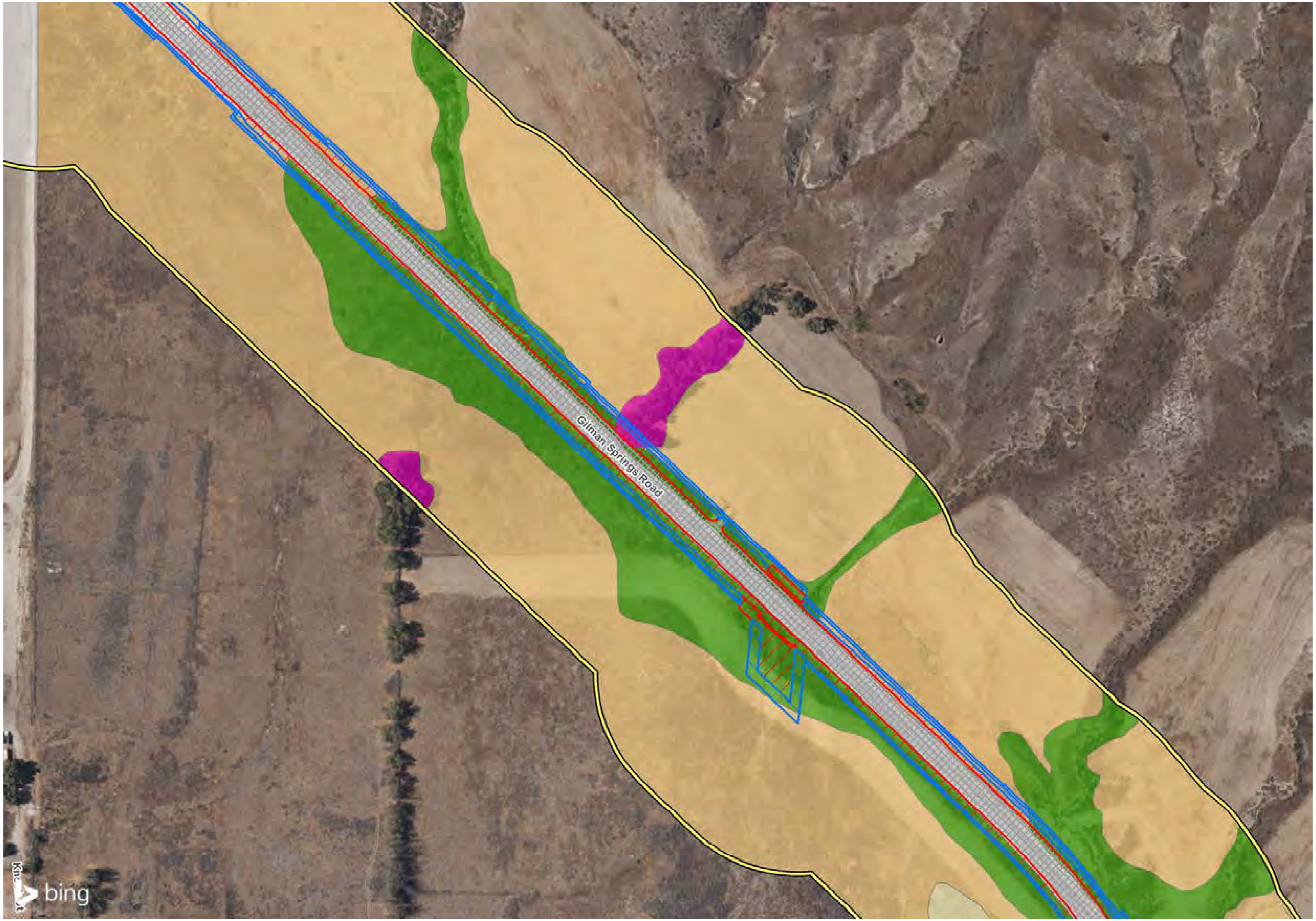
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 5
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Disturbed Fourwing Saltbush Scrub
- Wild Oats and Annual Brome Grasslands
- Tamarisk Thickets
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 6
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Disturbed Fourwing Saltbush Scrub
- Mule Fat Thickets
- Wild Oats and Annual Brome Grasslands
- Tamarisk Thickets
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

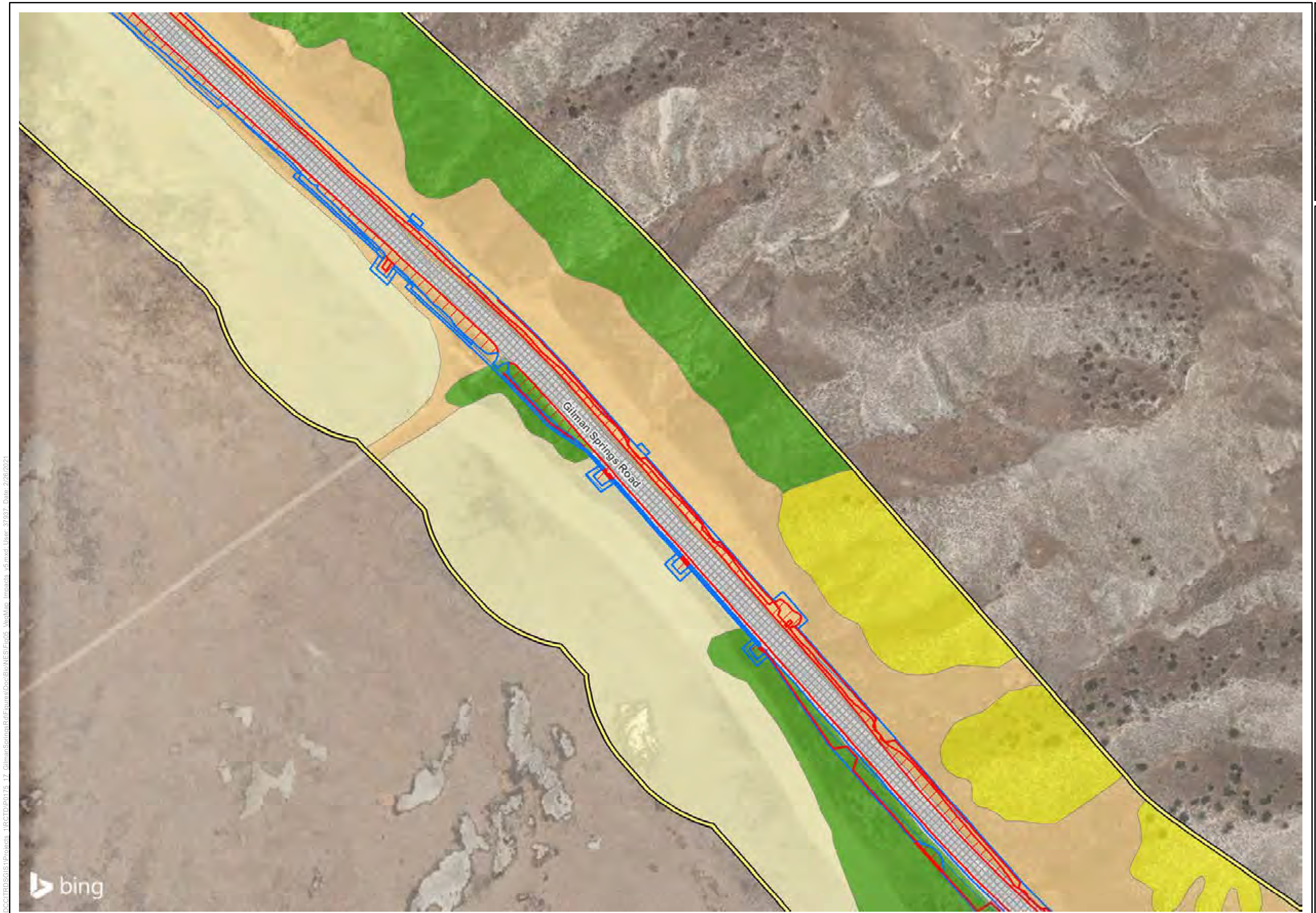
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 7
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Brittle Bush Scrub
- Disturbed Fourwing Saltbush Scrub
- Wild Oats and Annual Brome Grasslands
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

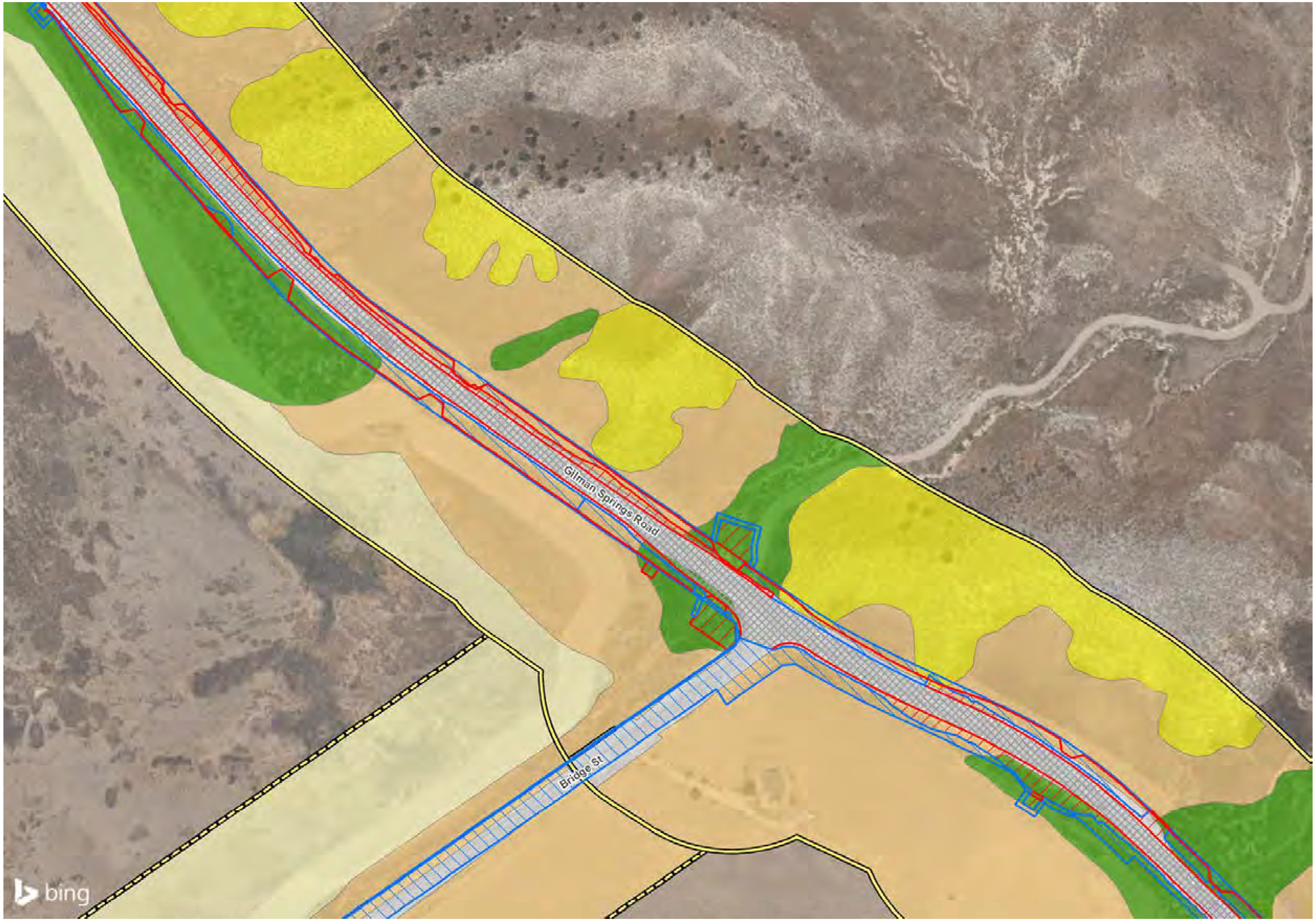
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 8
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Brittle Bush Scrub
- Disturbed Fourwing Saltbush Scrub
- Wild Oats and Annual Brome Grasslands
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

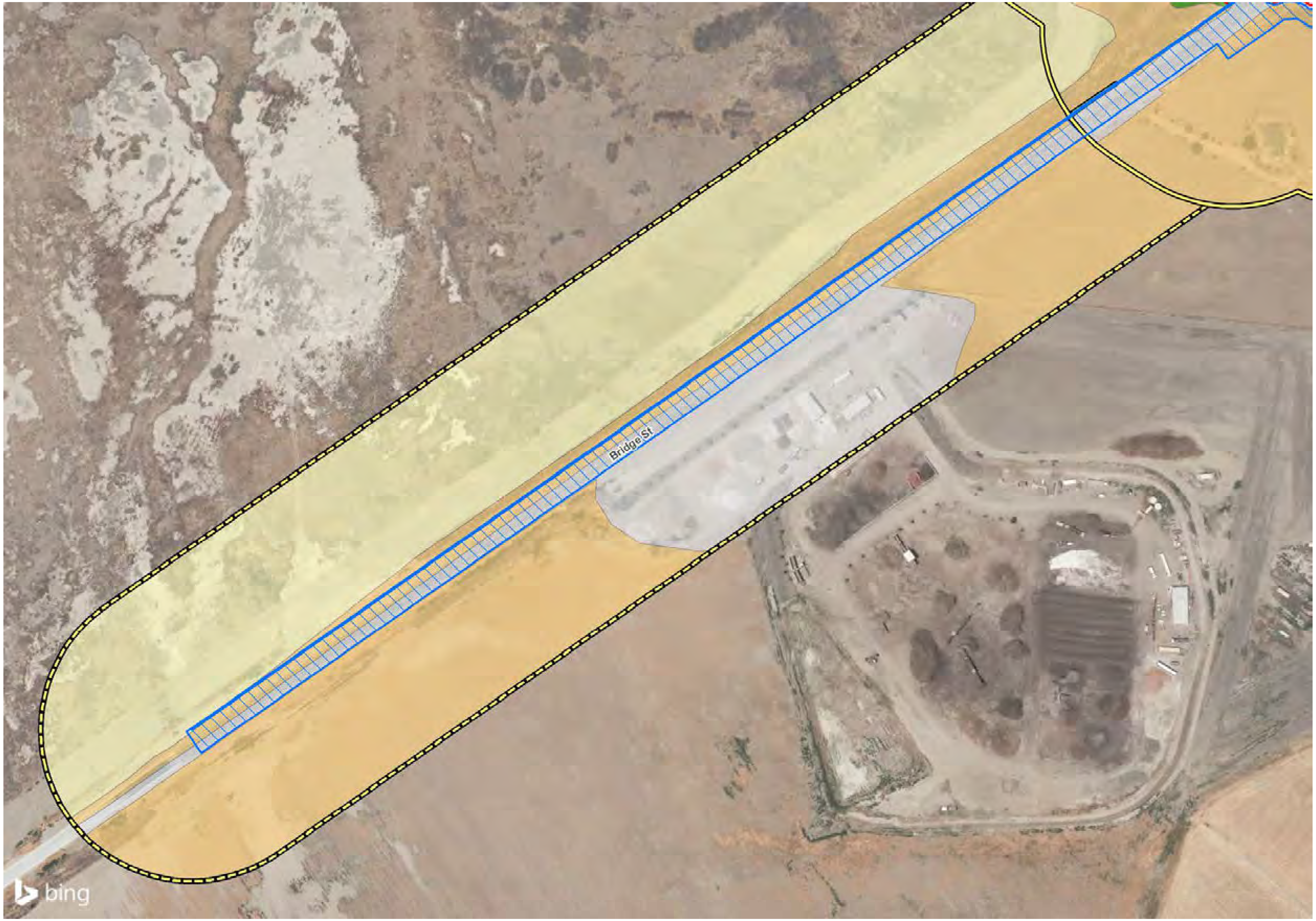
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 9
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Disturbed Fourwing Saltbush Scrub
- Wild Oats and Annual Brome Grasslands
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 10
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Brittle Bush Scrub
- Disturbed Brittle Bush Scrub
- Disturbed Fourwing Saltbush Scrub
- Disturbed Habitat
- Developed

**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 5 - Sheet 11
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway

Vegetation

- Brittle Bush Scrub
- Disturbed Brittle Bush Scrub
- Fourwing Saltbush Scrub
- Disturbed Fourwing Saltbush Scrub
- Scale Broom Scrub
- Disturbed Habitat
- Developed

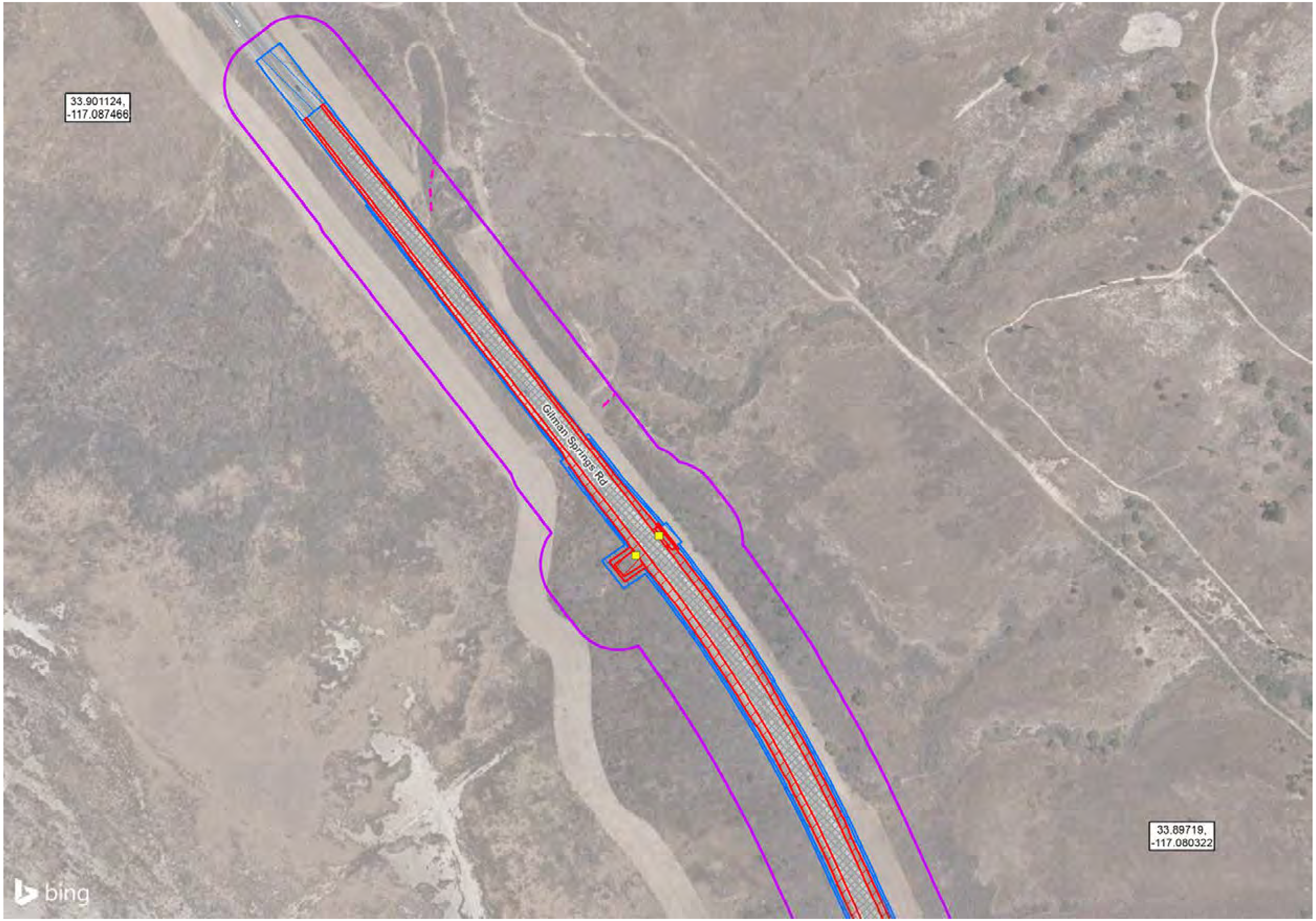
**Note: Design changes following initial establishment of the BSA and completion of field surveys resulted in the BSA of Bridge Street not being mapped in the field. As such, areas within the Biological Study Area of Bridge Street were assessed via desktop analysis using aerial imagery (Google Earth 2021).*

Source: RCTD (2021); ESRI (2017)

N

0 100 200
Feet
1:2,400

Figure 5 - Sheet 12
Vegetation Communities and Impacts
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

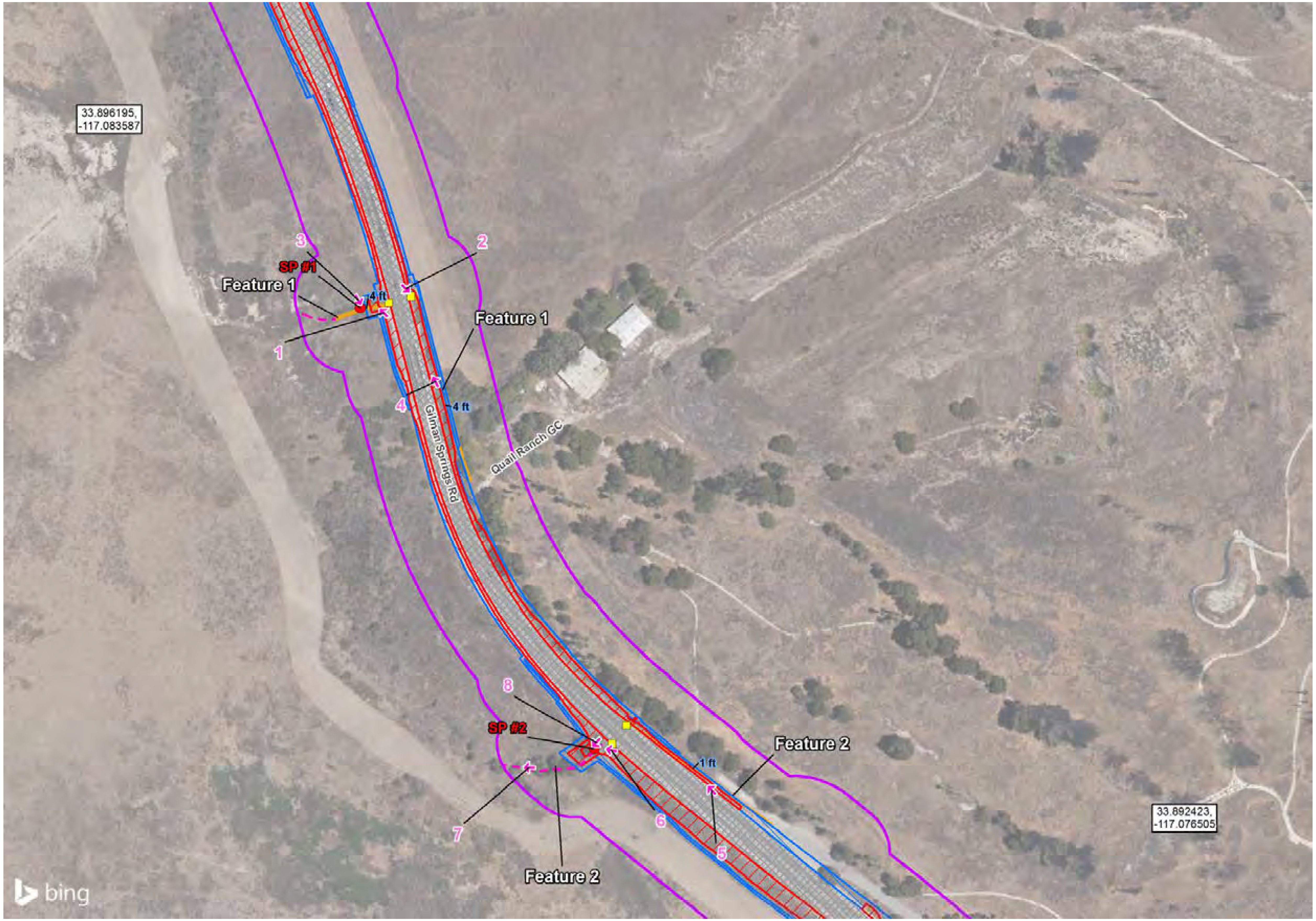
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 1
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

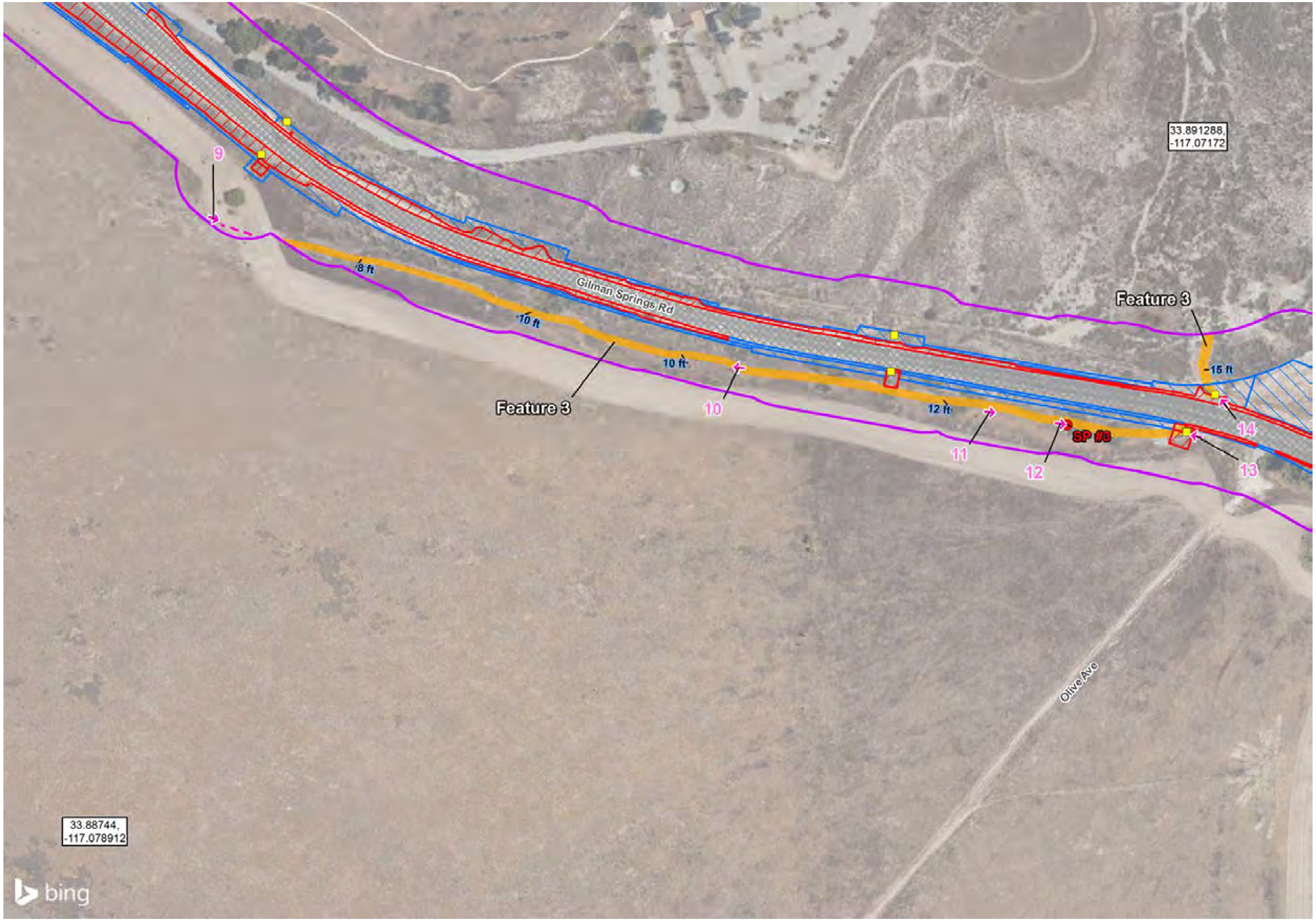
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 2
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 3
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

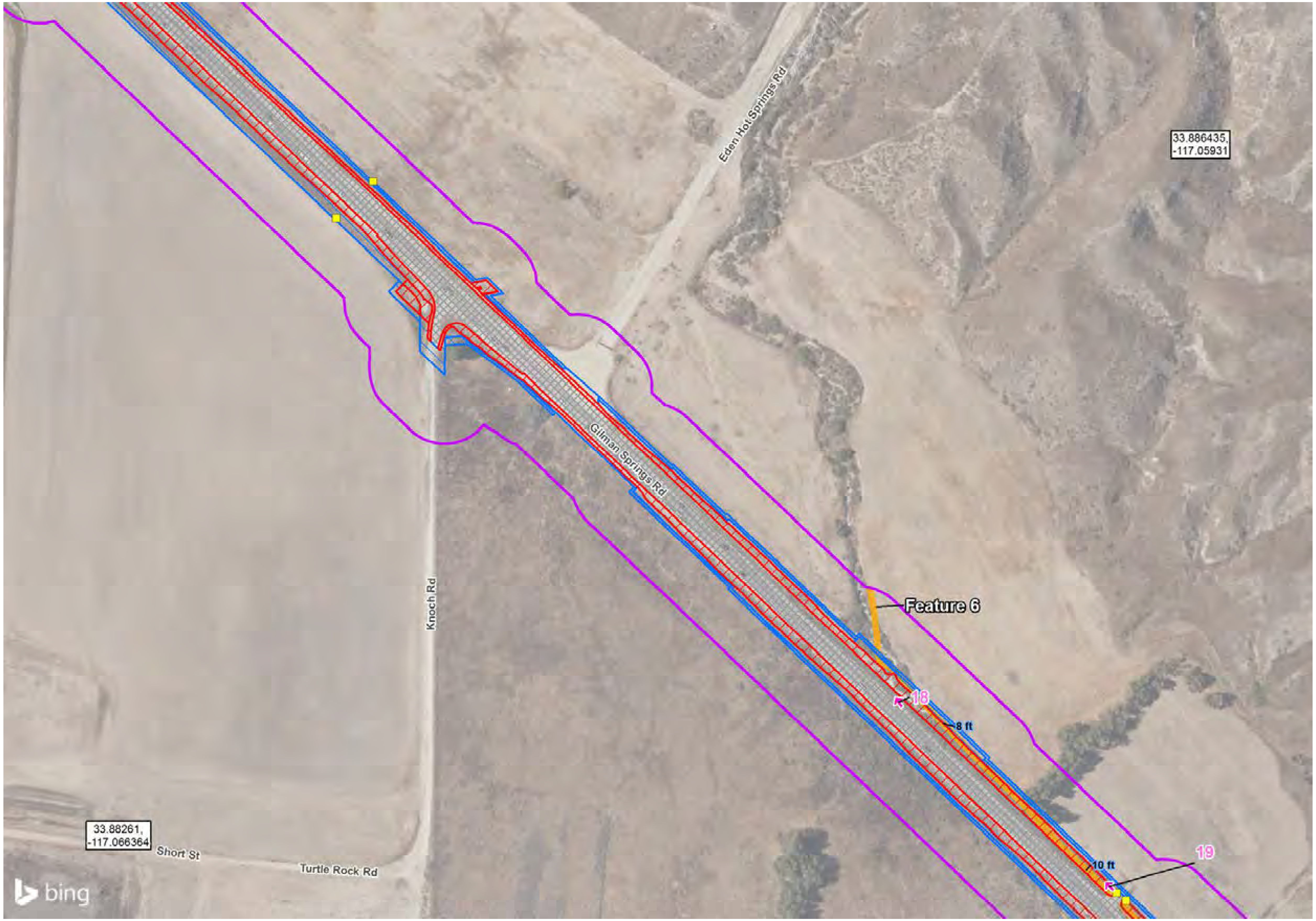
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 4
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

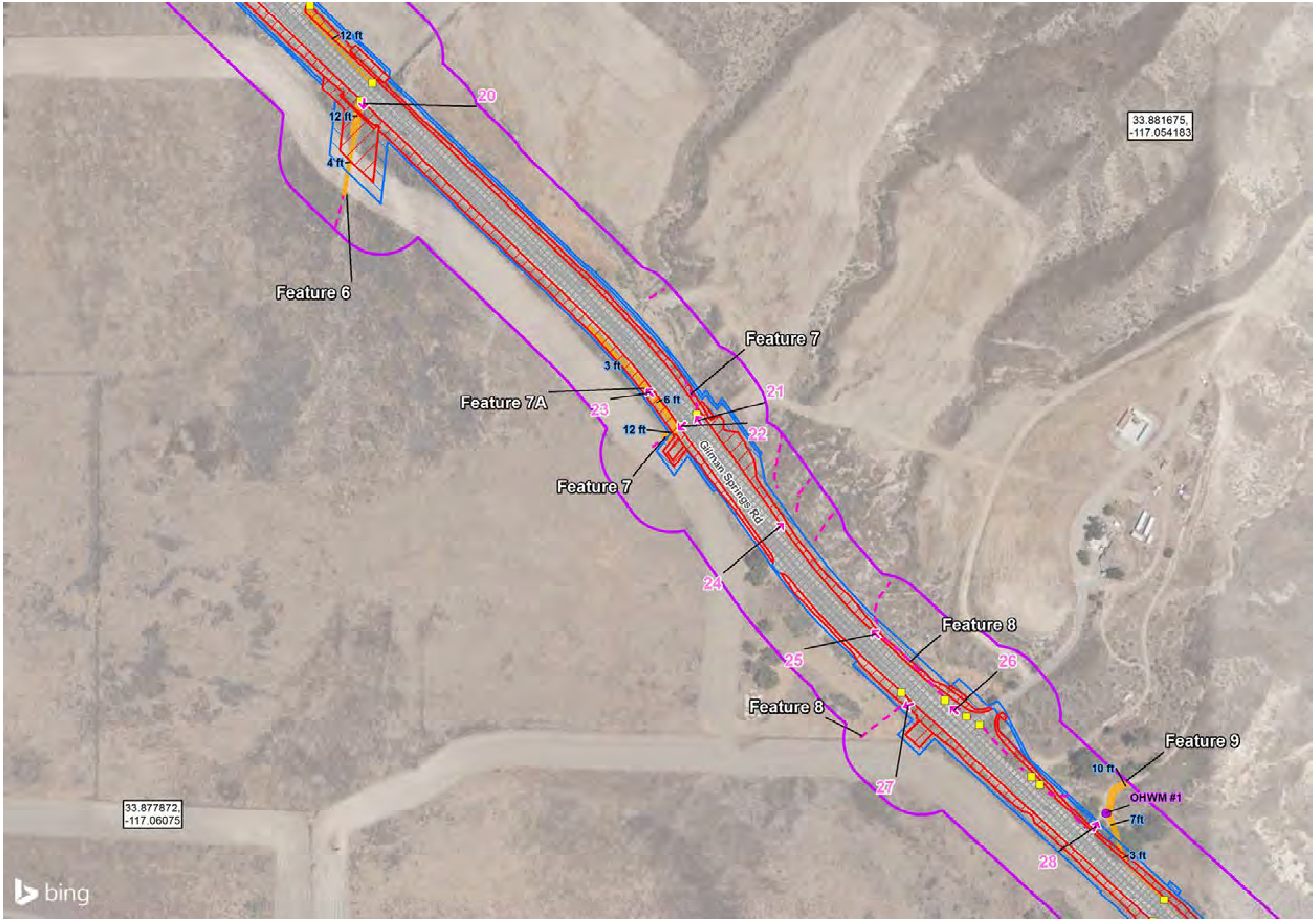
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 5
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

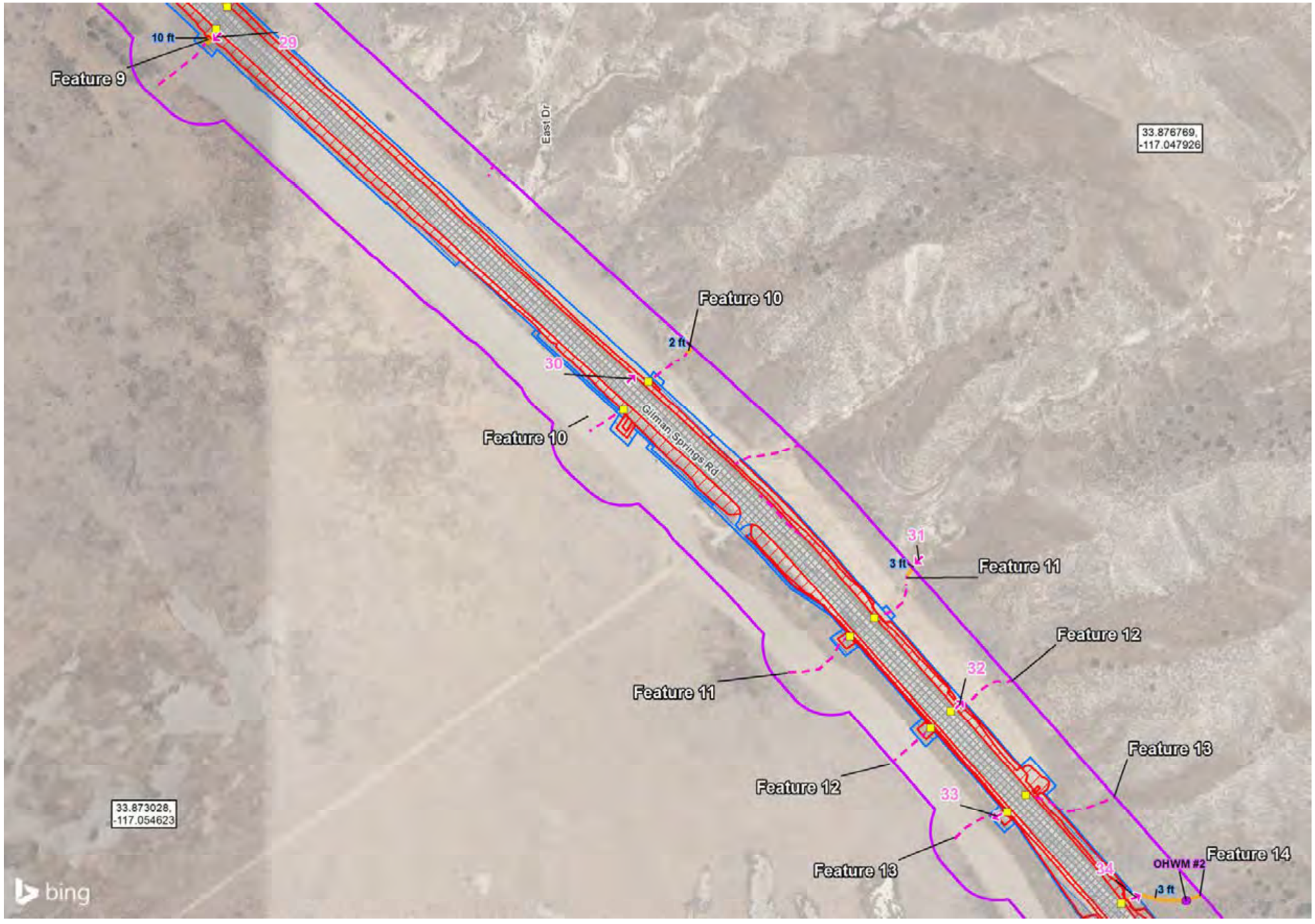
ft = Width at Ordinary High Water Mark

Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet
1:2,400

Figure 6A- Sheet 6
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

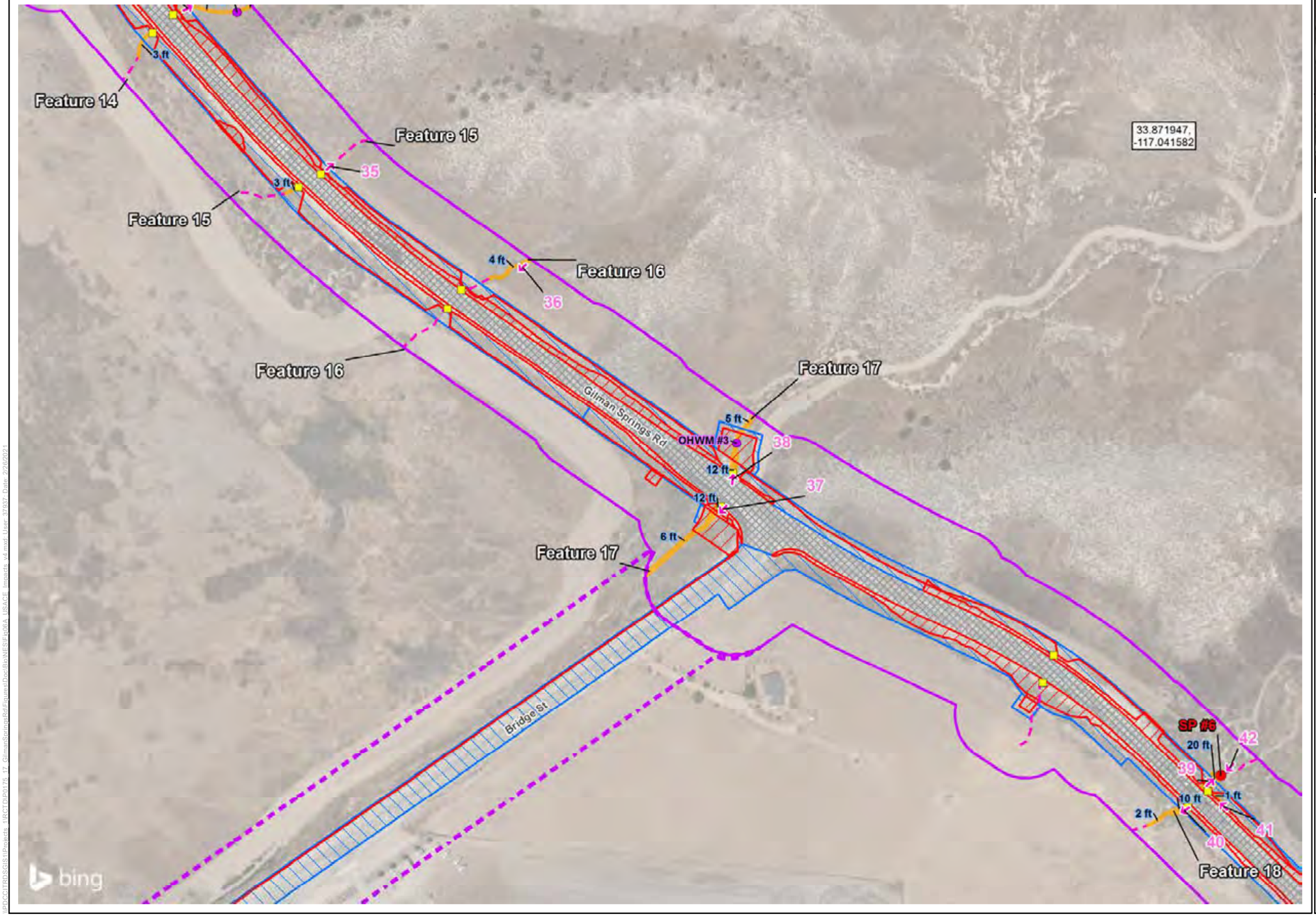
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 7
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

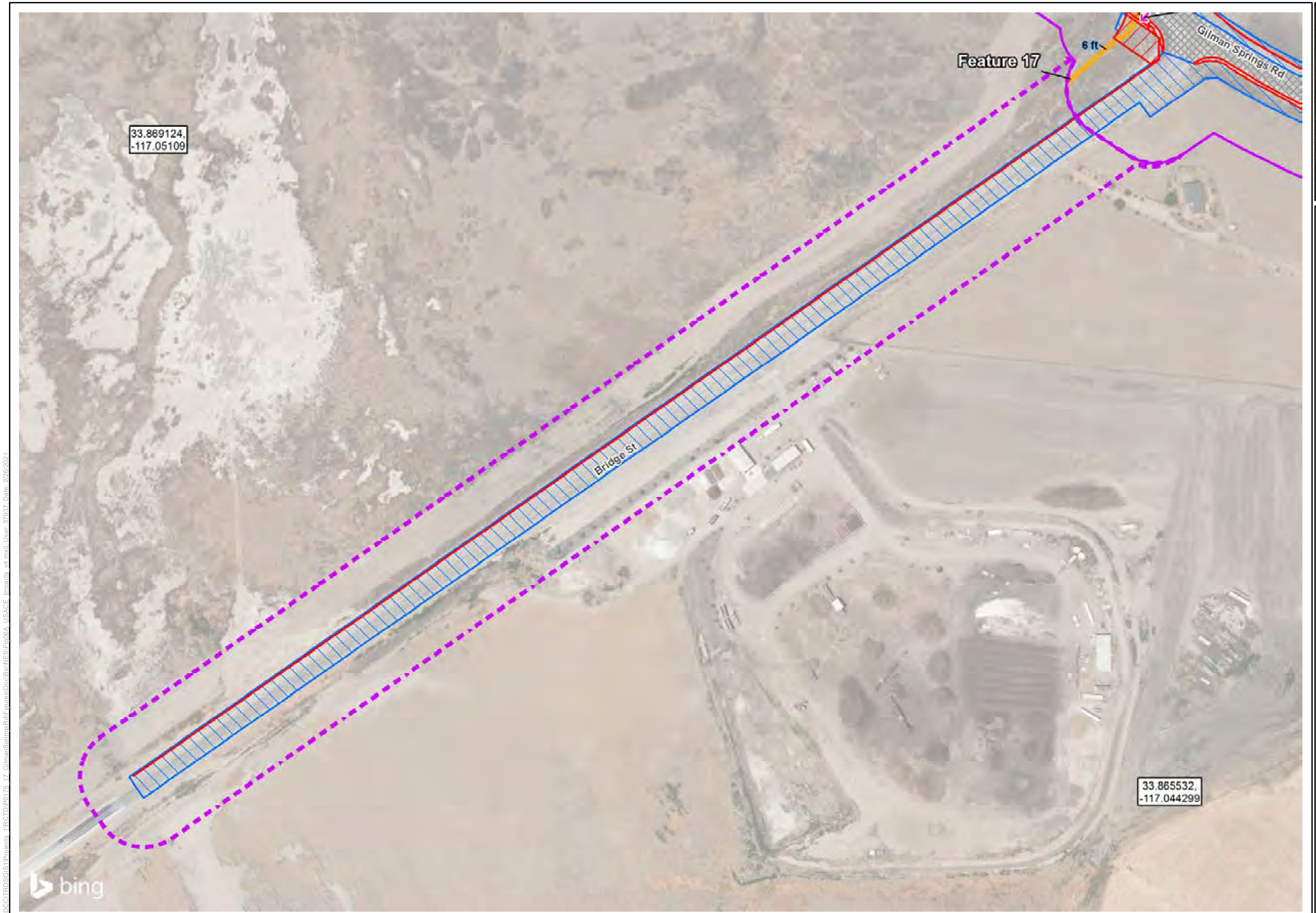
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 8
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

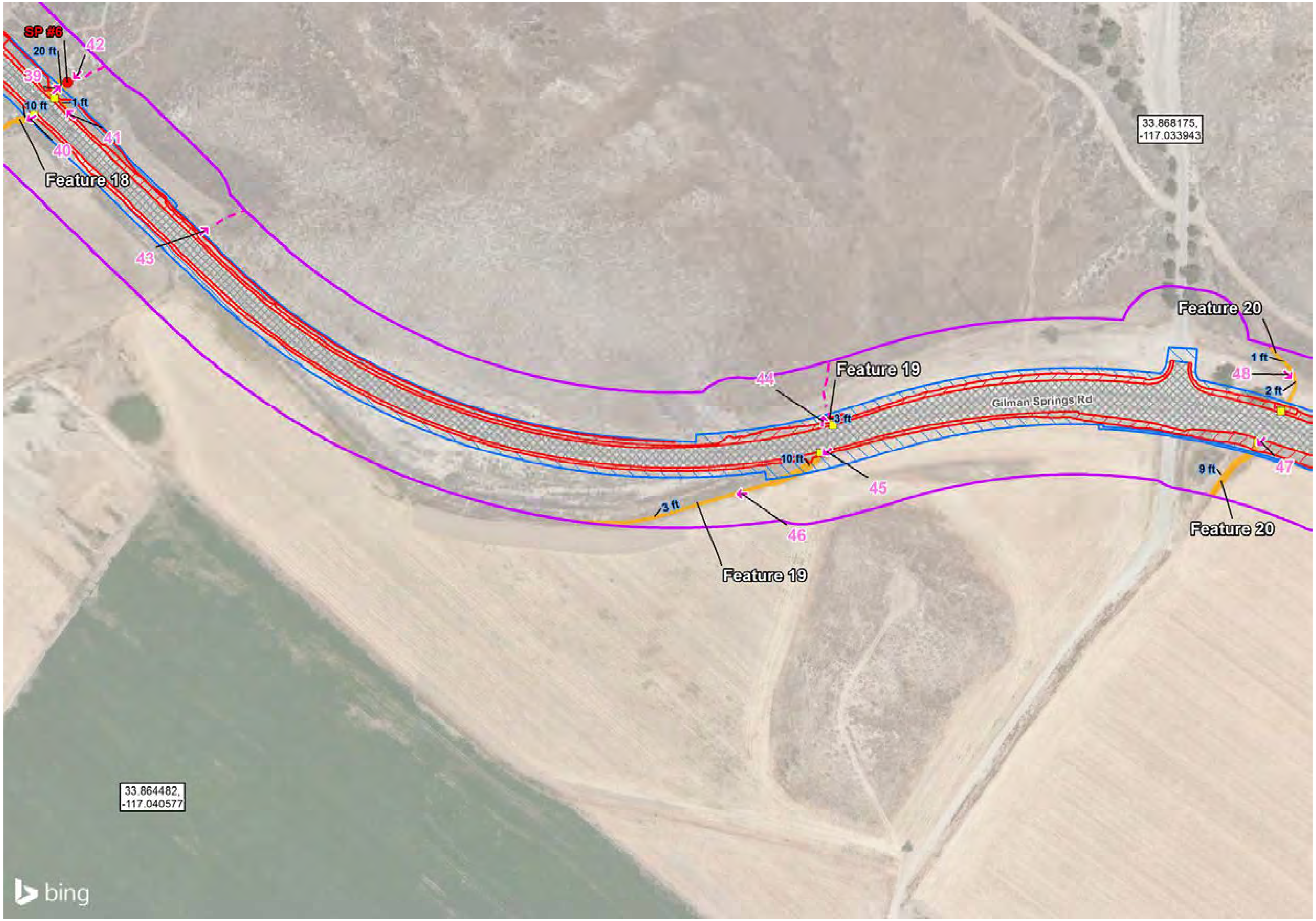
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 9
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

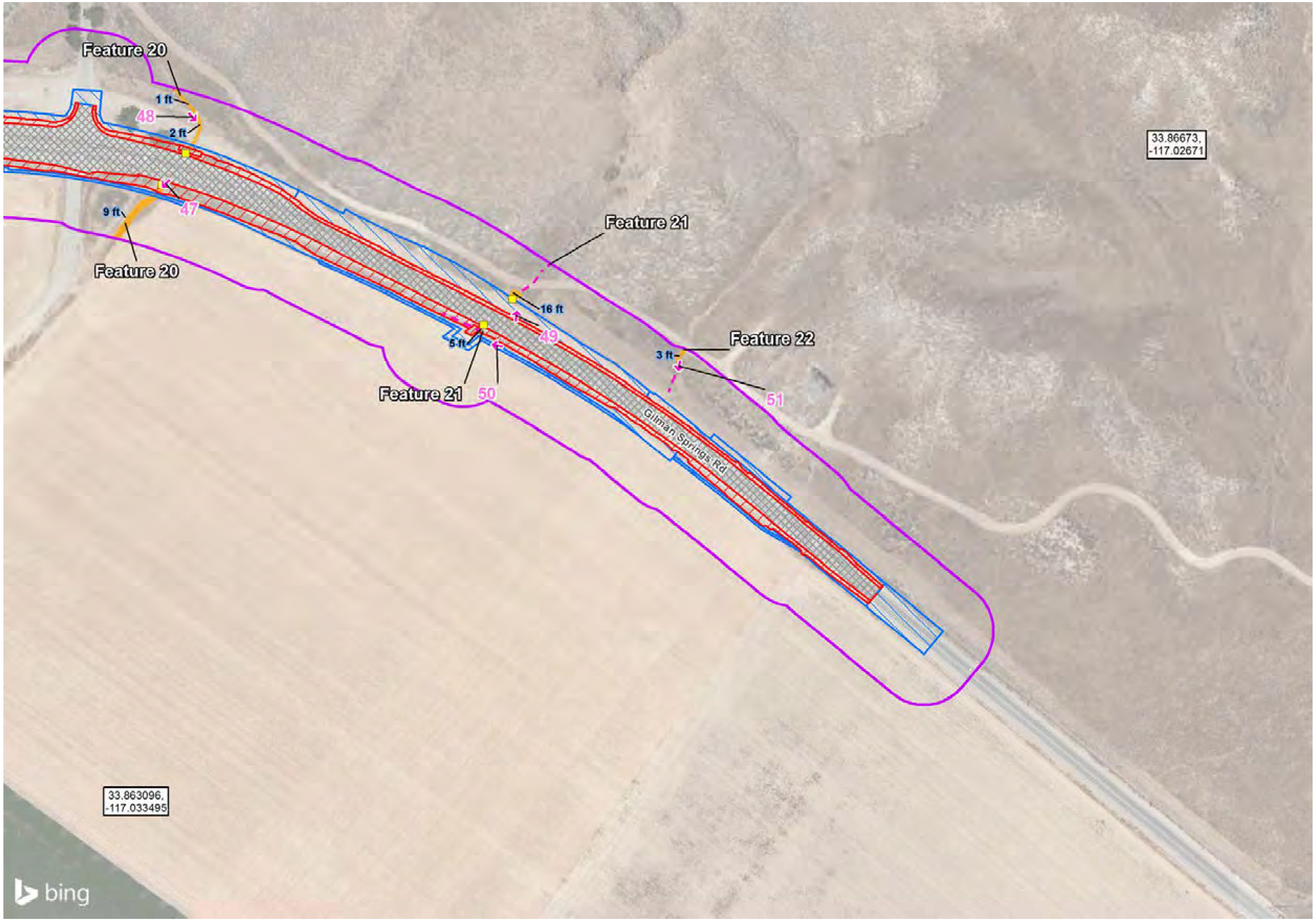
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 10
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Wetland Sample Point (SP#)
- OHWM Data Form
- Photo Location
- Culvert
- Swale

Potential USACE/RWQCB Jurisdiction

- Non-wetland Waters of the U.S.
- Wetland Waters of the U.S.

ft = Width at Ordinary High Water Mark

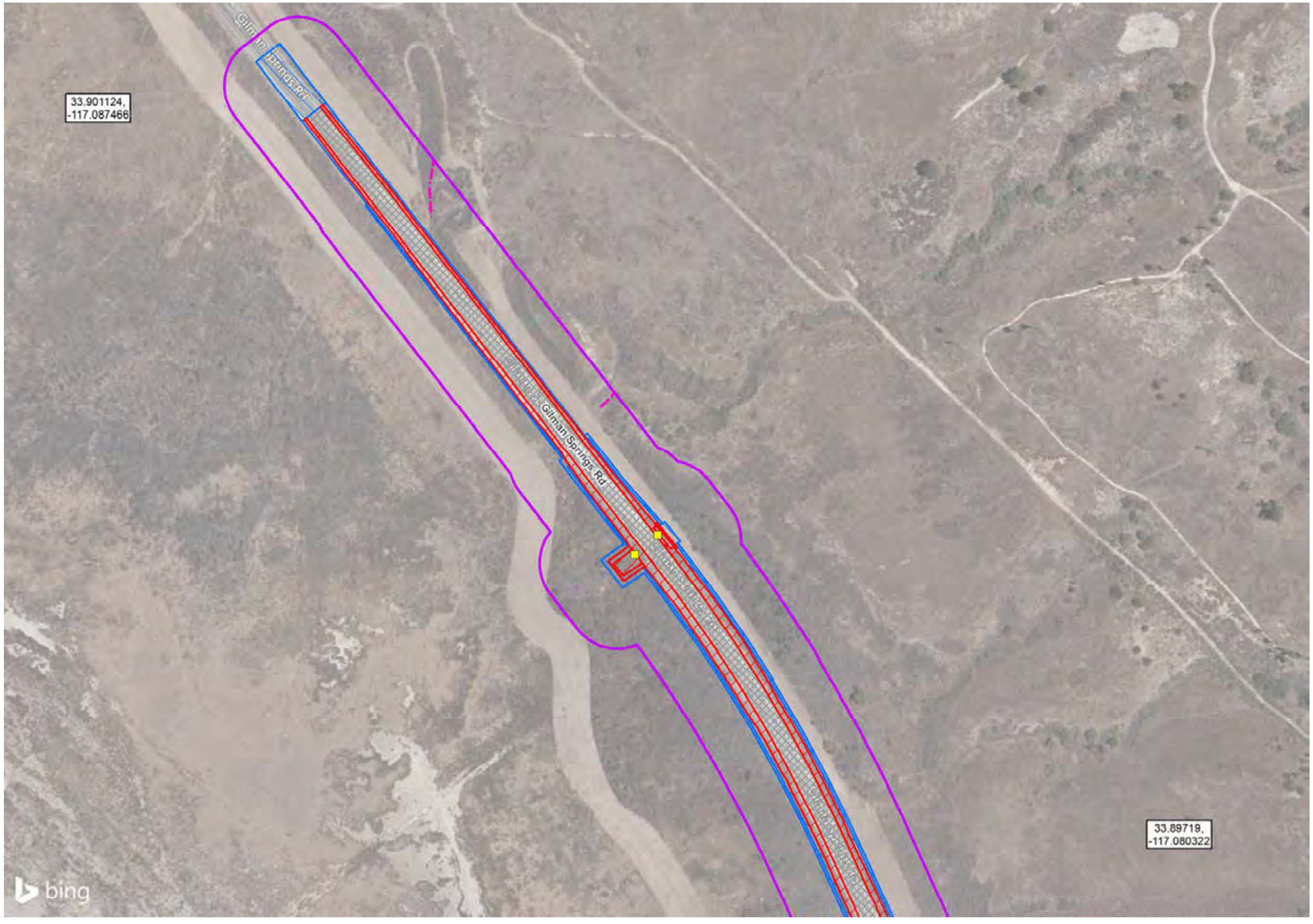
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6A- Sheet 11
USACE/RWQCB Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

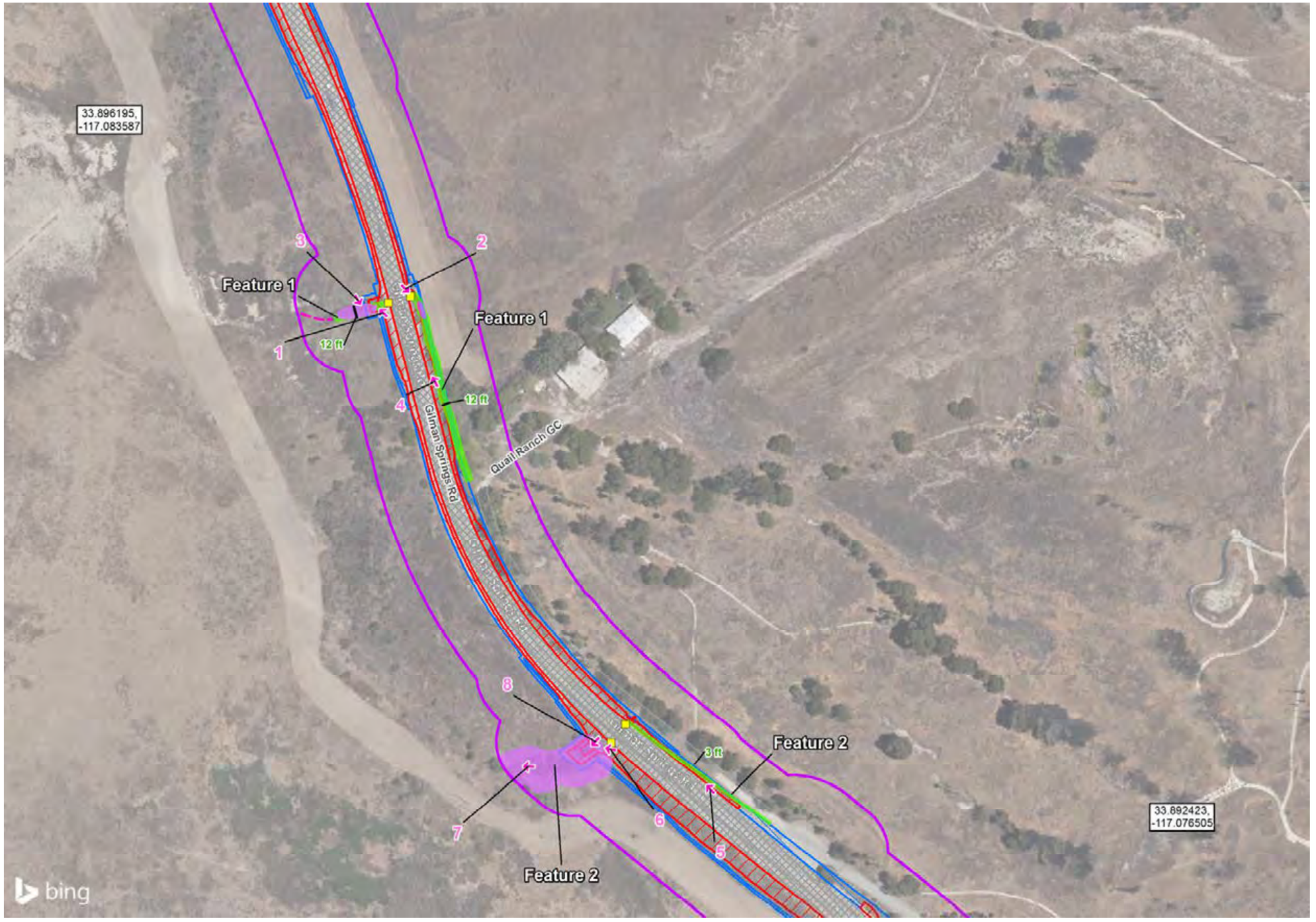
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 1
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

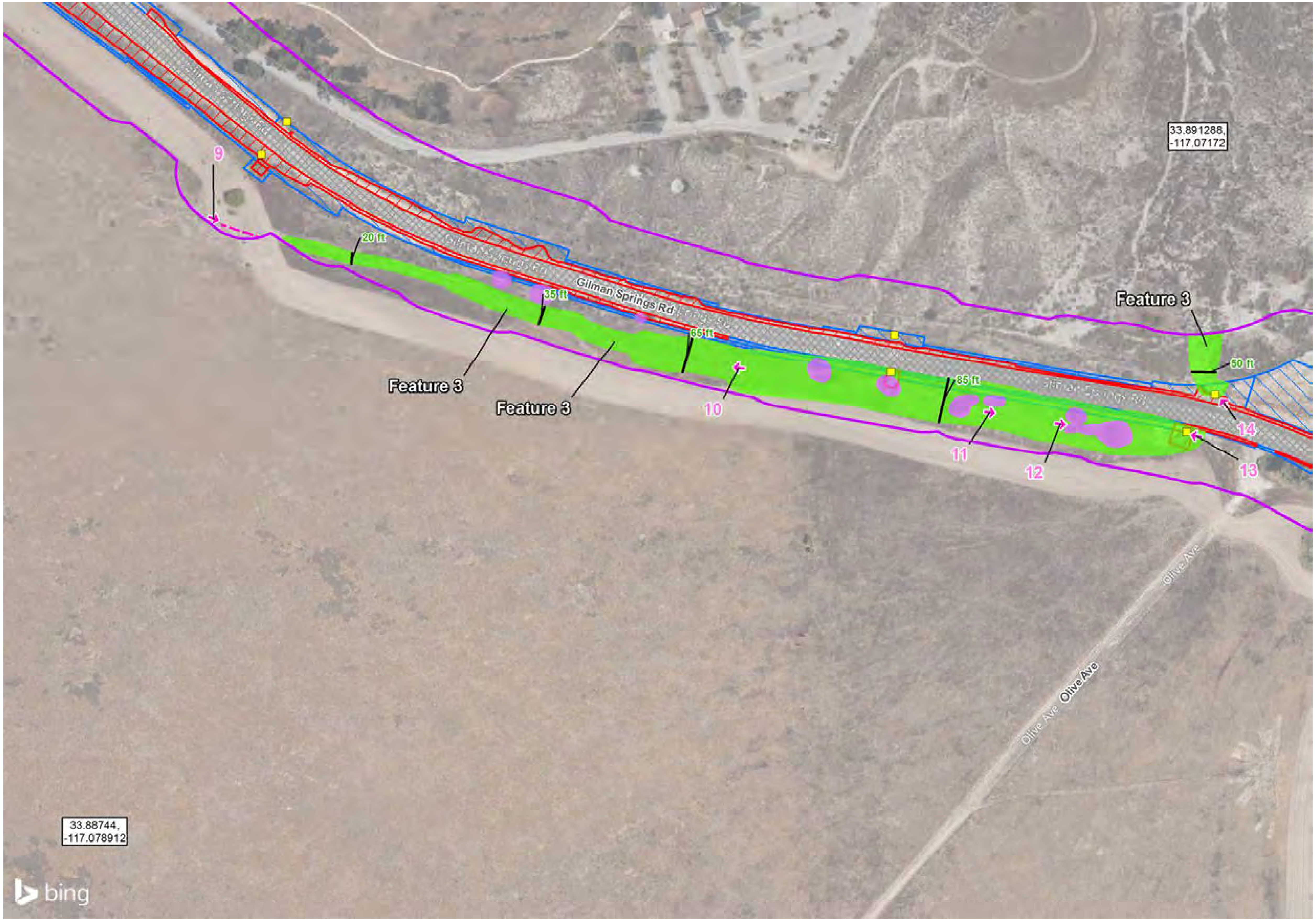
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 2
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 3
CDFW Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

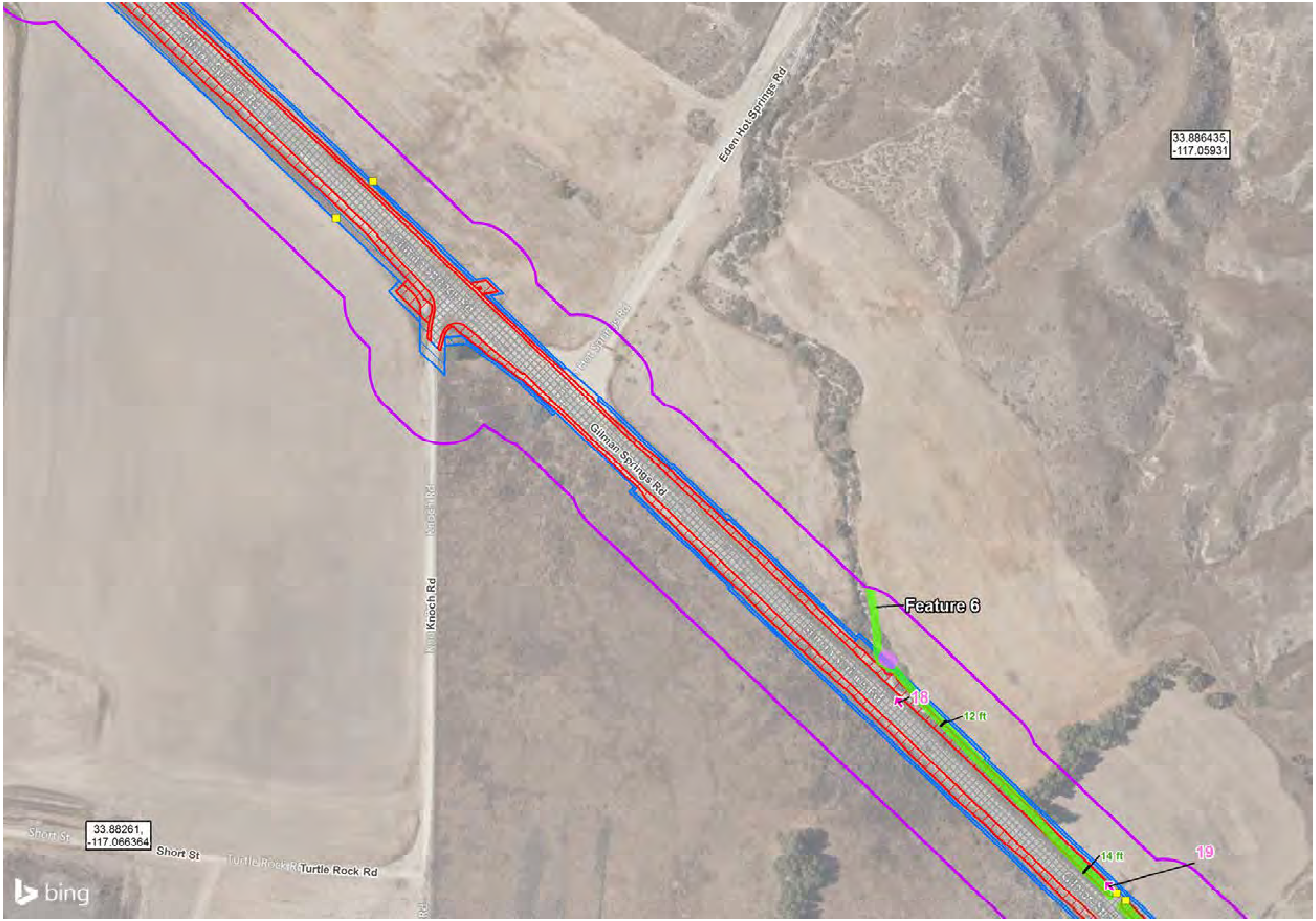
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 4
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

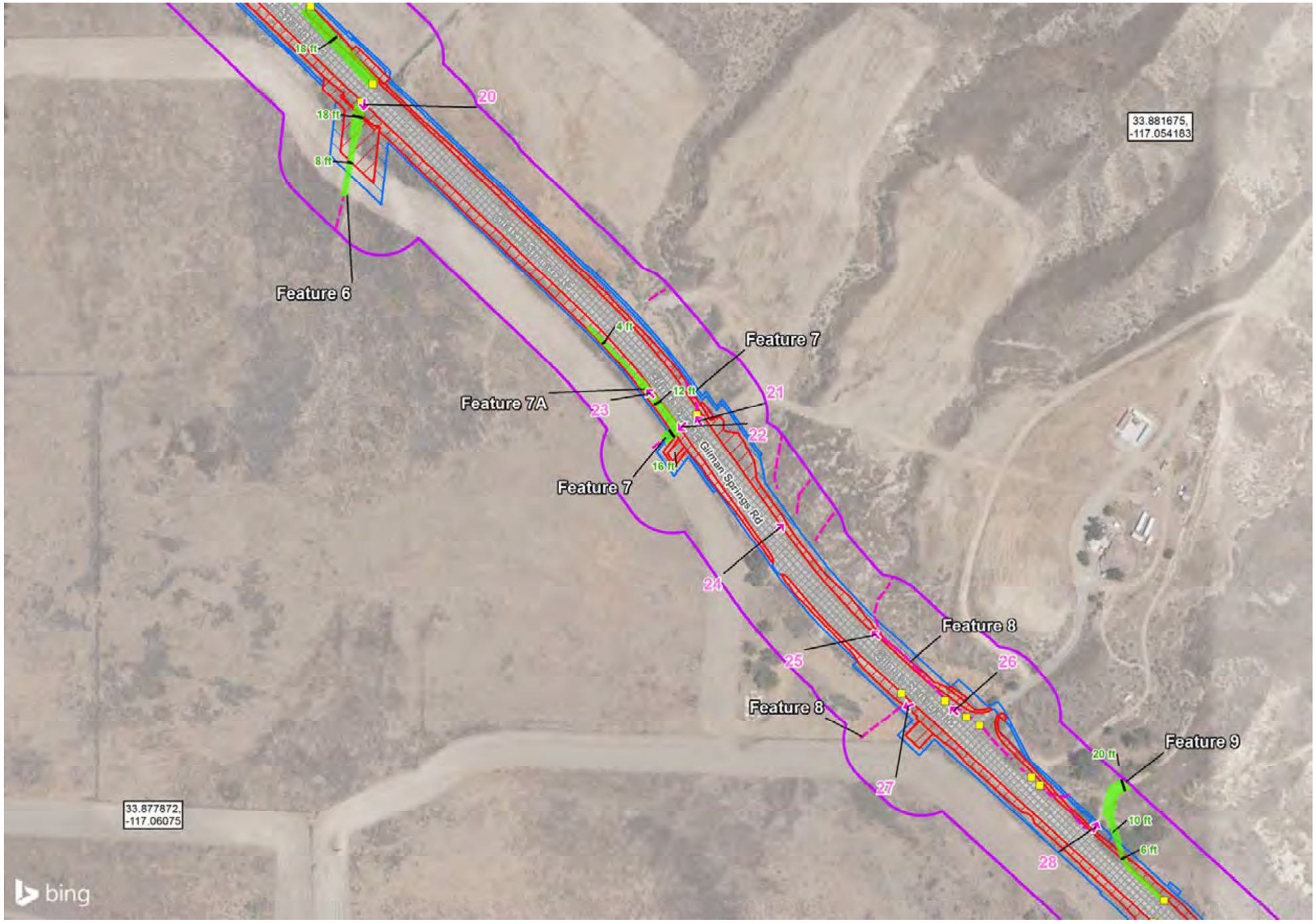
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 5
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian

ft = Top of Bank

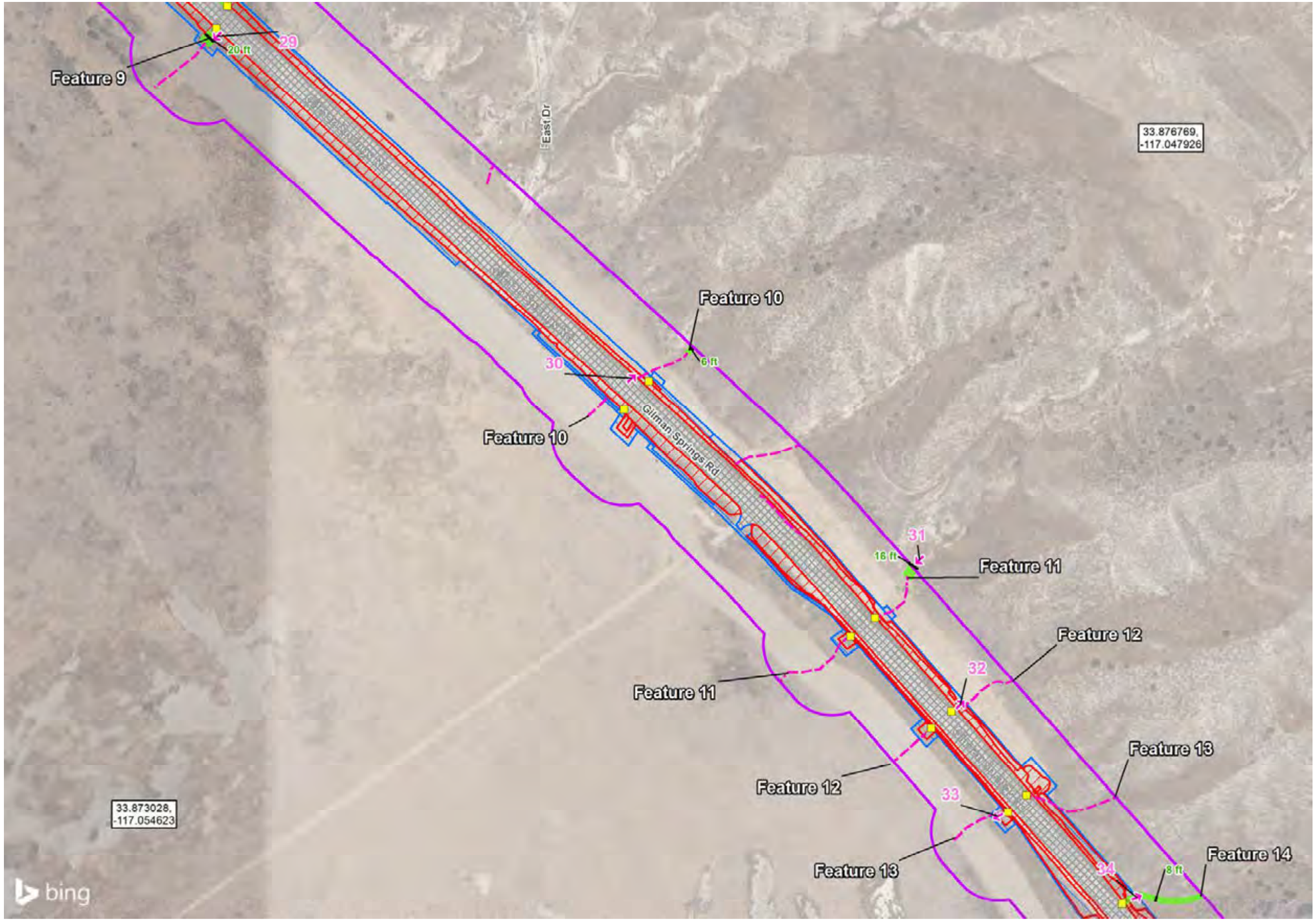
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 6
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian

ft = Top of Bank

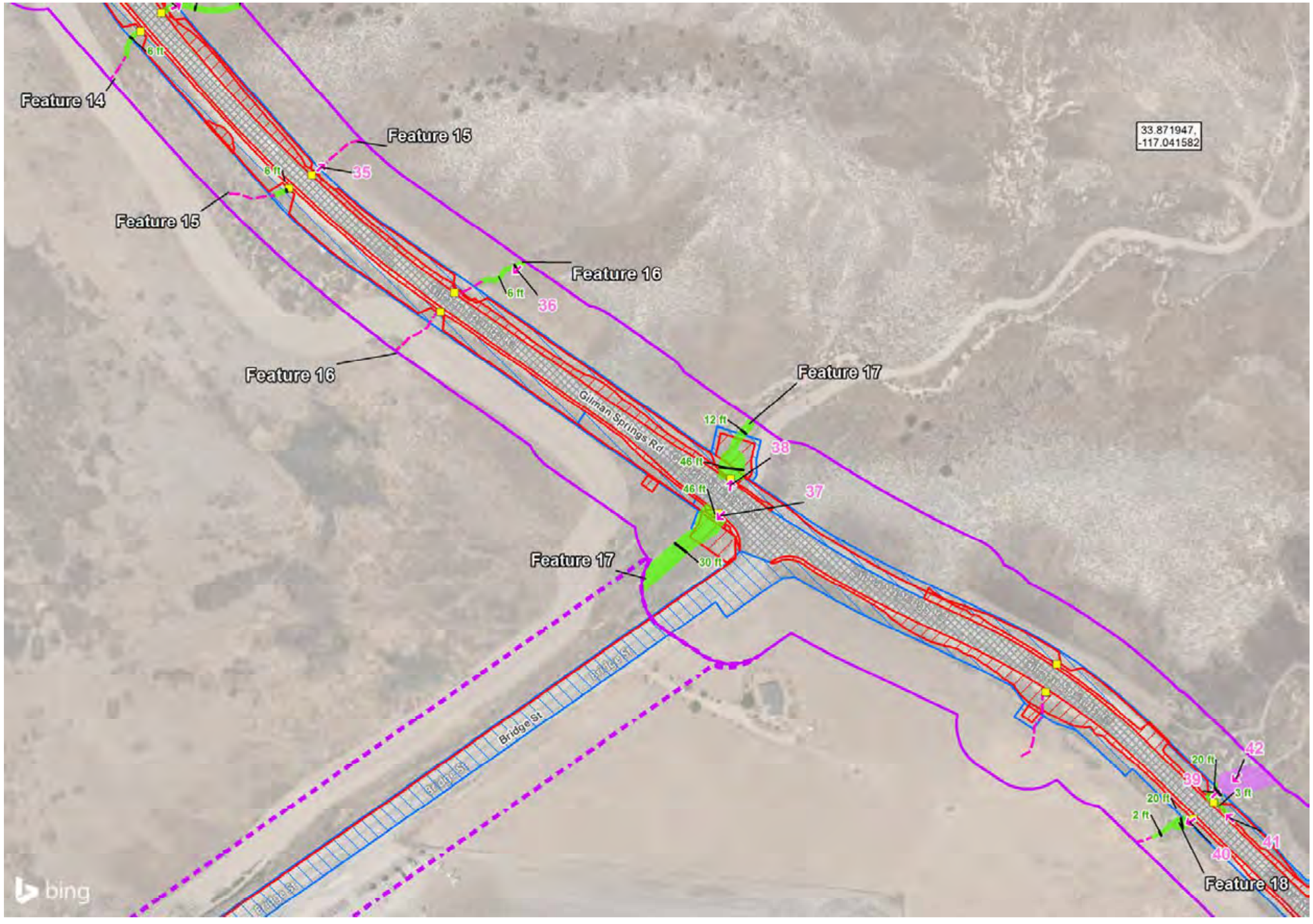
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 7
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

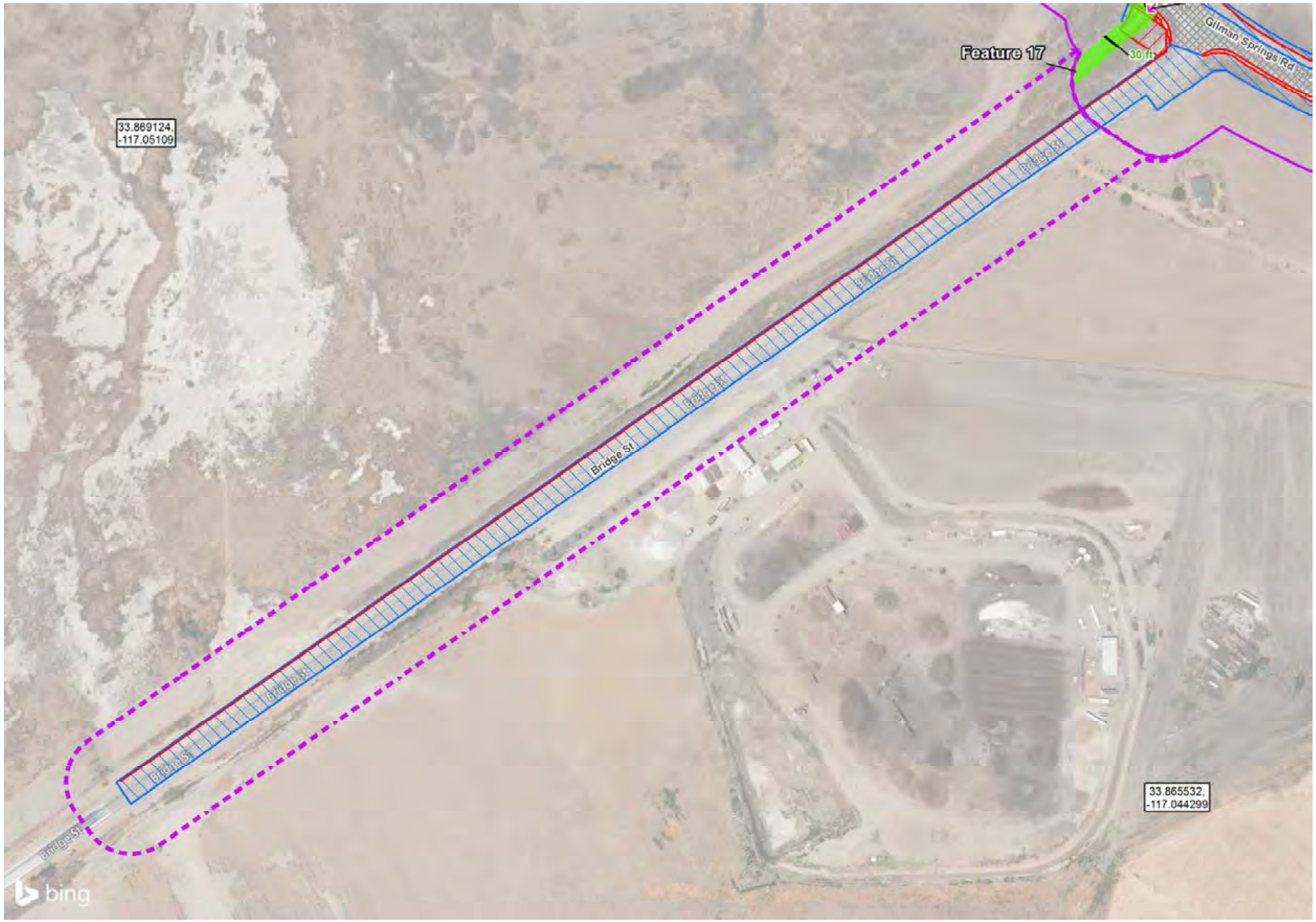
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 8
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

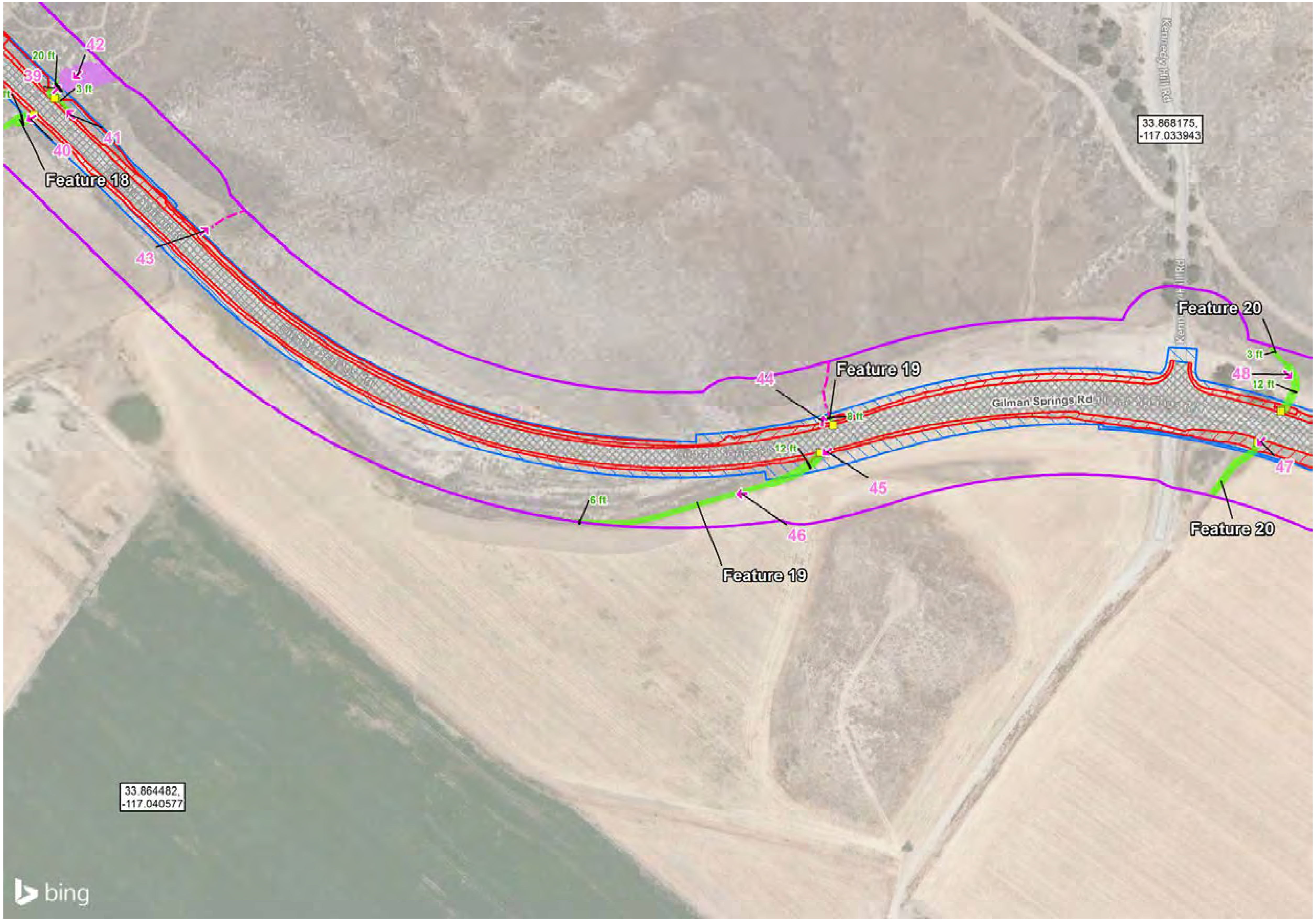
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 9
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian
- # ft = Top of Bank

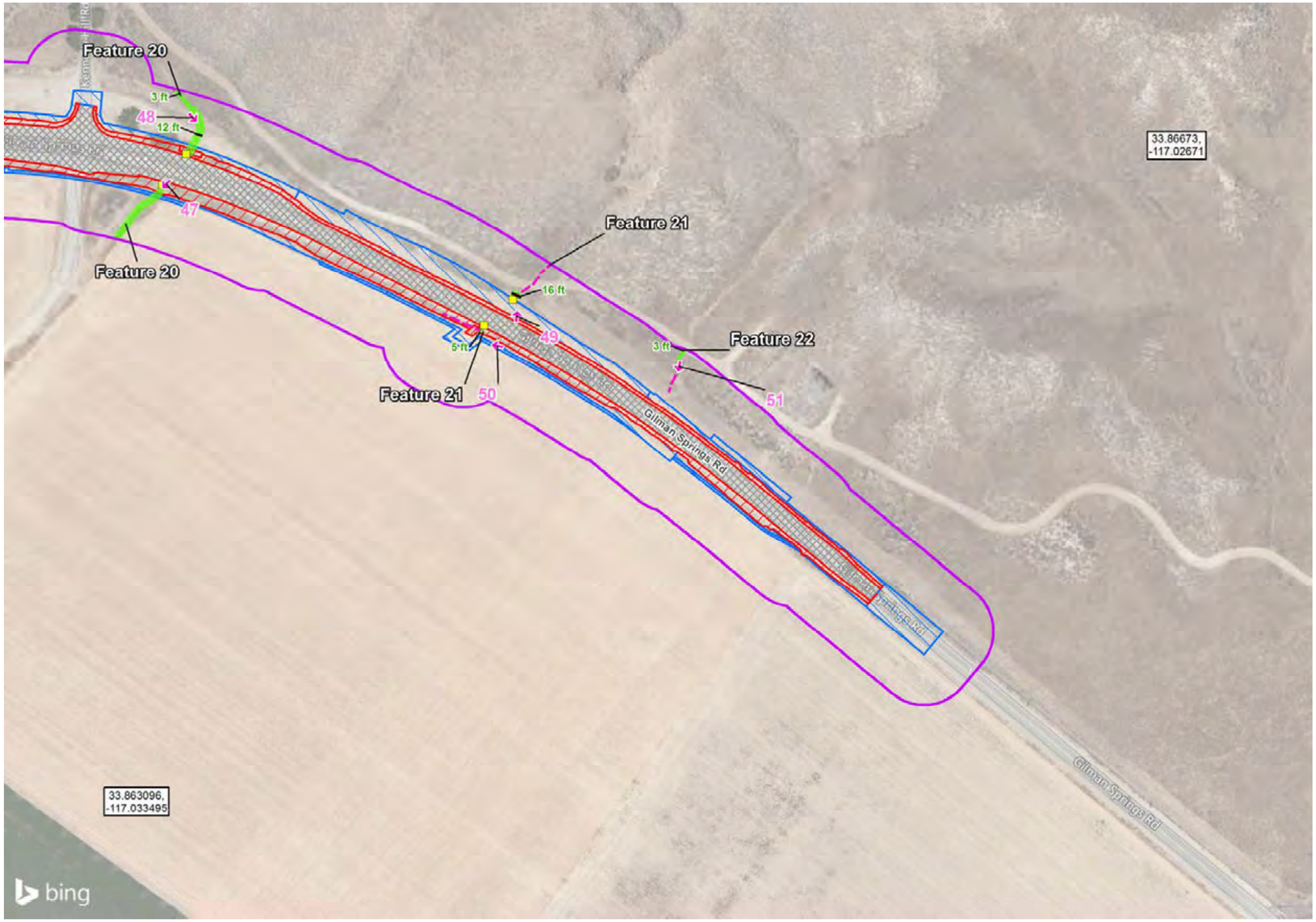
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 10
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd JD Study Area (100-ft Buffer)
- Bridge St JD Study Area (100-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Culvert
- Photo Location
- Swale

Potential CDFW Jurisdiction

- Streambed
- Riparian

ft = Top of Bank

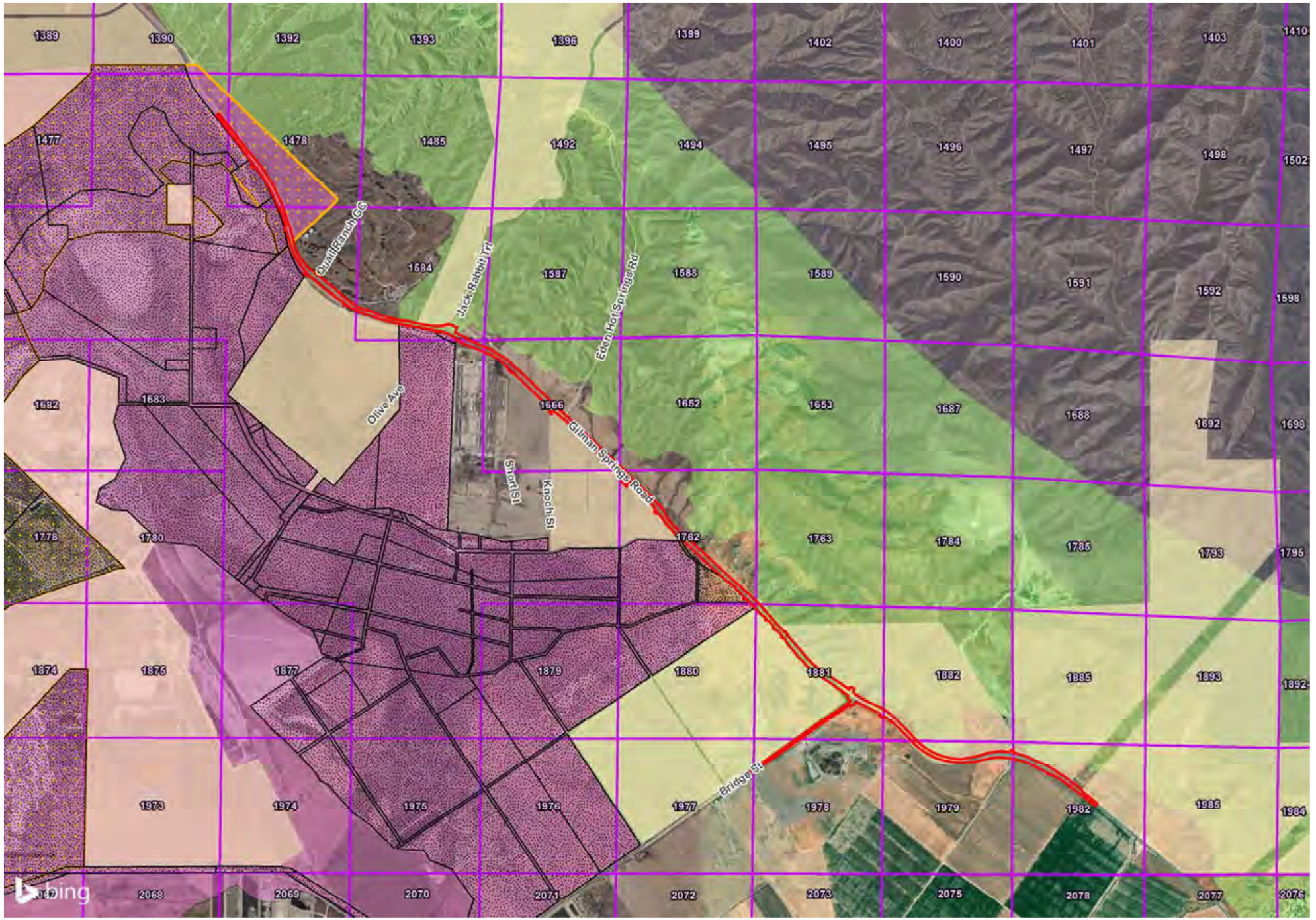
Note: Design changes following initial establishment of the JD Study Area and completion of field surveys resulted in the JD Study Area of Bridge Street which has not yet been mapped in the field.

N

0 100 200 Feet

1:2,400

Figure 6B - Sheet 11
CDFW Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Limits of Disturbance

Western Riverside County Multiple Species Habitat Conservation Plan

- PQP Conserved Lands
- Existing Core-H
- Proposed Core-3
- Criteria Cell
- Additonal Reserved Lands

Stephens' Kangaroo Rat Habitat Conservation Plan

- San Jacinto-Lake Perris Core Reserve

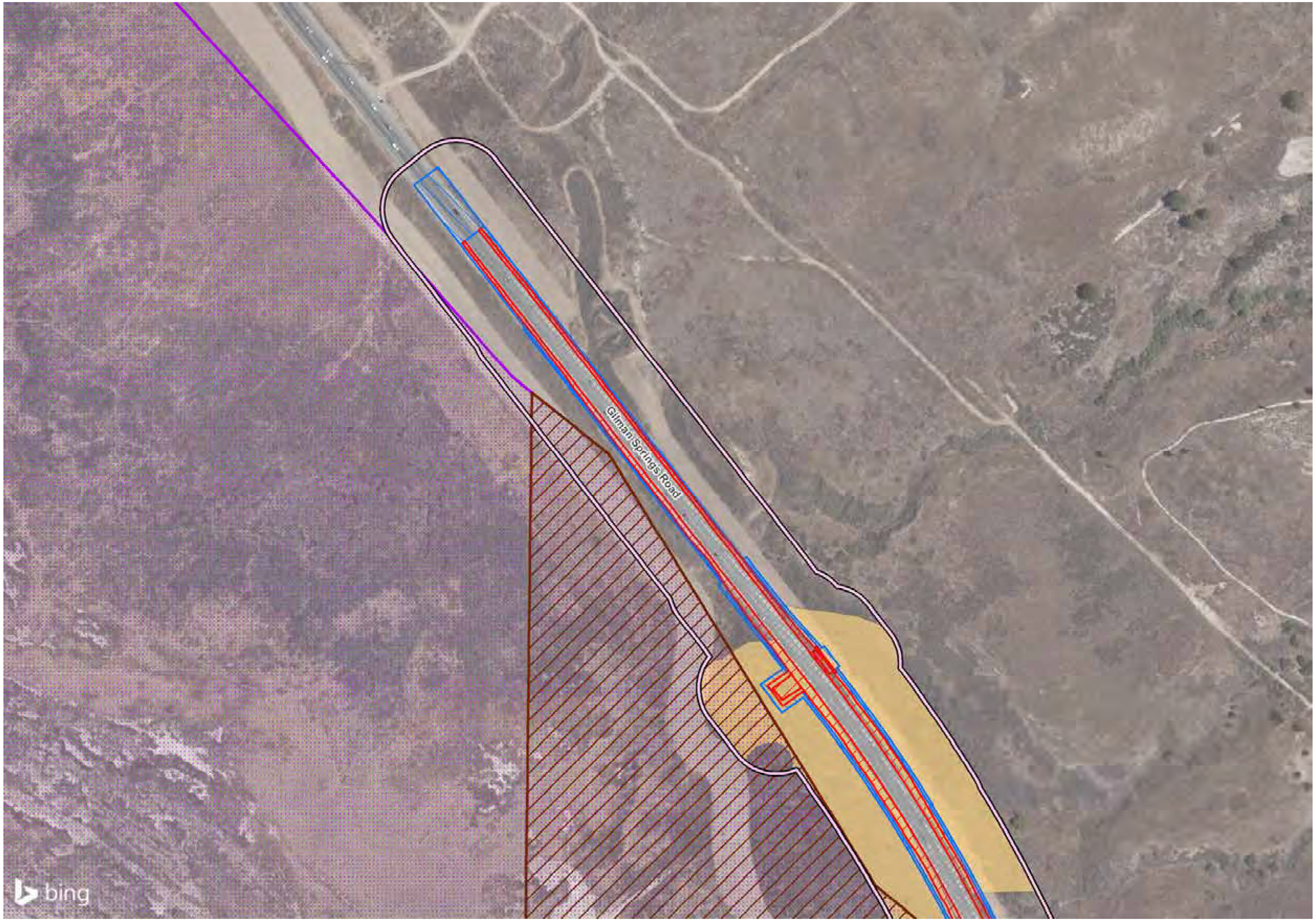
Source: RCTD (2017); ESRI (2017)

N

0 1,000 2,000 Feet

1:24,000

Figure 7
MSHCP Conservation Areas
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

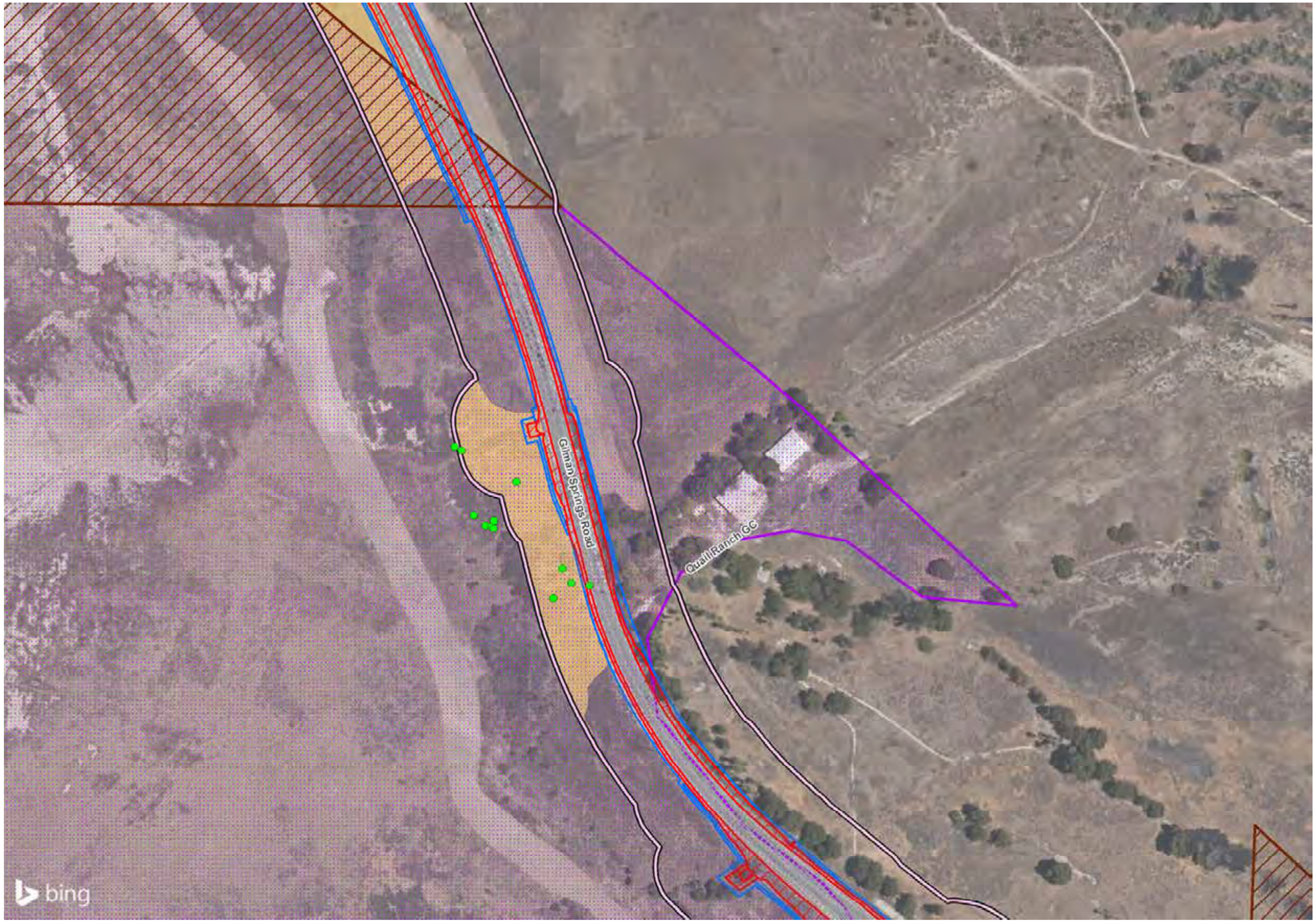
Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet
1:2,400

Figure 8A - Sheet 1
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

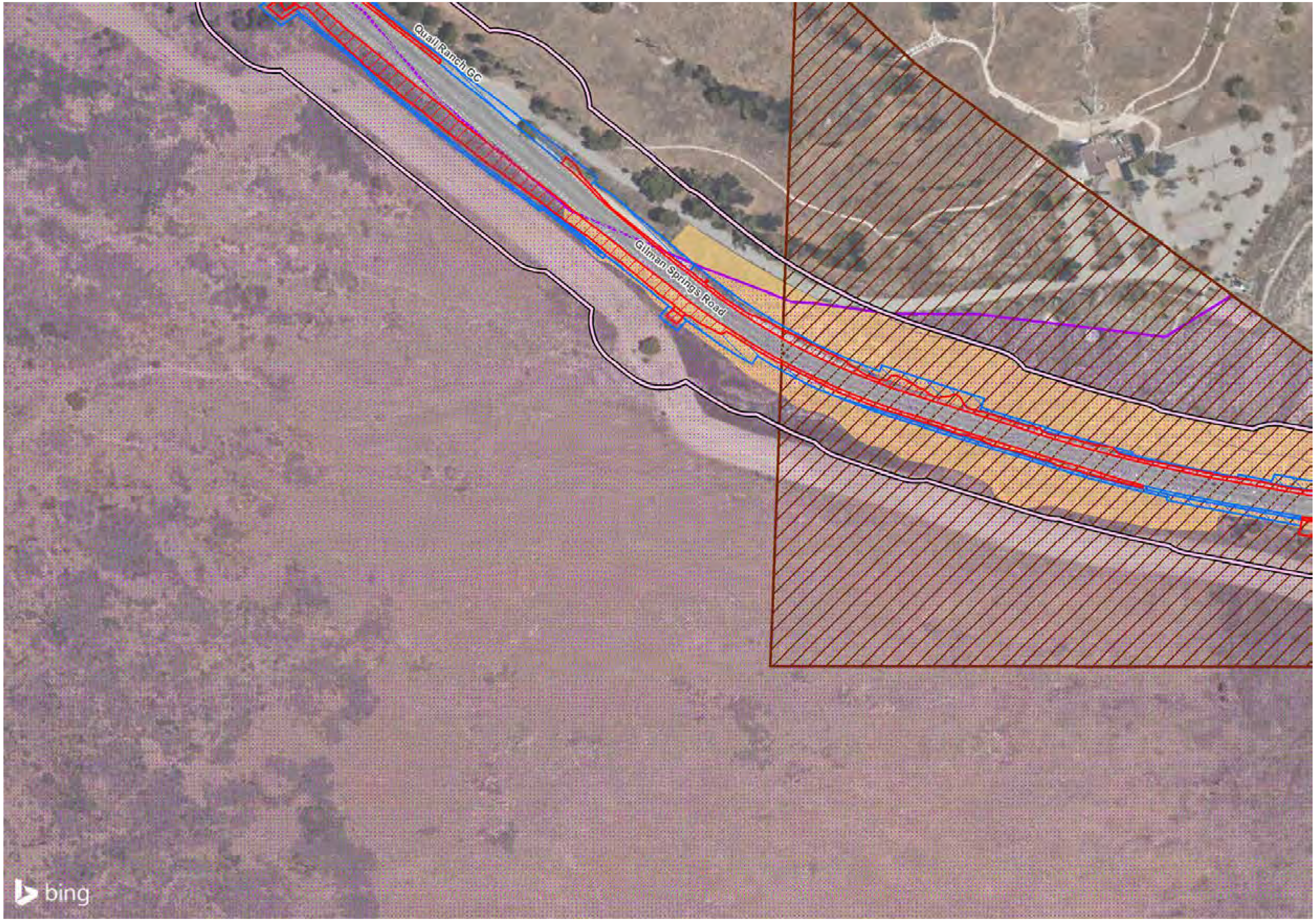
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 2
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 3
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 4
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 5
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

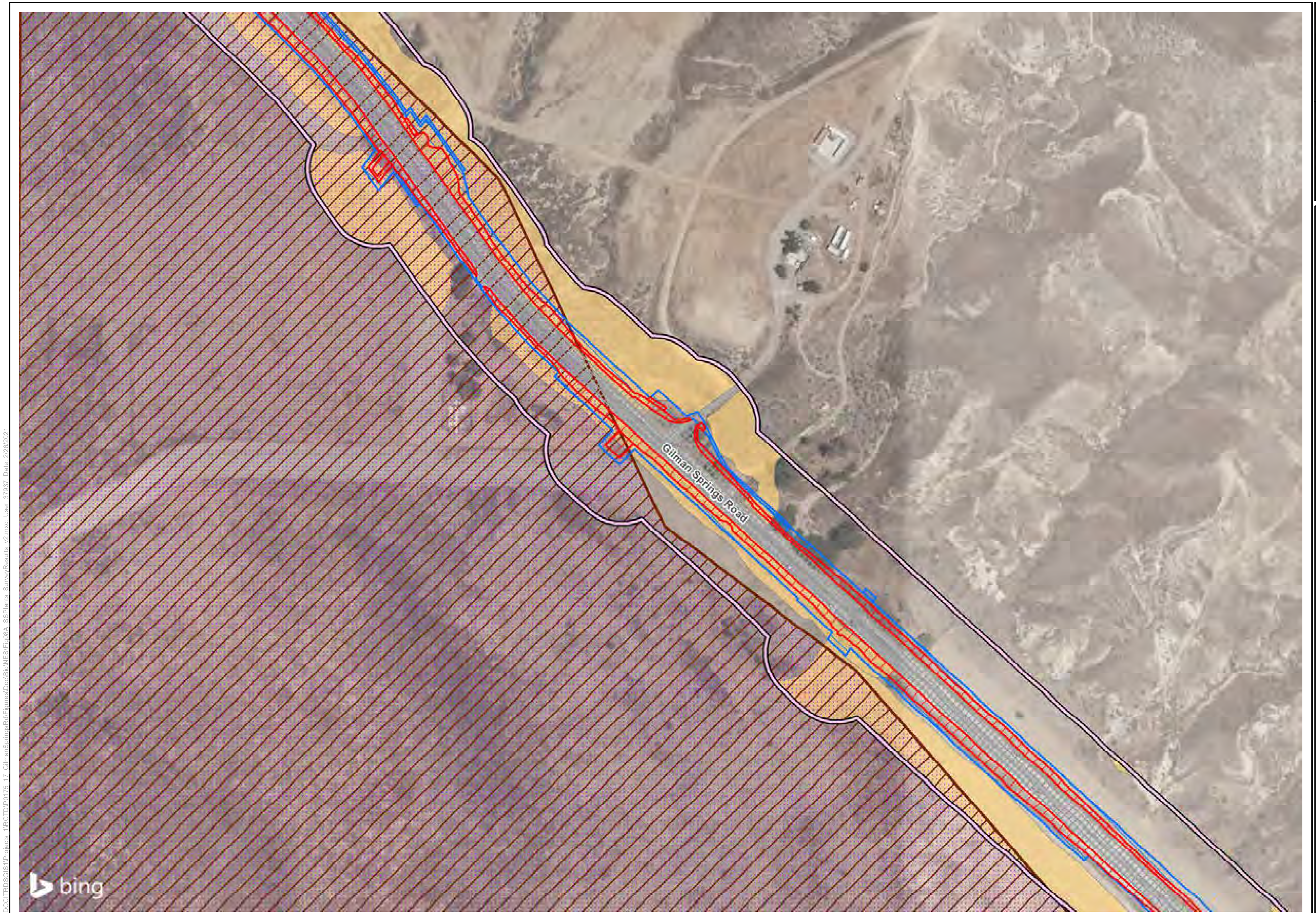
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 6
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

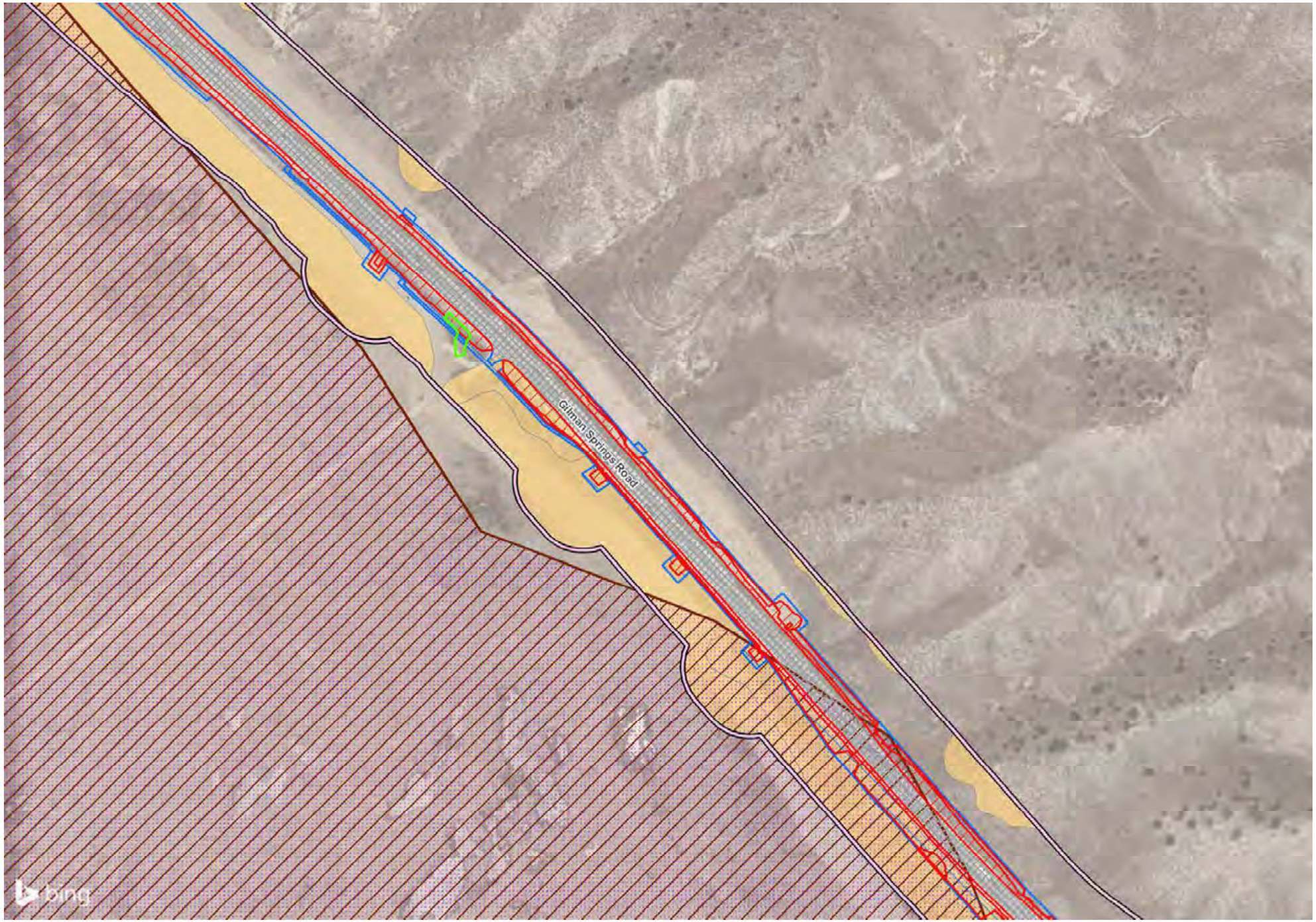
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 7
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

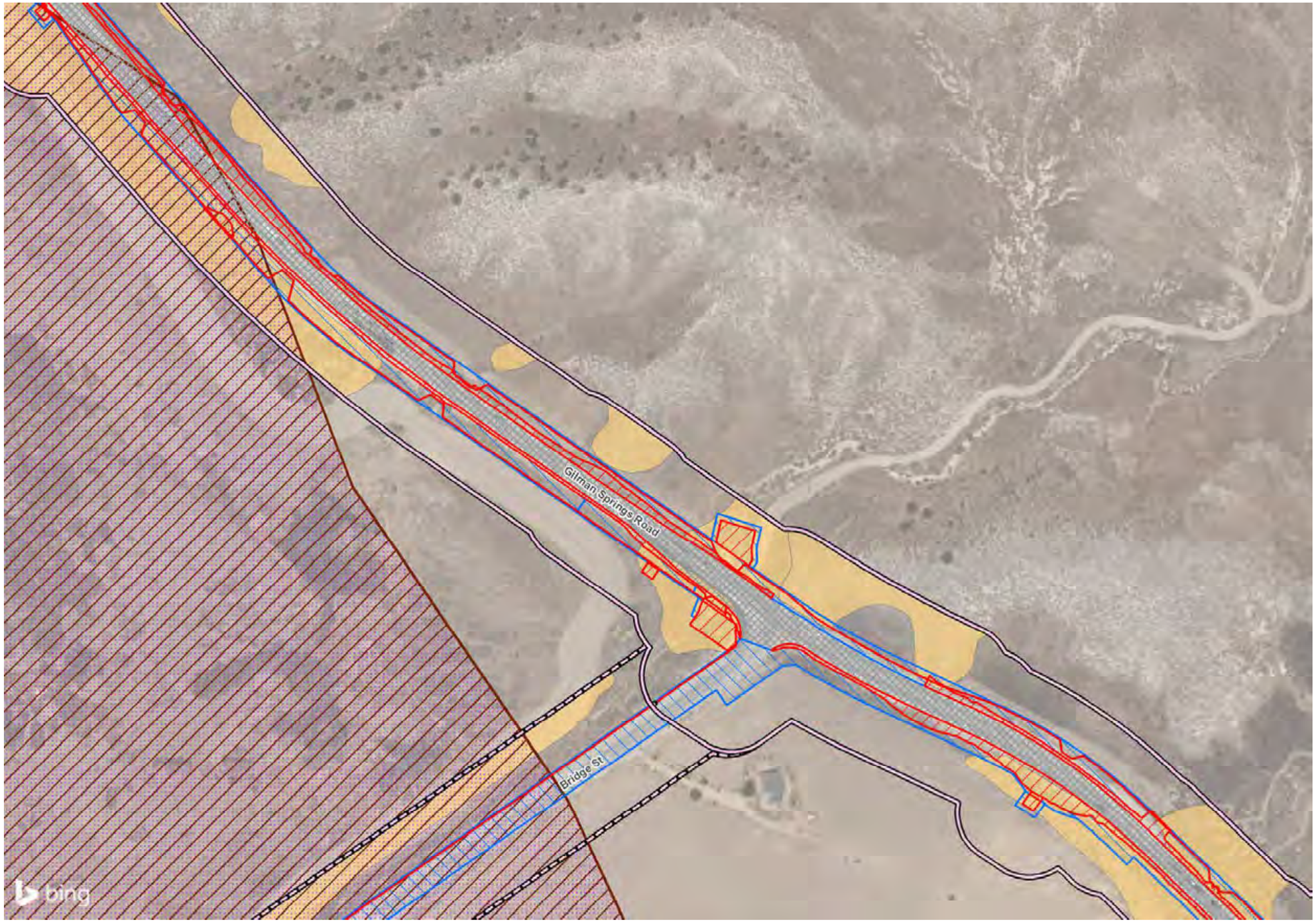
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 8
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

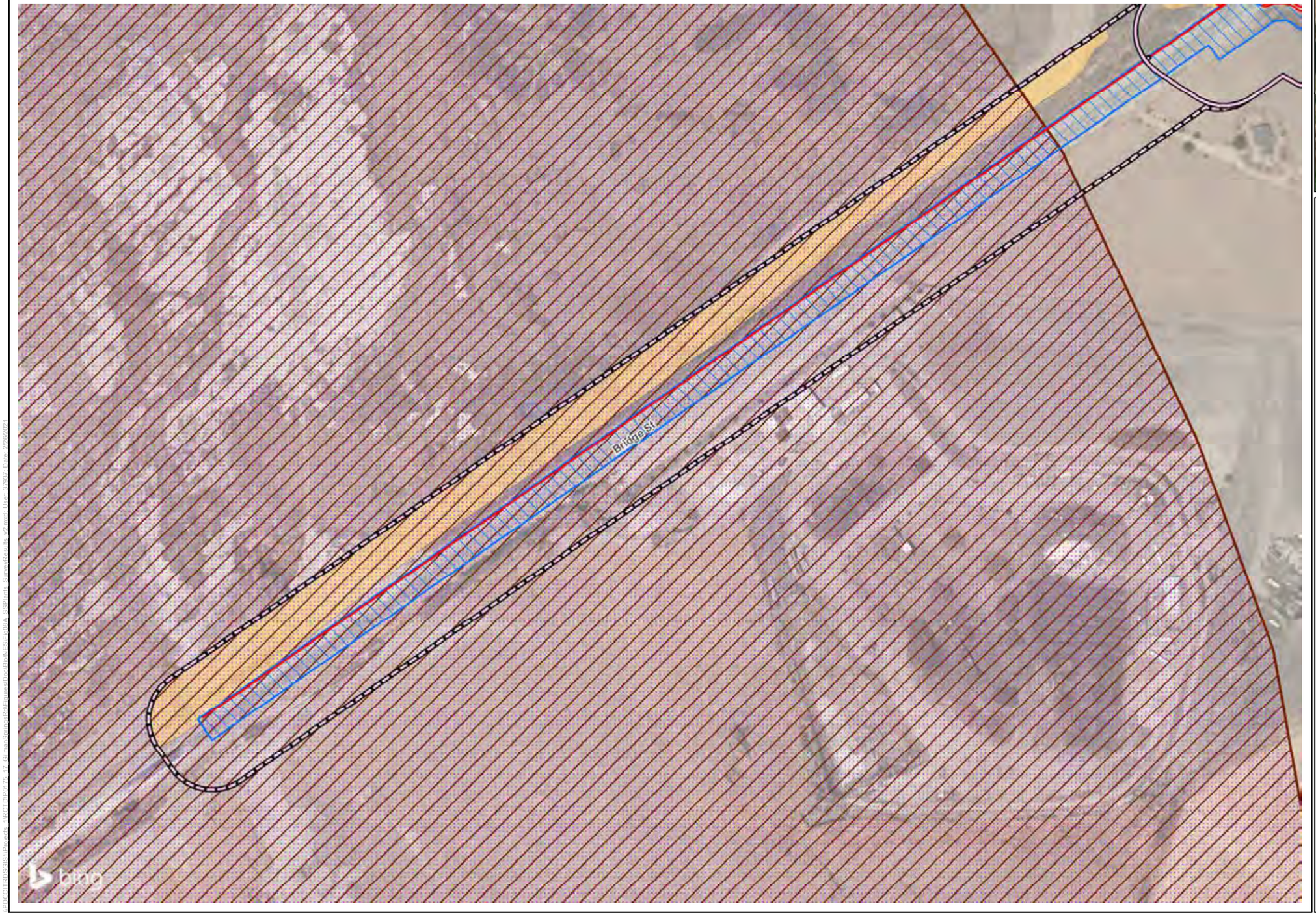
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 9
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 10
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

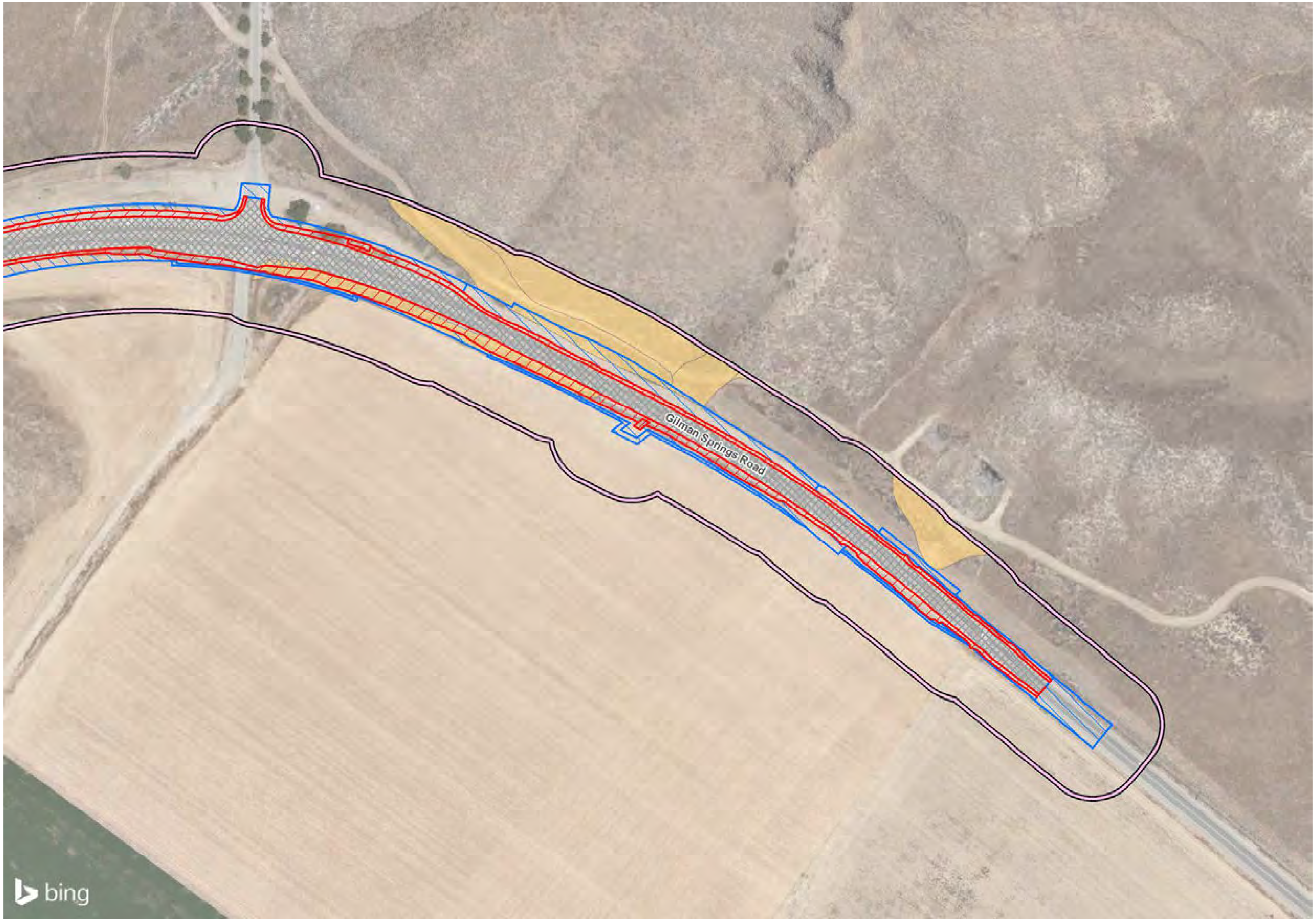
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 11
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Rare Plant Study Area (100-ft Buffer)
- Bridge St Rare Plant Study Area (100-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Special Status Plants Suitable Habitat

Survey Areas

- Narrow Endemic Plants Survey Area
- Criteria Area Plant Survey

Survey Results

- Smooth Tarplant
- Smooth Tarplant

Note: Design changes following initial establishment of the Rare Plant Study Area and completion of field surveys resulted in the Rare Plant Study Area of Bridge Street which has not yet been mapped in the field

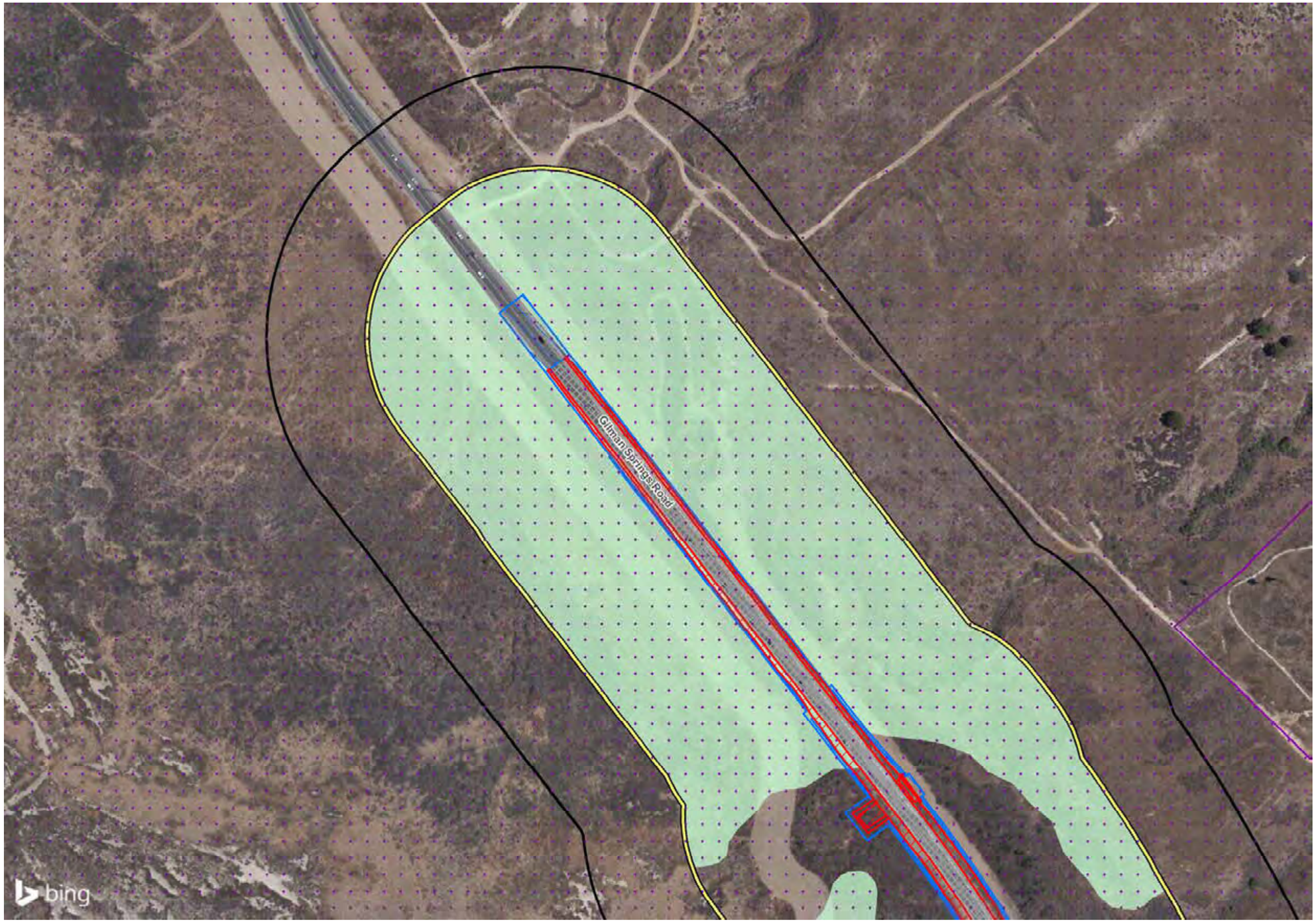
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8A - Sheet 12
Rare Plant Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

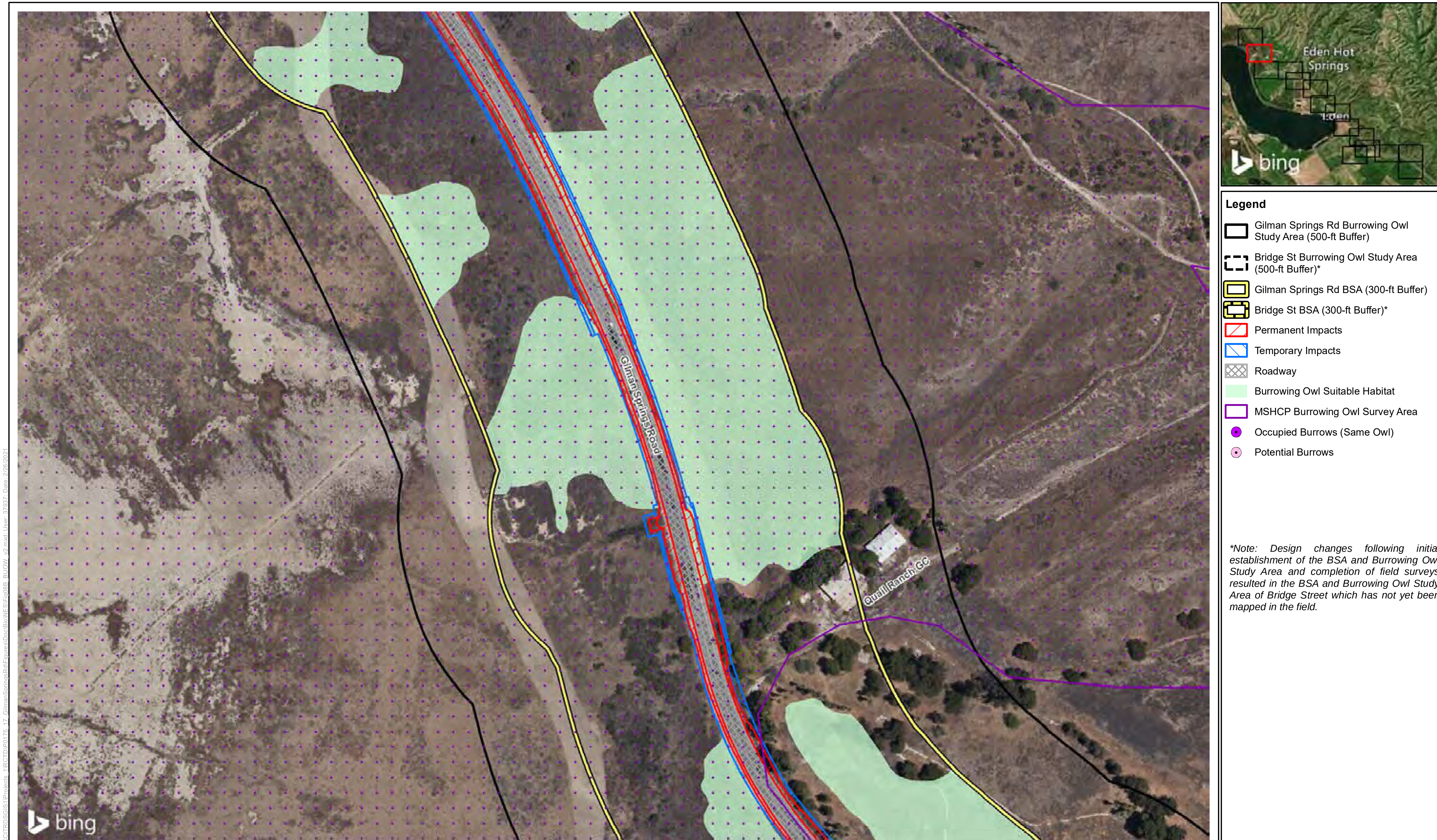
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 1
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 2
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 3
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 4
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

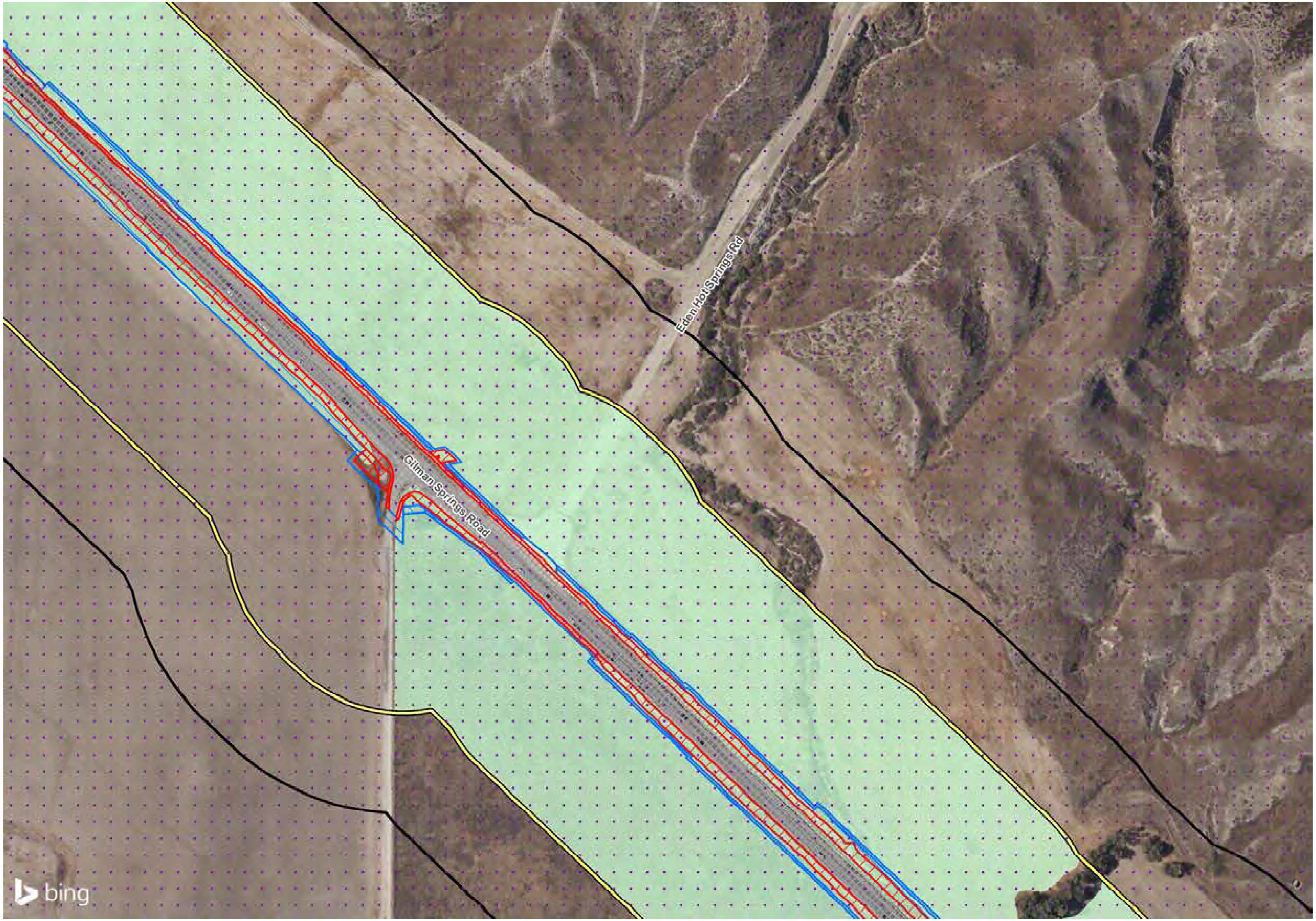
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 5
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

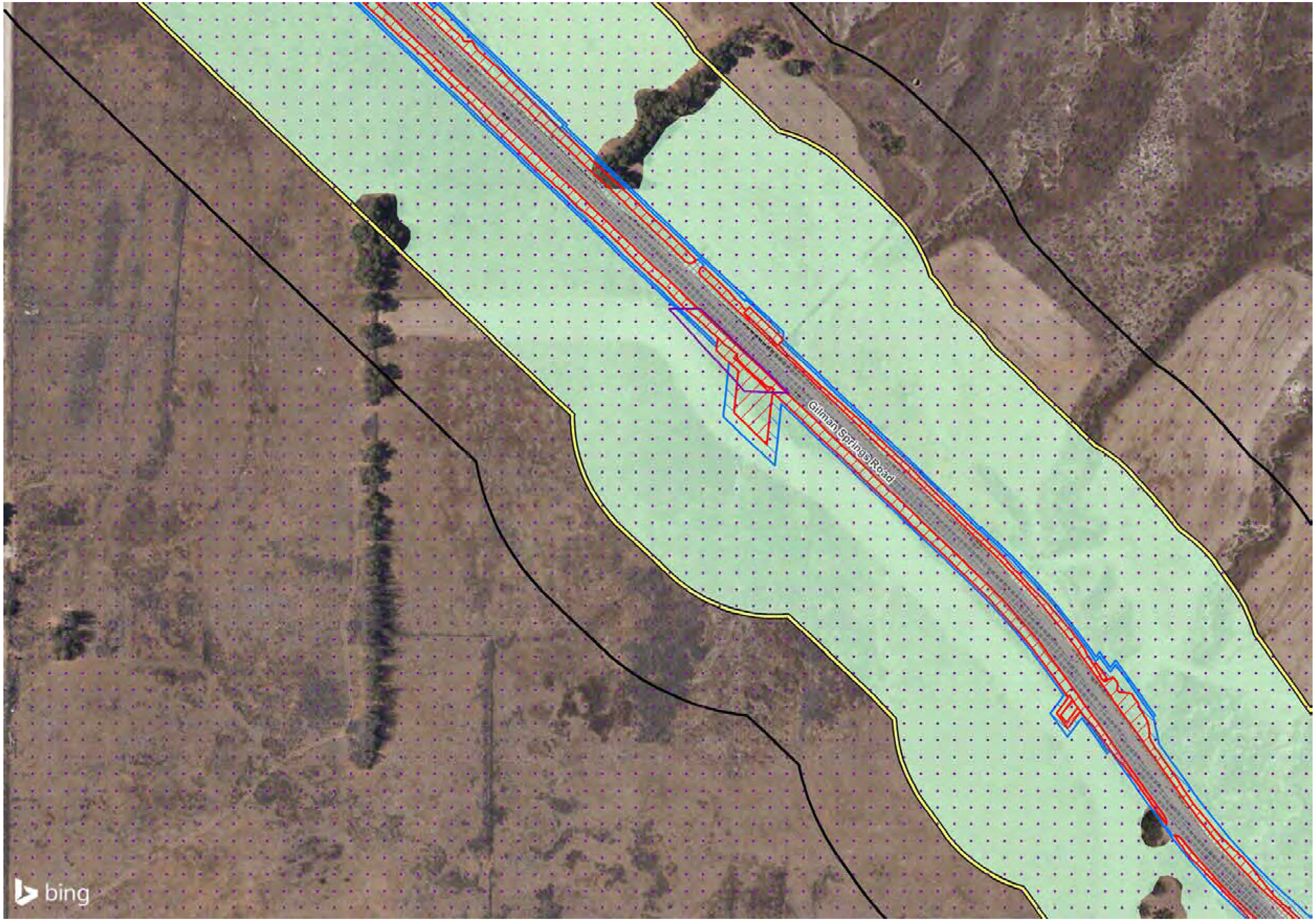
0 100 200 Feet

1:2,400

Figure 8B - Sheet 6

Burrowing Owl Surveys and Results

Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 7

Burrowing Owl Surveys and Results

Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

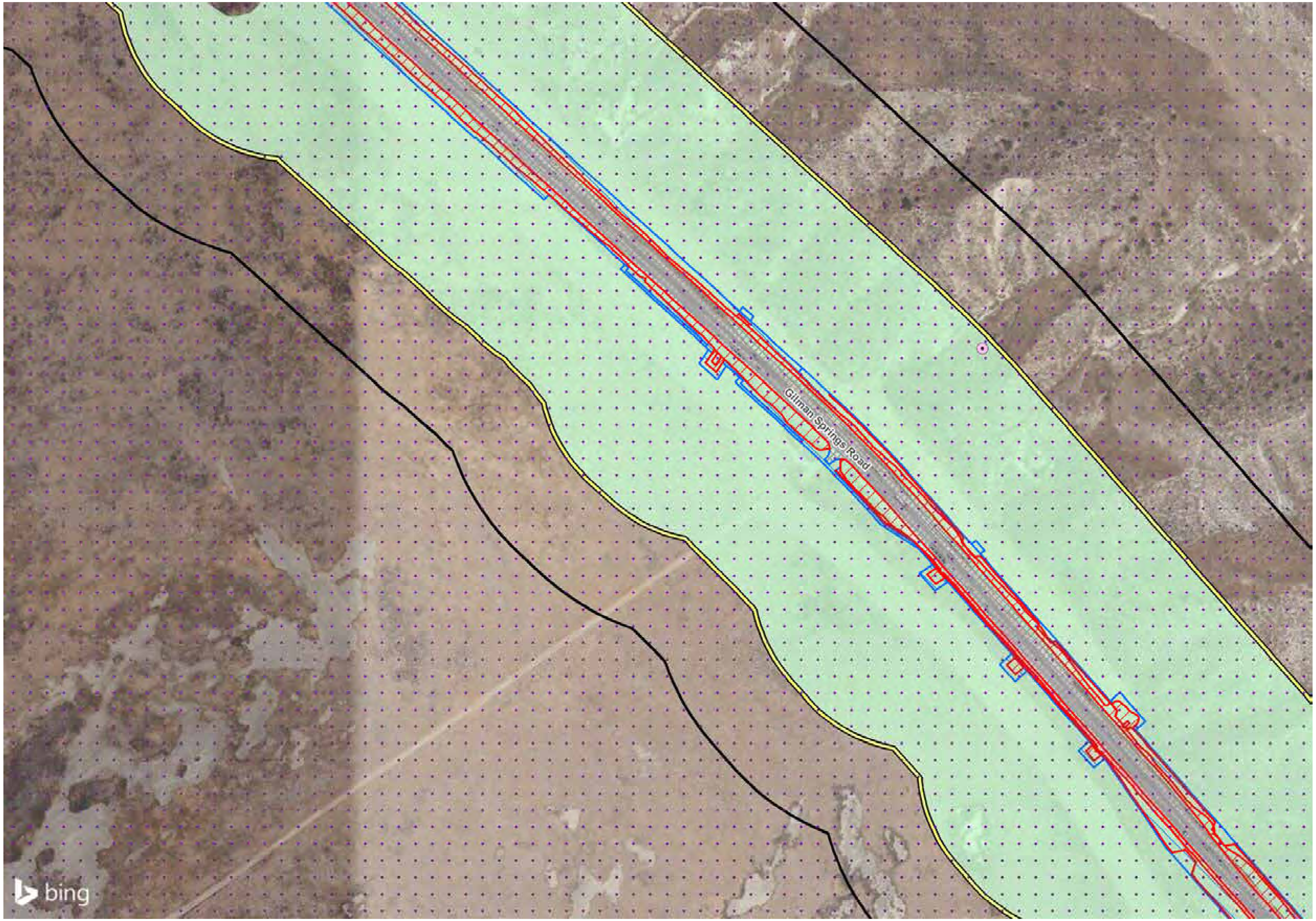
Source: RCTD (2021); ESRI (2017)

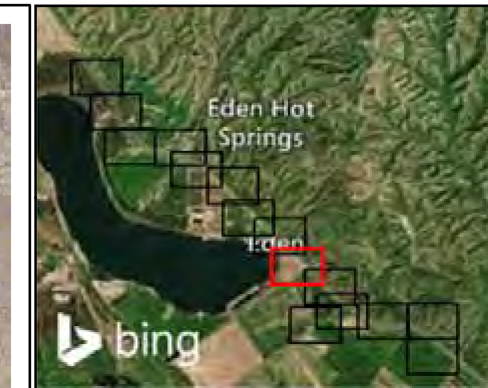
N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 8
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project





Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 9
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

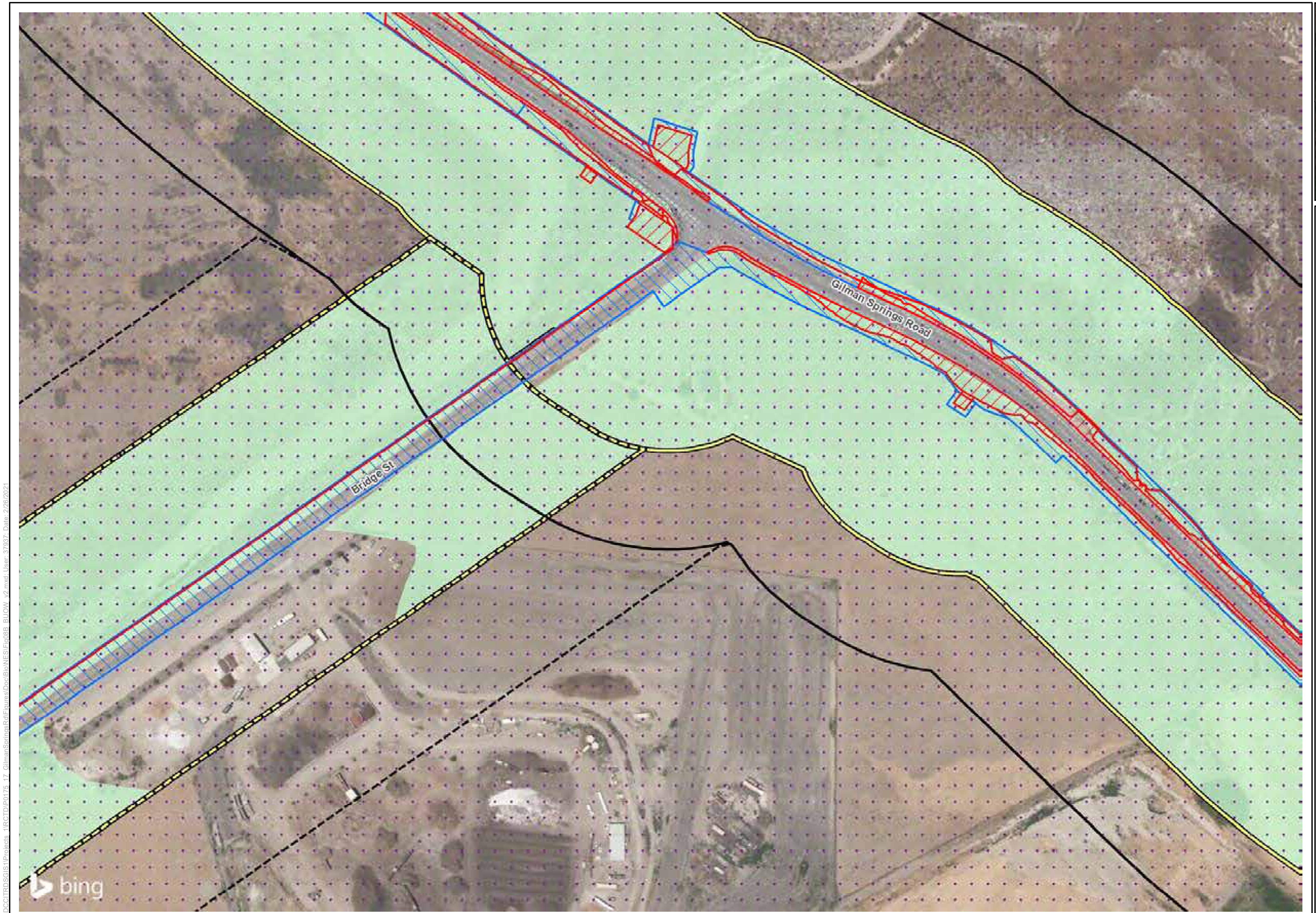
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 10
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

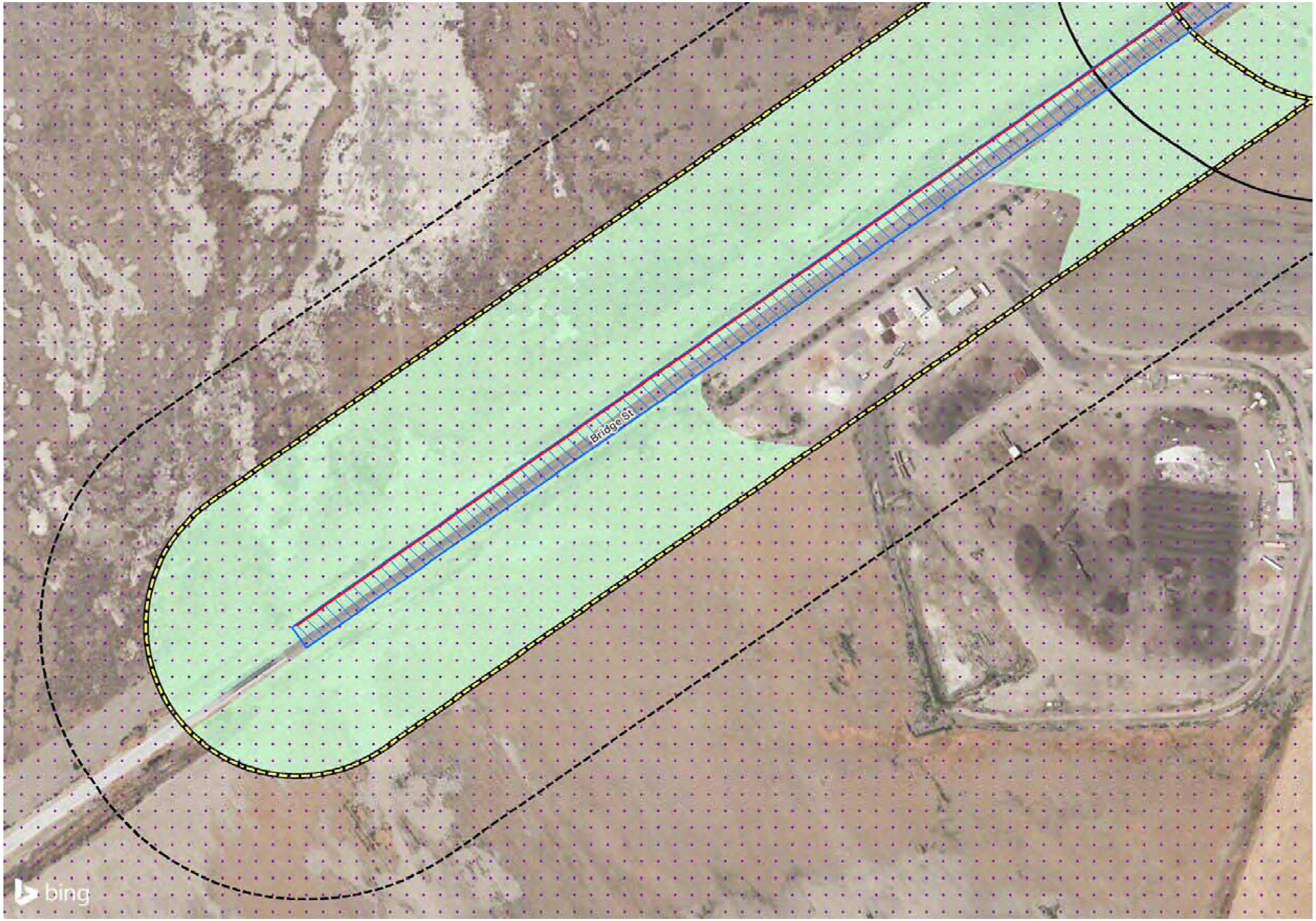
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 11
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.

Source: RCTD (2021); ESRI (2017)

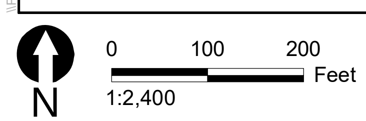
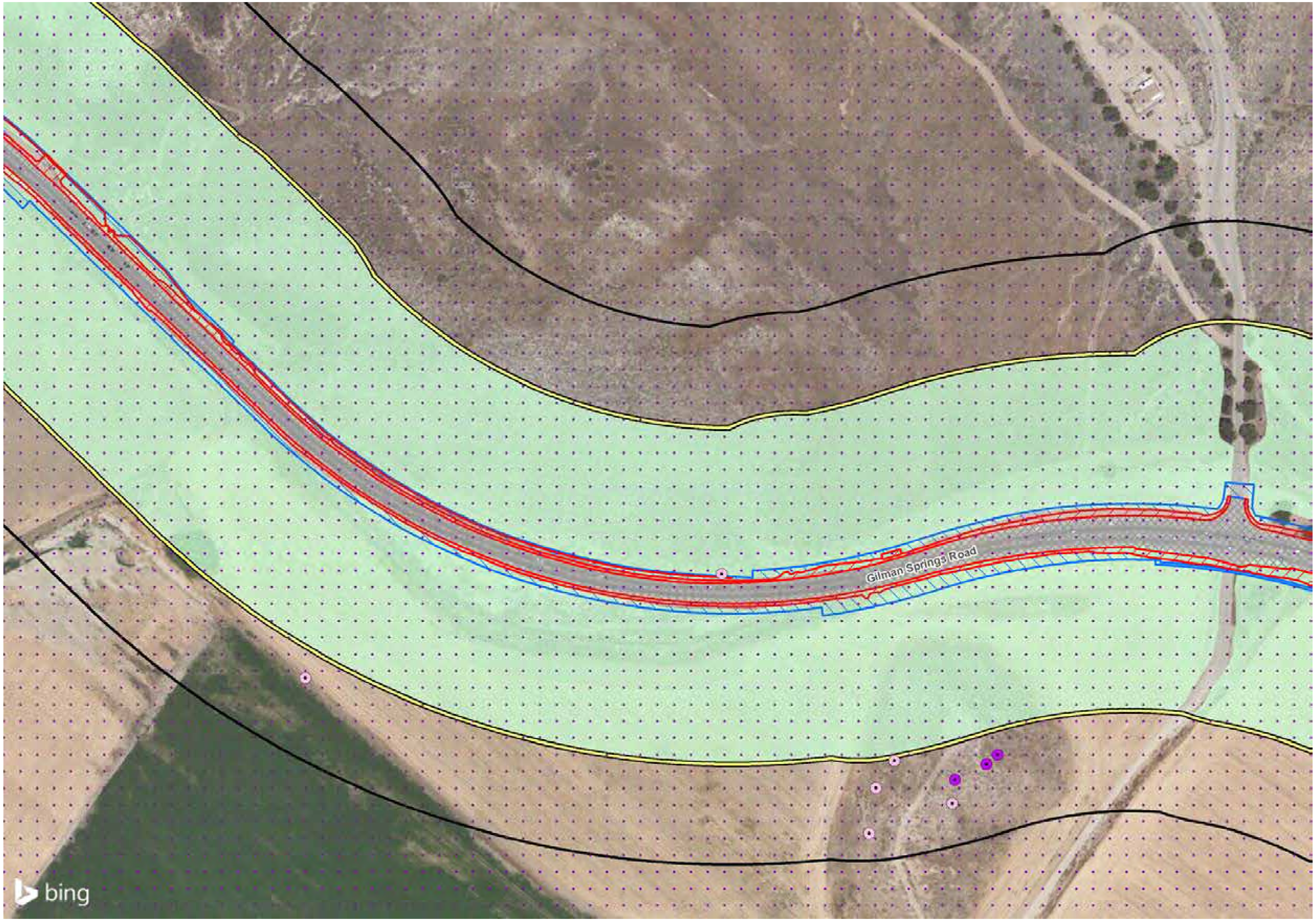


Figure 8B - Sheet 12
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 13

Burrowing Owl Surveys and Results

Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

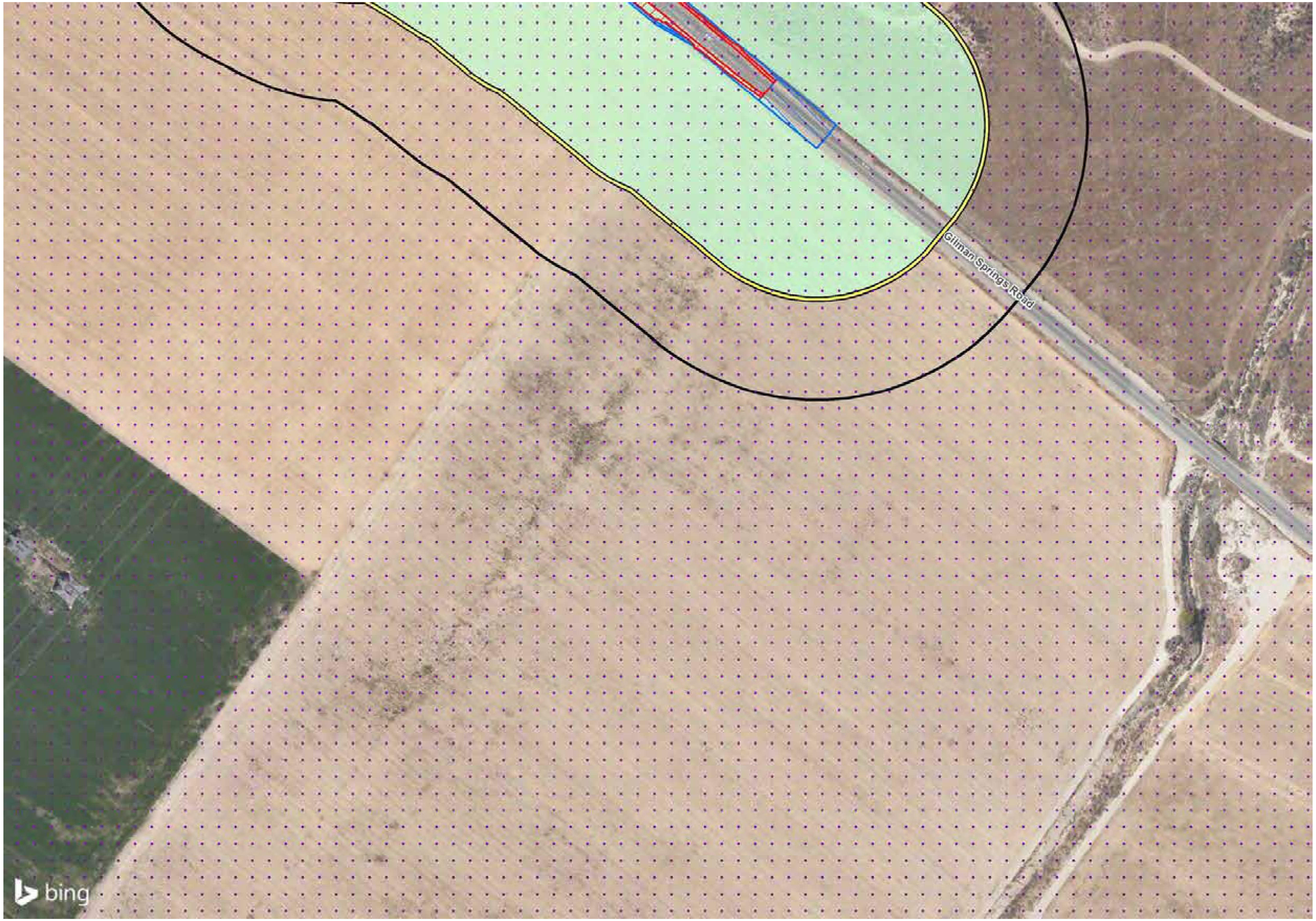
**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet
1:2,400

Figure 8B - Sheet 14
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Burrowing Owl Study Area (500-ft Buffer)
- Bridge St Burrowing Owl Study Area (500-ft Buffer)*
- Gilman Springs Rd BSA (300-ft Buffer)
- Bridge St BSA (300-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Burrowing Owl Suitable Habitat
- MSHCP Burrowing Owl Survey Area
- Occupied Burrows (Same Owl)
- Potential Burrows

**Note: Design changes following initial establishment of the BSA and Burrowing Owl Study Area and completion of field surveys resulted in the BSA and Burrowing Owl Study Area of Bridge Street which has not yet been mapped in the field.*

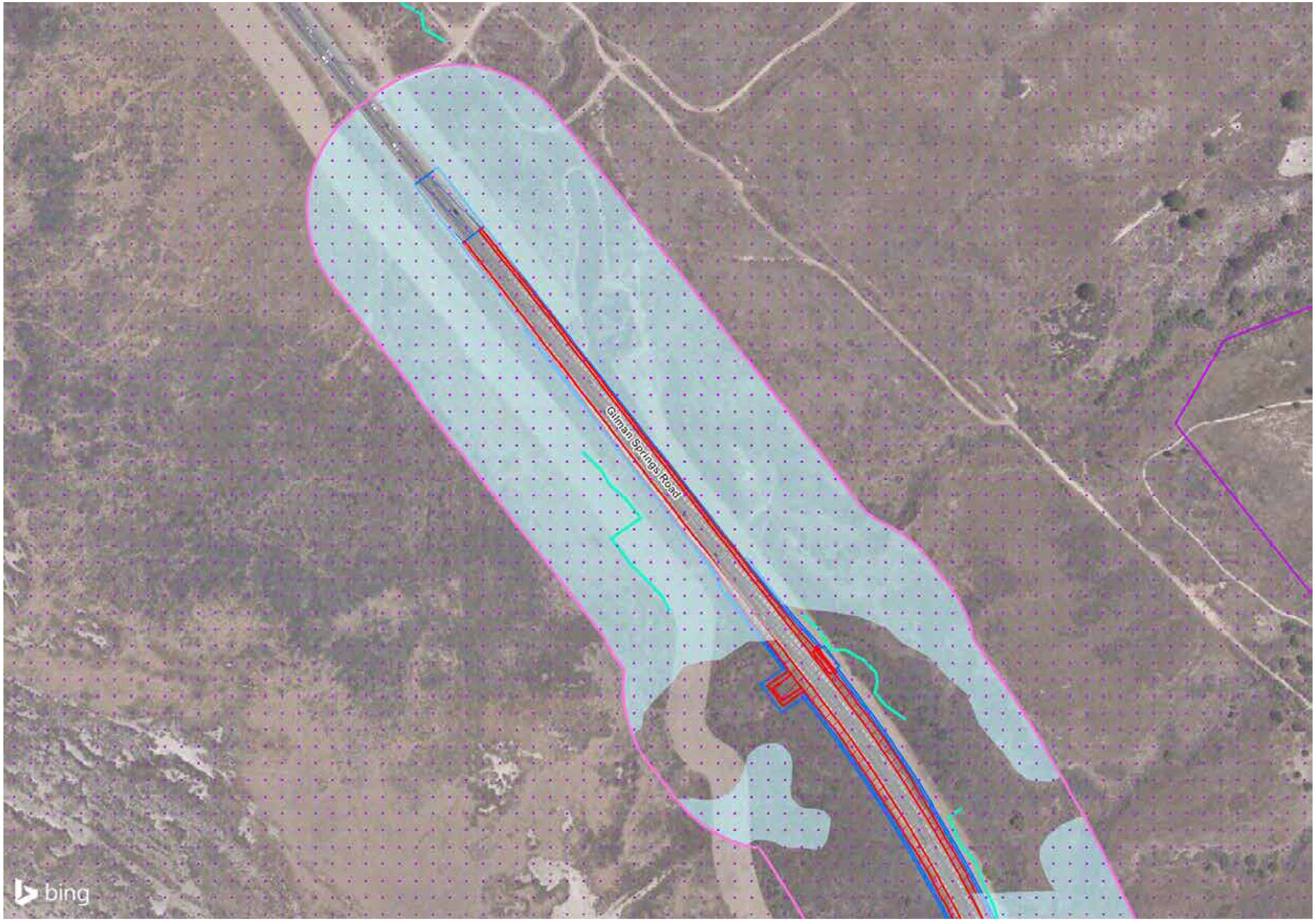
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8B - Sheet 15
Burrowing Owl Surveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 1
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

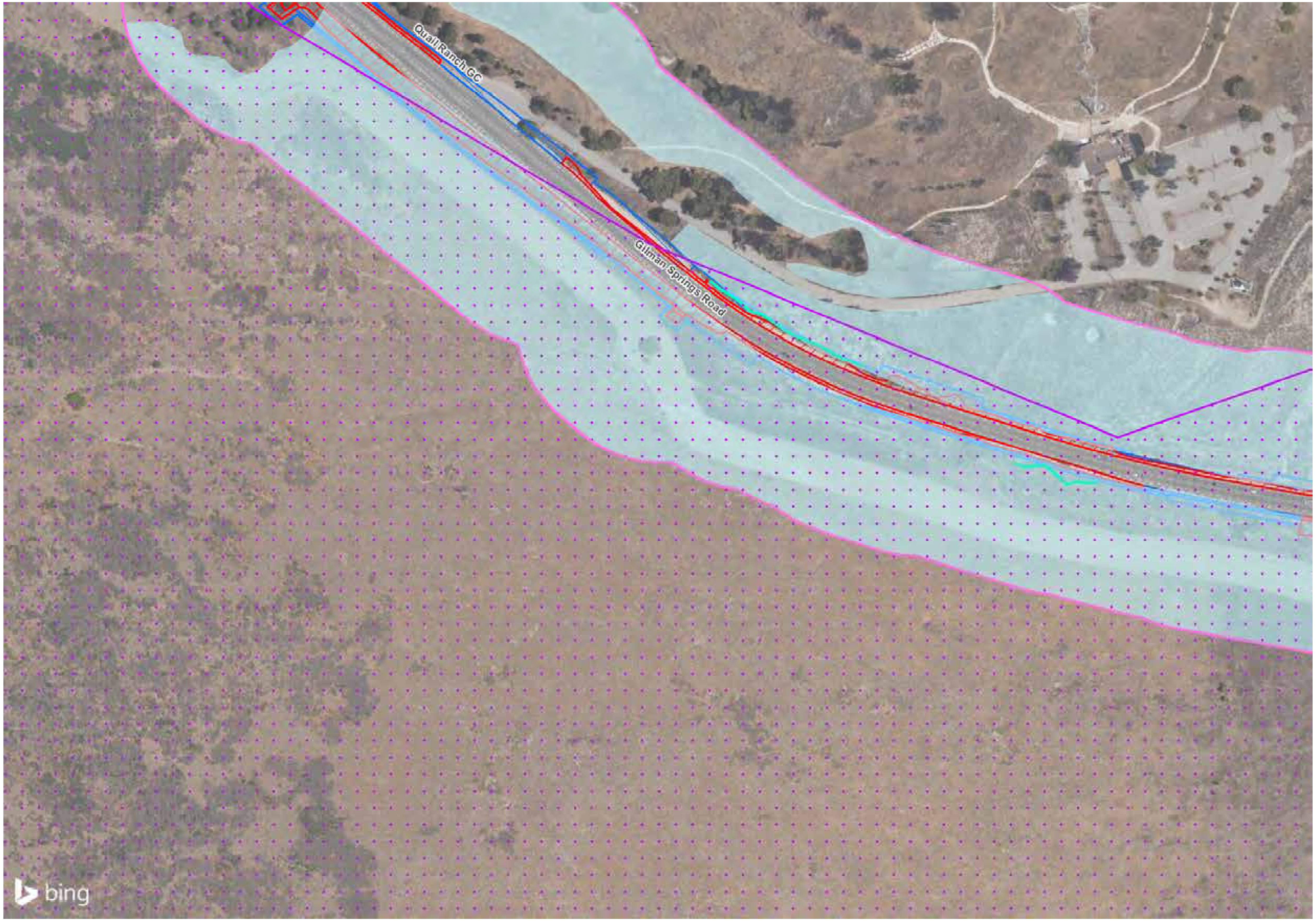
0 100 200 Feet

1:2,400

Figure 8C - Sheet 2

Small Mammal Sruveys and Results

Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

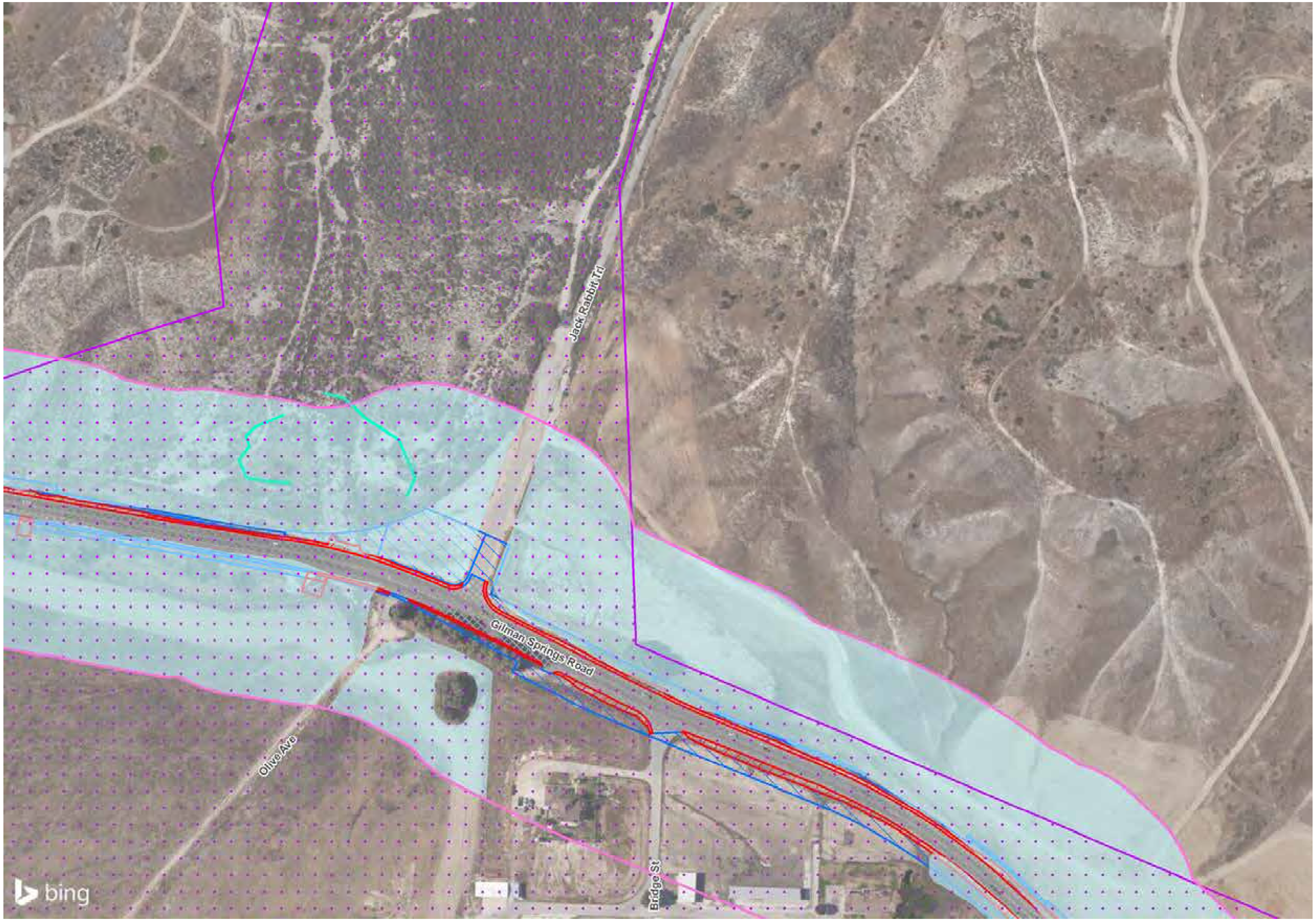
0 100 200 Feet

1:2,400

Figure 8C - Sheet 3

Small Mammal Sruveys and Results

Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 4
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

Figure 8C - Sheet 5
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 6
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

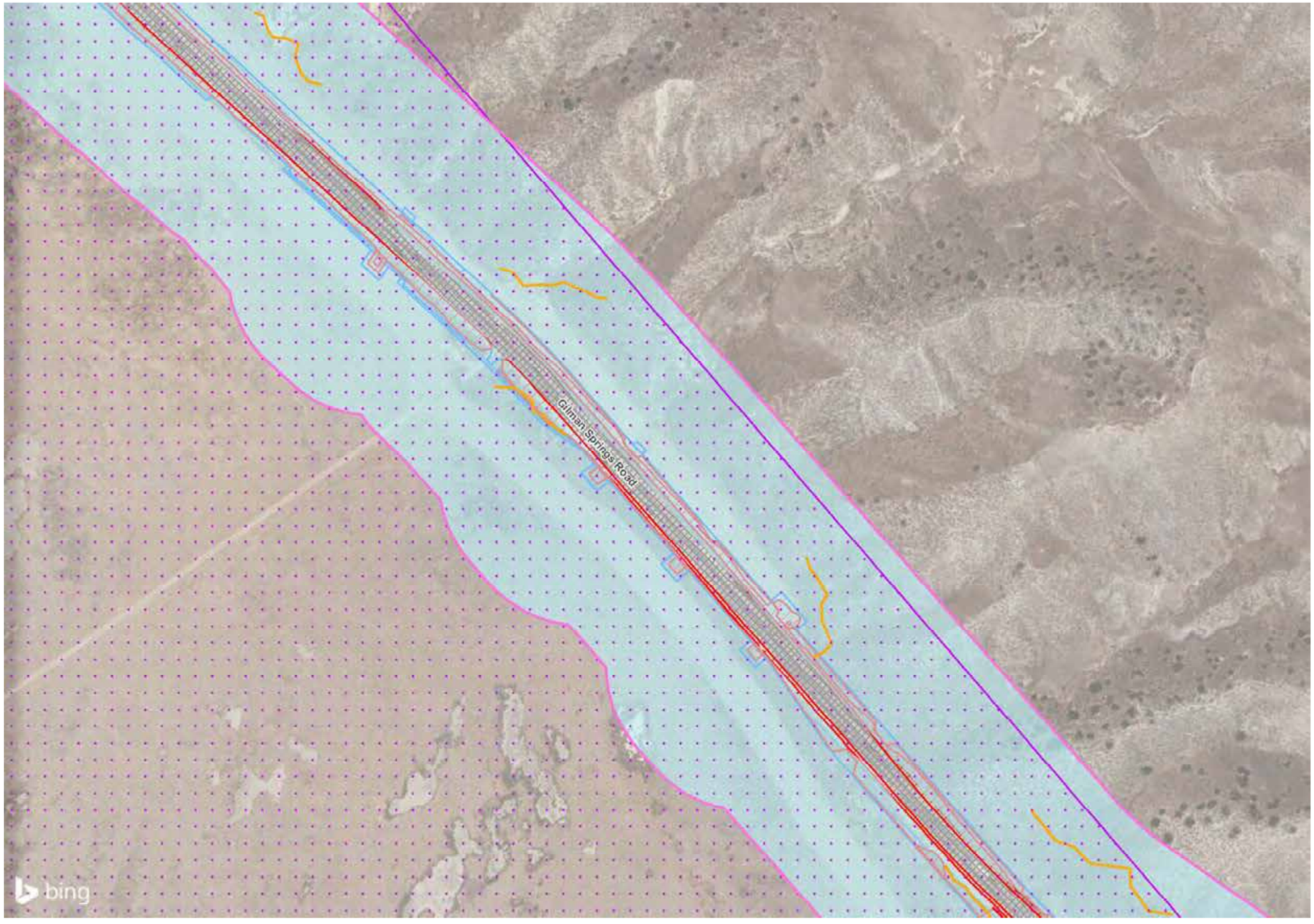
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 7
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

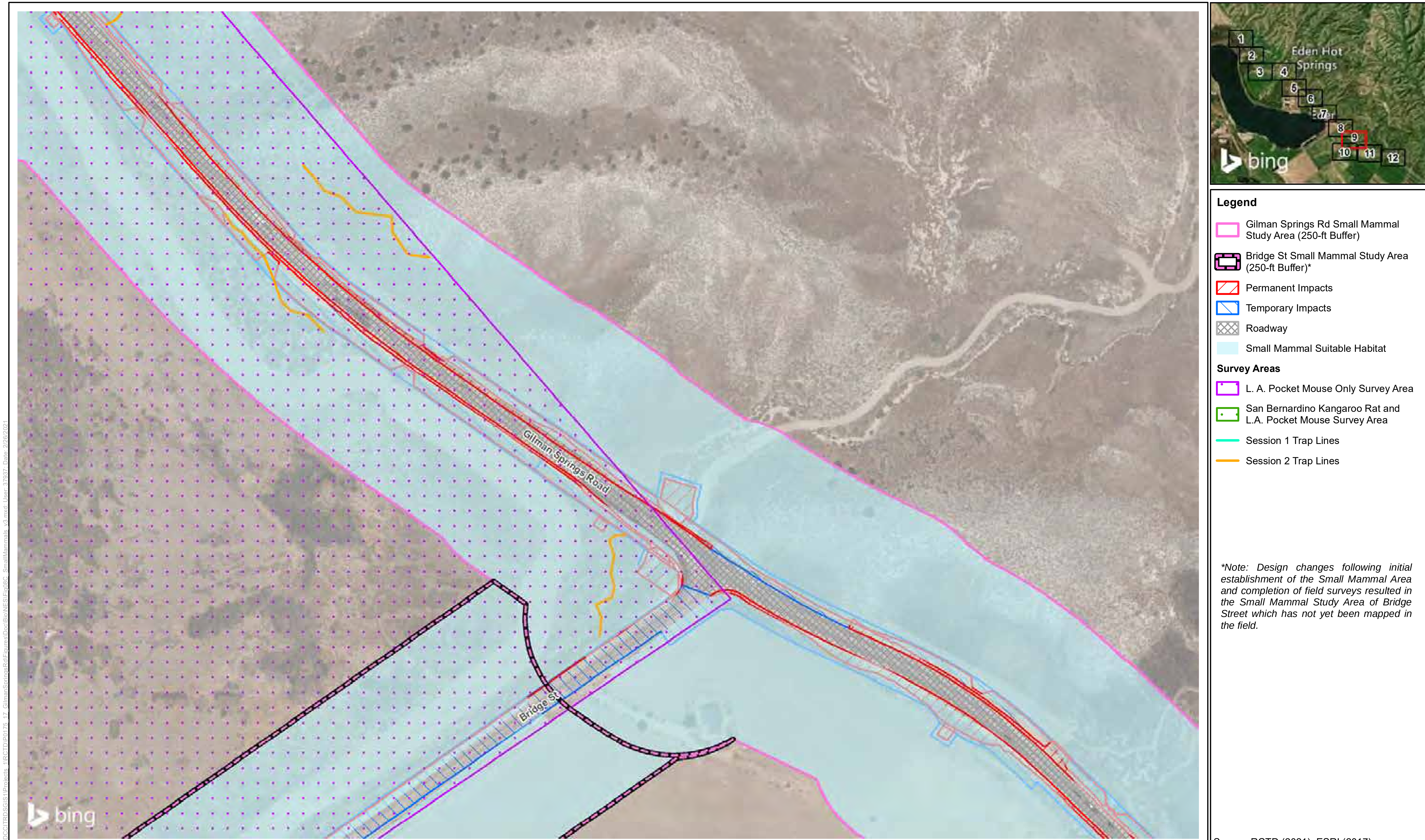
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 8
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Bridge St Small Mammal Study Area (250-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.

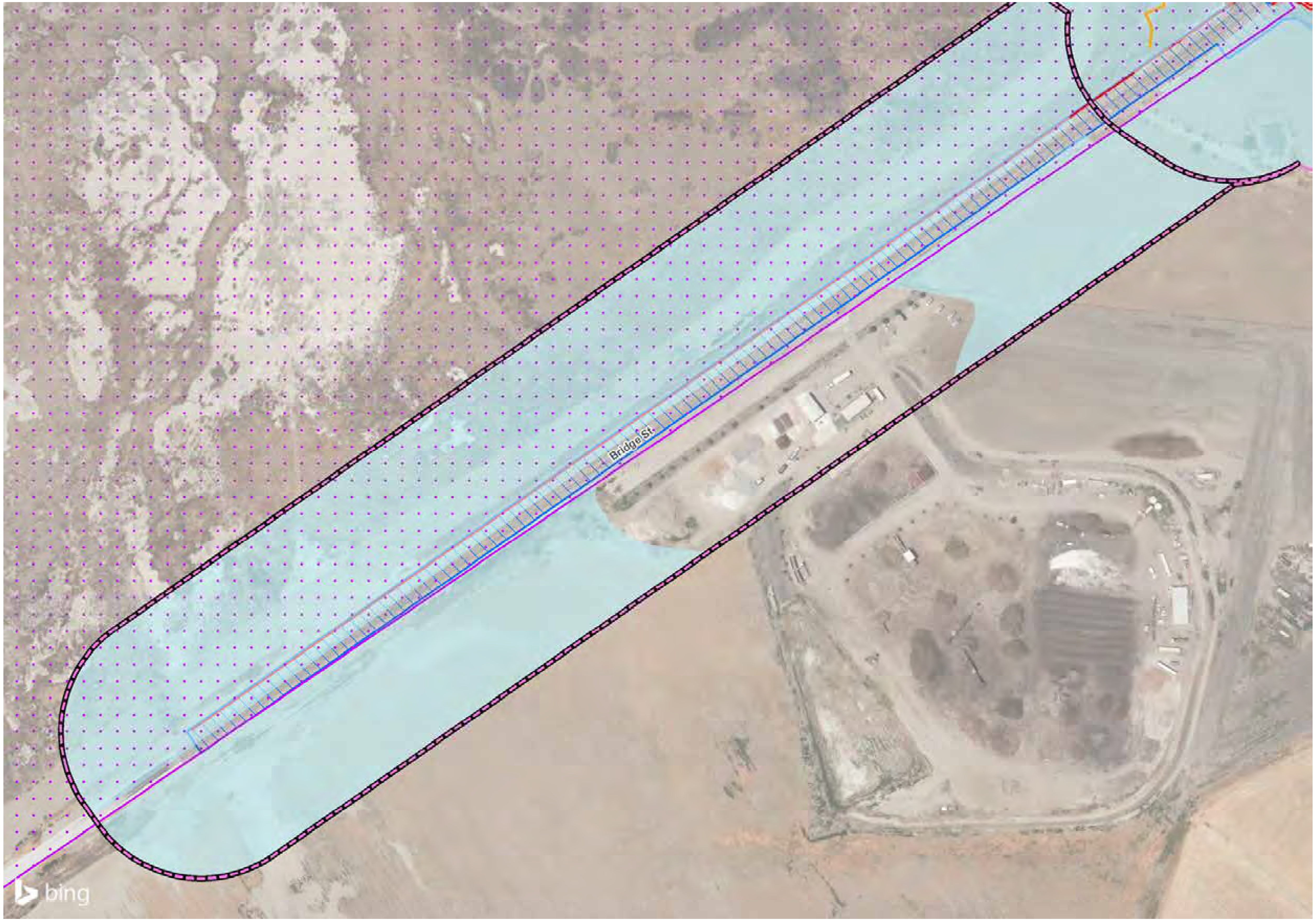
Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 9
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Bridge St Small Mammal Study Area (250-ft Buffer)*
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 10
Small Mammal Sruveys and Results
Gilman Springs Median and Shoulder Improvements Project

Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

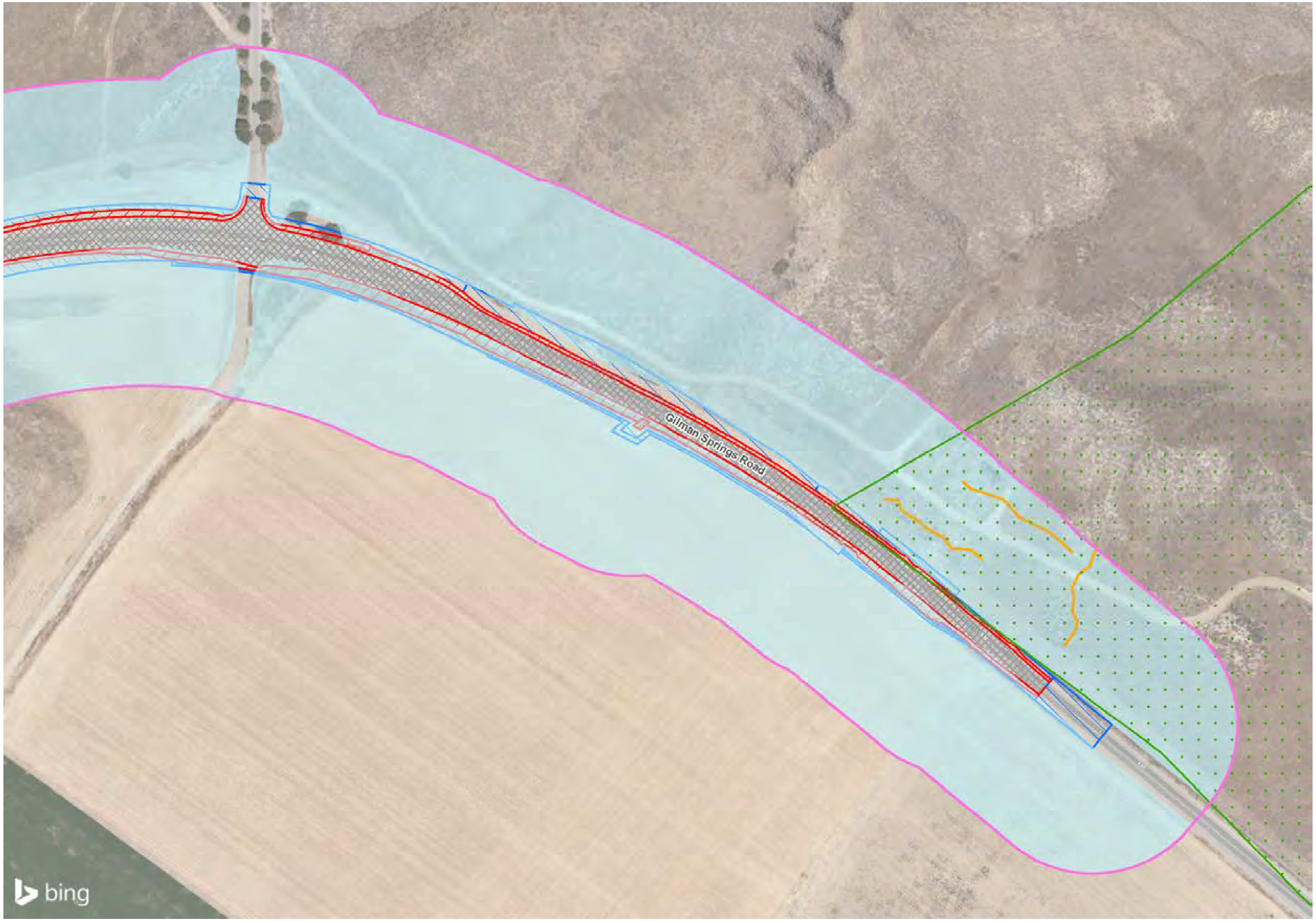
0 100 200 Feet

1:2,400

Figure 8C - Sheet 11

Small Mammal Sruveys and Results

Gilman Springs Median and Shoulder Improvements Project



Legend

- Gilman Springs Rd Small Mammal Study Area (250-ft Buffer)
- Permanent Impacts
- Temporary Impacts
- Roadway
- Small Mammal Suitable Habitat

Survey Areas

- L. A. Pocket Mouse Only Survey Area
- San Bernardino Kangaroo Rat and L.A. Pocket Mouse Survey Area
- Session 1 Trap Lines
- Session 2 Trap Lines

**Note: Design changes following initial establishment of the Small Mammal Area and completion of field surveys resulted in the Small Mammal Study Area of Bridge Street which has not yet been mapped in the field.*

Source: RCTD (2021); ESRI (2017)

N

0 100 200 Feet

1:2,400

Figure 8C - Sheet 12

Small Mammal Sruveys and Results

Gilman Springs Median and Shoulder Improvements Project

Appendix B Regulatory Requirements

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Regulatory Requirements

This section summarizes background information regarding the applicable regulations for protecting biological resources that are pertinent to the proposed project.

Federal Requirements

National Environmental Policy Act

The National Environmental Policy Act (NEPA) declares a continuing federal policy "to use all practicable means and measures...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations." NEPA directs "a systematic, interdisciplinary approach" to planning and decision-making, and requires environmental statements for "major Federal actions significantly affecting the quality of the human environment." Implementation regulations by the Council on Environmental Quality (CEQ) (Code of Federal Regulations [CFR], title 40, Parts 1500–1508) require federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. Federal agencies are further directed to emphasize significant environmental issues in project planning and to integrate impact studies required by other environmental laws and Executive Orders into the NEPA process. The NEPA process should therefore be seen as an overall framework for the environmental evaluation of federal actions.

Endangered Species Act of 1973 (16 United States Code (U.S.C.) § 1531 et seq.)

Species listed as endangered and/or threatened by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA) are protected under Section 9 of FESA, which forbids any person to "take" an endangered or threatened species. "Take" is defined in Section 3 of FESA as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The U.S. Supreme Court ruled in 1995 that the term "harm" includes destruction or modification of habitat. Sections 7 and 10 of FESA may authorize "incidental take" for an otherwise lawful activity (a development project, for example) if it is determined that the activity would not jeopardize the species' survival or recovery. Section 7 applies to federalized projects where a federally listed species is present and there is a federal nexus such as a federal CWA Section 404 permit (e.g., presence of Waters of the United States (WoUS)) that is required. Section 7 requires federal agencies in consultation with, and with the assistance of, the Secretary of the Interior to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of Critical Habitat (CH) for these species. Section 10 applies when a federally listed species is present but no federal nexus is present.

Clean Water Act (33 U.S.C. § 1251 et seq.)

The federal Clean Water Act (CWA) provides a structure for regulating discharges of pollutants into the WoUS. The applicable sections of the CWA are further discussed below.

- Under Section 401 of the CWA, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into WoUS. The applicant must obtain state certification that the discharge complies with other provisions of the CWA. The nine Regional Water Quality Control Boards (RWQCBs) administer the certification program

in California. Project sponsors must obtain a 401 Water Quality Certification from RWQCB. The RWQCBs regulate at the state level all activities that are regulated by the USACE. Therefore, RWQCB jurisdiction usually coincides with the jurisdictional boundaries of the WoUS, however if waters are determined not to be WoUS, they may still be subject to RWQCB jurisdiction based on the Porter-Cologne Water Quality Control Act (refer to Section 2.1.2.5).

- Under Section 402, all point source discharges, including, but not limited to, construction-related stormwater discharges to surface waters, are regulated through the National Pollutant Discharge Elimination System (NPDES) program. Project sponsors must obtain an NPDES permit from SWRCB.
- Under CWA Section 404, the United States Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) regulate the discharge (permanent or temporary) of dredged and fill materials into the WoUS (including wetlands). A discharge of fill materials includes, but is not limited to, grading, placing riprap for erosions control, pouring concrete, laying sod, and stockpiling excavated material into WoUS. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain channel maintenance activities, constructing temporary mining and farm/forest roads and excavating without stockpiling. Project sponsors must obtain a permit from USACE for discharges of dredged or fill materials into proposed jurisdictional waters over which USACE determines that it will exert jurisdiction.

Waters of the United States

On January 23, 2020, EPA and USACE signed and released the prepublication notice of the Navigable Waters Protection Rule, redefining WoUS (33 CFR 328). The Navigable Waters Protection Rule and revised definition of WoUS went into effect on June 23, 2020. The Navigable Waters Protection Rule outlines four clear categories of waters that are considered waters of the United States:

(1) Territorial seas and traditional navigable waters (TNWs);
(2) Tributaries to TNWs that are perennial or intermittent;
(3) Lakes, ponds, and impoundments of jurisdictional water; and
(4) Adjacent wetlands.

The Navigable Waters Protection Rule also identified those waters that are not considered WoUS, which include:

(1) Waters or water features that are not identified in paragraph (a)(1), (2), (3), or (4) of this section;
(2) Groundwater, including groundwater drained through subsurface drainage systems;
(3) Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;
(4) Diffuse stormwater run-off and directional sheet flow over upland;
(5) Ditches that are not waters identified in paragraph (a)(1) or (2) of this section, and those portions of ditches constructed in waters identified in paragraph (a)(4) of this section that do not satisfy the conditions of paragraph (c)(1) of this section;
(6) Prior converted cropland;
(7) Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;
(8) Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-

jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters that meet the conditions of paragraph (c)(6) of this section;

(9) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

(10) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off; and

(11) Waste treatment systems.

Wetlands

Normally, three criteria must be satisfied to classify an area as a jurisdictional wetland: (1) a predominance of plant life adapted to living in wet conditions (hydrophytic vegetation); (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology) (Environmental Laboratory 1987; USACE 2008).

U.S. Fish and Wildlife Coordination Act (16 U.S.C. § 661–666c)

The U.S. Fish and Wildlife Coordination Act applies to any federal project where any body of water is impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with USFWS and the appropriate state wildlife agency. These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to wildlife resources. The term wildlife includes both animals and plants. Provisions of the act are implemented through the NEPA process and Section 404 permit process.

Migratory Bird Treaty Act (16 U.S.C. § 703–712)

The Migratory Bird Treaty Act (MBTA) of 1918 prohibits the take of the nest, eggs, birds, or any parts thereof (listed at 50 C.F.R. Part 10.13 as modified by 75 Fed. Reg. § 9281). The law applies to the removal of nests as well as the abandonment of nests occupied by migratory birds during the breeding season.

Bald and Golden Eagle Protection Act (16 U.S.C. § 668–668(d); 50 C.F.R. Part 22)

The Bald and Golden Eagle Protection Act (BGEPA) prohibits anyone from taking, possessing, or transporting bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), or the parts, nests, or eggs of such birds without prior authorization. The BGEPA regulations authorize issuance of incidental take permits of bald and golden eagles under limited circumstances.

Protection of Wetlands (USEO 11990)

U.S. Presidential Executive Order (USEO) 11990 aims to avoid direct or indirect impacts on wetlands from Federal or federally approved projects when a practicable alternative is available. If wetland impacts cannot be avoided, all practicable measures to minimize harm must be included.

Protection of Migratory Bird Populations (USEO 13186)

USEO 13186 directs each federal agency taking actions that have or may have adverse impact on migratory bird populations to work with USFWS to develop a memorandum of understanding that will promote the conservation of migratory bird populations.

Invasive Species (USEO 13112)

USEO 13112 requires federal agencies to work cooperatively to prevent and control the introduction and spread of invasive plants and animals. This order requires federal agencies to combat the introduction or spread of invasive species in the United States. Federal Highway Administration guidance issued August 10, 1999, directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

State Requirements

California Environmental Quality Act

The California Environmental Quality Act (CEQA) establishes state policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to actions directly undertaken, financed, or permitted by state lead agencies. Regulations for implementation are found in the state CEQA guidelines published by the state resources agency (Office of the Secretary).

California Endangered Species Act (Fish and Game Code, §§ 2050–2085)

The California Endangered Species Act (CESA) is regulated by California Department of Fish and Wildlife (CDFW). This act establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that affect both a state and federally listed species, compliance with FESA would satisfy CESA if CDFW determines that the federal incidental take authorization is consistent with CESA under Fish & Game Code Section 2080.1. For projects that would result in a "take" of a state-only listed species, the Applicant must apply for a take permit under Section 2081(b).

Compared to the FESA process, CESA contains a procedure for CDFW to issue a Section 2081 incidental take permit authorizing the take of listed and candidate species incidental to an otherwise lawful activity, subject to specified conditions, including that the impacts of the take are fully mitigated.

California Fish and Game Codes

SECTIONS 3511, 4700, 5050, AND 5515 (FULLY PROTECTED SPECIES)

The California Fish and Game Code (CFGC) designates 37 fully protected species and prohibits the take or possession at any time of such species with certain limited exceptions.

SECTIONS 3503, 3503.5, AND 3513 (BIRD PROTECTIONS)

Section CFGC 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by code or any regulation made pursuant thereto. Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (New World vultures, hawks, eagles, ospreys, and falcons, among others) or Strigiformes (owls). Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take pro-visions, it is generally required that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

SECTION 1600 ET SEQ. (LAKE AND STREAMBED ALTERATION)

Section 1600 et seq. requires notifying the CDFW prior to any project activity that might (1) substantially divert or obstruct the natural flow of any river, stream or lake; (2) substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement (SAA) and is applicable to all projects involving state or local government discretionary approvals.

California Native Plant Protection Act (Cal. Fish and Game Code, §§ 1900–1913)

The California Native Plant Protection Act (NPPA) requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. The NPPA gives the CDFW the power to designate native plants as “endangered” or “rare” and prohibits the take of such plants, with certain exceptions.

Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.)

The RWQCBs regulate activities that would involve “discharging waste, or proposing to discharge waste, within any region that could affect waters of the state” (California Water Code 13260[a]), pursuant to provisions of the state Porter-Cologne Act. Waters of the State (WoS) are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code 13050 [e]). Such waters may include waters not subject to regulation under CWA Section 404 due to a lack of connectivity with a navigable water body or lack of an OHWM (i.e., isolated drainages).

Regional and Local Regulations

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a Habitat Conservation Plan (HCP) focusing on conservation of species and associated habitats in Western Riverside County. The MSHCP Plan Area encompasses 1.26 million acres and includes all of unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line as well the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet and San Jacinto.

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of FESA and is used to allow for participating jurisdictions to authorize “Take” of plant and wildlife species identified in the MSHCP plan area. The USFWS and CDFW (wildlife agencies) granted “take authorization” that

may incidentally take or harm individual species or their habitat outside of the MSHCP conservation areas in exchange for the assembly and management of the MSHCP conservation area.

The MSHCP must disclose impacts likely to result from the proposed taking of species and incorporate measures to minimize and mitigate the impacts of such takings. Measures to minimize and mitigate impacts include the assembly of the MSHCP conservation area, the management and monitoring of the MSHCP conservation area and implementation measures to minimize impacts.

In order to receive species take coverage, the MSHCP must meet the FESA issuance criteria for HCPs which require that the HCP disclose impacts likely to result from the proposed taking and measures to avoid, minimize and mitigate such impacts. For some species within the MSHCP Plan Area, existing available information was not sufficient to make findings necessary to satisfy this issuance criteria. For these species, survey requirements are incorporated into the MSHCP and these requirements are detailed below.

- Protection of Species Associated with Riparian/Riverine and Vernal Pool policies (Section 6.1.2 of the MSHCP)
  - Survey, mapping and documentation is required for all riparian/riverine and vernal pools.
  - Invertebrates-Crustaceans - a habitat assessment for Riverside, vernal pool and Santa Ana fairy shrimp is required.
  - Birds – a habitat assessment for least Bell's vireo, southwestern willow flycatcher and western yellow-billed cuckoo is required.
  - Where suitable habitat is present for these species is present, focused surveys are required.
  - If the species are detected, 90% of the portions of the property that provide for the long-term conservation value of the identified species will be avoided until it is demonstrated that the conservation goals of that species are met.
- Protection of Narrow Endemic Plant Species (NEPS) (Section 6.1.3 of the MSHCP)
  - This includes habitat assessments for these species within the Narrow Endemic Plant Species Survey Area.
  - Where suitable habitat is present, focused surveys are required.
  - If the species are detected, 90% of the portions of the property that provide for the long-term conservation value of the identified species will be avoided until it is demonstrated that the conservation goals of that species are met.
- Additional Survey Needs and Procedures (Section 6.3.2 of the MSHCP)
  - For several plant species, habitat assessments will be conducted within the Criteria Area as shown in Figure 6-2 of the MSHCP.
  - Where suitable habitat exists, focused surveys are required.
  - For several amphibian, mammal and one bird species, habitat assessments will be conducted within the Criteria Area as shown in Figures 6-3, 6-4 and 6-5.
  - Where suitable habitat for these species exist, focused surveys are required.
  - If the species are detected, 90% of the portions of the property that provide for the long-term conservation value of the identified species will be avoided until it is demonstrated that the conservation goals of that species are met.

Appendix C Site Photographs

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	**Photograph:** 1 **Photo Date:** May 12, 2017 **Location:** Southwest end of BSA **Direction:** View facing east. **Comment:** Photo depicts disturbed habitat dominated by stinknet with mule fat scrub in the background.
	**Photograph:** 2 **Photo Date:** May 12, 2017 **Location:** Southwest end of BSA **Direction:** View facing west. **Comment:** Photo depicts nonnative grassland habitat.

	**Photograph:** 3 **Photo Date:** May 12, 2017 **Location:** Southeast end of BSA. **Direction:** View facing west. **Comment:** Photo depicts recently plowed area.
	**Photograph:** 4 **Photo Date:** May 12, 2017 **Location:** Southeast end of BSA **Direction:** View facing west. **Comment:** Photo depicts brittle bush scrub.

	**Photograph:** 5 **Photo Date:** July 20, 2017 **Location:** Northeast end of BSA **Direction:** View facing west. **Comment:** Photo depicts fourwing saltbush scrub.
	**Photograph:** 6 **Photo Date:** July 20, 2017 **Location:** North-central portion of the BSA. **Direction:** View facing northeast. **Comment:** Photo depicts disturbed habitat adjacent to Gilman Springs Road.

	**Photograph:** 7 **Photo Date:** July 20, 2017 **Location:** Northeast end of the BSA. **Direction:** View facing west. **Comment:** Photo depicts disturbed habitat with brittlebush scrub on the hills in the background.
	**Photograph:** 8 **Photo Date:** May 12, 2017 **Location:** South-central portion of the BSA. **Direction:** View facing west. **Comment:** Close-up of smooth tarplant

	**Photograph:** 9 **Photo Date:** May 12, 2017 **Location:** South-central portion of the BSA. **Direction:** View facing west. **Comment:** Photo of smooth tarplant population.
	**Photograph:** 10 **Photo Date:** March 8, 2018 **Location:** Southern portion of the BSA. **Direction:** NA **Comment:** Photo of burrowing owl.

Appendix D USFWS List of Threatened and Endangered Species for the Gilman Springs Median and Shoulder Improvements Project

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
http://www.fws.gov/carlsbad/

In Reply Refer To: February 10, 2021
Consultation Code: 08ECAR00-2021-SLI-0604
Event Code: 08ECAR00-2021-E-01341
Project Name: Gilman Springs Road Median and Shoulder Improvements Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2021-SLI-0604
Event Code: 08ECAR00-2021-E-01341
Project Name: Gilman Springs Road Median and Shoulder Improvements Project
Project Type: TRANSPORTATION
Project Description: The proposed Gilman Springs Shoulder and Median Widening project is located on Gilman Springs Road from approximately 1.29 miles north of Jack Rabbit Trail to approximately one-mile south of Bridge Street. The proposed project would reconstruct the existing roadway to a configuration which includes 5-foot outside shoulders with rumble strips and a 12-foot lane in each direction, a 4-foot double yellow striped median with impact resistant channelizers and rumble strips in the median, and a 5-foot graded shoulder within the project limits. The project would also include one, approximately 6,900-foot long passing lane in the westbound direction from approximately 1,350 feet north of Bridge Street to approximately 1,200 feet north of Eden Springs. Additionally, the project will replace the existing reinforced concrete box culvert near the Gilman Springs Road intersection with Bridge Street with a single-span concrete slab bridge that will be used to create a wildlife crossing. An eight-foot high wildlife fence, which would also extend an additional two feet below grade, would be installed at the same location and jumpouts would be integrated into the fencing to allow wildlife to escape from the right-of-way. Three retaining walls, approximately 10 to 16 feet high and approximately 100 to 320 feet long, are proposed to prevent grading into an adjacent channel.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.88141755,-117.05921768175628,14z

Counties: Riverside County, California

Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat *Dipodomys stephensi (incl. D. cascus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp *Streptocephalus woottoni* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8148	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
San Jacinto Valley Crownscale *Atriplex coronata var. notatior* There is **final** critical habitat for this species. However, no *actual* acres or miles were designated due to exemptions or exclusions. See Federal Register publication for details. Species profile: https://ecos.fws.gov/ecp/species/4353	Endangered
Santa Ana River Woolly-star *Eriastrum densifolium ssp. sanctorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered
Spreading Navarretia *Navarretia fossalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1334	Threatened
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix E Special-Status Species and Habitats of Concern Potential to Occur

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COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
PLANTS				
Chaparral Sand-verbena (*Abronia villosa var. aurita*)	-/-/1B.1/-	This annual herb is found in sandy soil within coastal scrub, mostly on broad alluvial fans and benches. Elevation ranges from 262 feet (ft.) to 5,248 ft. above mean sea level (amsl). It blooms from January through August. Known to occur in northern Orange County, western Riverside County, San Bernardino County, San Diego County, and southern Imperial County.	HP	Potentially suitable habitat is present within the study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Yucaipa Onion (*Allium marvinii*)	-/-/1B.2/ MSHCP(b)	This perennial bulbiferous herb is found in clay soils within chaparral. Elevation ranges from 2,493 ft. to 3,494 ft. amsl. It blooms from April through May. Known to occur in the foothills of the San Bernardino Mountains near Beaumont and Calimesa (Roberts et al. 2004).	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: This species is a Narrow Endemic Plant Species. The rare plant study area lies outside of the MSHCP survey area for this species (Area 8). Therefore, this species does not pose a constraint to the project and no further action is necessary.
Munz's onion (*Allium munzii*)	E/T/1B.1/ WRCMSHCP(b)	Found on mesic exposures or seasonally moist microsites in grassy openings in coastal sage scrub, chaparral, juniper woodland, and valley and foothill grasslands in clay soils. Associated with a special "clay soil flora" found in southwestern Riverside County. At least one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay.	HP	There are suitable grasslands within the study area, some of which occur on mapped clay soils. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: This is a Narrow Endemic Plant Species (Area 3) for the project; however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Diego Ambrosia (*Ambrosia pumila*)	E/-/1B.1/ MSHCP(b)	Perennial rhizomatous herb that occurs in open floodplain terraces or in the margins of vernal pool watersheds at low elevations generally less than 1600 feet. Associated with plant communities dominated by sparse non-native grasslands or ruderal habitat, chaparral, coastal scrub, vernal pools, and alkali playas. Blooming period is from April-October.	HA	Suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: This is a Narrow Endemic Plant Species (Area 3) for the project. However, no suitable habitat occurs within the rare plant study area. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
Rock Sandwort (*Arenaria lanuginosa var. saxosa*)	-/-/2B.3/-	This perennial herb is found in mesic and sandy soils within subalpine coniferous forest and upper montane coniferous forest. Elevation ranges from 4,774 ft. to 8,530 ft. amsl (above mean sea level). It blooms from July through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Marsh Sandwort (*Arenaria paludicola*)	-/-/1B.1/-	This perennial stoloniferous herb occurs in wetland and freshwater marshes and grows up through dense mats of *Typha* sp., *Juncus* sp., and *Scirpus* sp. Elevation ranges from sea level to 558 ft. amsl. It blooms from May through August. This species was documented within the Santa Ana River in late 1899; however, the species is now believed to be extirpated from southern California (USFWS 2008).	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Diego Sagewort (*Artemisia palmeri*)	-/-/4.2/-	This perennial deciduous shrub is found in sandy/mesic soils within chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland. Elevation ranges from 49 ft. to 3002 ft. amsl. This species blooms from May through September, uncommonly from February through April.	HP	Potentially suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Horn's milk-vetch (*Astragalus hornii var. hornii*)	-/-/1B.1/-	This annual herb is found near lake margins and alkaline soils in meadows, seeps, and playas. Elevation ranges from 195 ft. to 2,790 ft. This species blooms from May through October.	HA	The rare plant study area occurs well outside the species' known range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Borrego Milk-vetch (*Astragalus lentiginosus var. borreganus*)	-/-/4.3/-	This annual herb is found in sandy soils within Mojavean and Sonoran desert scrub. Elevation ranges from 98 ft. to 2,936 ft. amsl. This species blooms from February through May.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Coachella Valley Milk-vetch (*Astragalus lentiginosus var. coachellae*)	E/-/1B.2/-	This annual/perennial herb is found in sandy soils within desert dunes and Sonoran desert scrub. Elevation ranges from 131 ft. to 2,149 ft. amsl. It blooms from February through May.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Jaeger's Milk-vetch (*Astragalus pachypus var. jaegeri*)	-/-/1B.1/ MSHCP	This perennial shrub is found in sandy or rocky soil within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Elevation ranges from 1,198 ft. to 3,199 ft. amsl. It blooms from December through June. Scarce and localized on steep sedimentary slopes in the San Jacinto Mountain foothills, Beaumont, Badlands, and near Vail lake (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
San Jacinto Valley Crownscale (*Atriplex coronata var. notatior*)	E/-/1B.1/ MSHCP(d)	This annual herb is found in mesic and alkaline soils within playas, valley and foothill grassland, and vernal pools. Elevation ranges from 456 ft. to 1,640 ft. amsl. It blooms from April through August. Endemic to the alkaline flats of the San Jacinto River, Hemet, and the wetlands northwest of Lake Elsinore (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area and established populations are known nearby. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
South Coast Saltscale (*Atriplex pacifica*)	-/-/1B.2/-	This annual herb is found within coastal bluff scrub, coastal dunes, coastal scrub, and playas. Elevation ranges from sea level to 459 ft. amsl. It blooms from March through October.	HA	The rare plant study area occurs well outside the species' known elevation range and was not observed during focused surveys in the spring of 2017. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Parish's Brittlescale (*Atriplex parishii*)	-/-/1B.1/ MSHCP(d)	This annual herb is found in alkaline soils within chenopod scrub, playas, and vernal pools. Elevation ranges from 82 ft. to 6,234 ft. amsl. It blooms from June through October. Occurs in alkaline flats along the San Jacinto River, west of Hemet, and near Winchester (Roberts et al. 2004).	HA	Suitable habitat is present nearby and established populations occur nearby, increasing the probability of this species' presence. However, suitable habitat does not occur within the rare plant study area. Additionally, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017 and suitable habitat does not occur within the rare plant study area. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
Davidson's Saltscale (*Atriplex serenana var. davidsonii*)	-/-/1B.2/ MSHCP(d)	This annual herb is found in alkaline and sandy soils within coastal bluff scrub and coastal scrub. Elevation ranges from 33 ft. to 656 ft. amsl. It blooms from April through October.	HA	The rare plant study area occurs well outside the species' known elevation range. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017 and suitable habitat does not occur within the rare plant study area. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Nevin's Barberry (*Berberis nevinii*)	E/E/1B.1/ MSHCP(d)	This perennial evergreen shrub is very rare and local; found on steep north facing slopes or in low-grade sandy washes in chaparral, coastal sage scrub, riparian scrub, and cismontane woodland from 968 ft. to 2,700 ft. amsl. It blooms from February through June. In western Riverside County, known only in the vicinity of Vail Lake (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, this rare plant is only known to occur within the vicinity of Vail Lake. Additionally, this conspicuous shrub was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies outside of the MSHCP survey area for this species (Criteria Areas 5 and 6); therefore, there is no survey requirement. Any potential impacts to the species would be fully mitigated by the MSHCP. No further action is necessary.
Scalloped Moonwort (*Botrychium crenulatum*)	-/-/2B.2/-	This perennial rhizomatous herb is found within bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, and upper montane coniferous forest. Elevation ranges from 4,160 ft. to 10,761 ft. amsl. It blooms from June through September.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Thread-leaved Brodiaea (*Brodiaea filifolia*)	T/E/1B.1/ MSHCP(d)	This perennial bulbiferous herb is found in heavy soils (e.g., clay) in coastal sage scrub, chaparral, cismontane woodland, and vernal pools from 1,575 ft. to 4,000 ft. amsl. This species blooms from March through June. Within western Riverside County, found in southern Santa Ana Mountains, Santa Rosa Plateau, and alkali flats of the San Jacinto River flood plain and west of Hemet (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area and established populations are known nearby. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Round-leaved filaree (*California macrophyllum*)	-/-/-/ WRCMSHCP(d)	Restricted to open cismontane woodland and valley and foothill grassland habitats on very friable deep clay soils between about 50 and 6,560 feet. Within western Riverside County, two of the mapped localities occur on Bosanko clay soils. Records reviewed for this species indicate that this species tends to be associated primarily with Wild Oats (*Avena fatua*).	HP	There are suitable grasslands within the study area, some of which occur on mapped clay soils. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: This is a Criteria Area Species (Area 3) for the project; however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
Palmer's Mariposa Lily (*Calochortus palmeri* var. *palmeri*)	-/-/1B.2/-	This perennial bulbiferous herb is found in mesic soils in chaparral, lower montane coniferous forest, and meadows and seeps. Elevation ranges from 2,329 ft. to 7,841 ft. amsl. This species blooms from April through July.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Plummer's Mariposa Lily (*Calochortus plummerae*)	-/-/4.2/ MSHCP(e)	This perennial bulbiferous herb is found on rocky and sandy areas with granitic or alluvial material in coastal sage scrub, chaparral, lower montane coniferous forest, cismontane woodland, and valley and foothill grasslands. Elevation ranges from 295 ft. to 5,280 ft. amsl. This species blooms from May through July.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: No suitable habitat for this species occurs within the MSHCP portion of the rare plant study area. In addition, this species was not observed during focused surveys in the spring of 2017. Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Bernardino Mountains Owl's-clover (*Castilleja lasiorhyncha*)	-/-/1B.2/-	This hemiparasitic annual herb is found is mesic places in meadows and seeps, pebble plains, upper montane coniferous forest, chaparral, and riparian woodland at elevations ranging from 4,265 ft. to 7,841 ft. amsl. This species blooms from May through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Heckard's Paintbrush (*Castilleja montigena*)	-/-/4.3/-	This perennial herb is found in lower montane coniferous forest, pinyon and juniper woodland, and upper montane coniferous forest. Elevation ranges from 6,398 ft. to 9,186 ft. amsl. This species blooms from May through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Payson's Jewelflower (*Caulanthus simulans*)	-/-/4.2/ MSHCP	This annual herb is found in sandy and granitic soils within chaparral and coastal shrub. Elevation ranges from 295 ft. to 7,218 ft. amsl. This species blooms from March through May, uncommonly in February and June. Uncommon in the eastern foothills, especially in the vicinity of Aguanga and Vail Lake (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Smooth Tarplant (*Centromadia pungens* ssp. *laevis*)	-/-/1B.1/ MSHCP(d)	This annual herb is found in association with fine or alkaline soils in seasonally wet chenopod scrub, meadows and seeps, playas, riparian woodland, fallow fields, drainage ditches, and moist situations within valley and foothill grasslands below 2,099 ft. amsl in elevation. This species blooms from April through September.	P	This species is present within the rare plant study area. Approximately 355 individuals were observed during the 2017 rare plant focused surveys conducted for the project. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3). Several individuals of this species were observed during the rare plant surveys in the spring of 2017.
Salt Marsh Bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)	E/E/1B.2/-	This hemiparasitic annual herb generally occurs within coastal dunes, salt marshes, and coastal swamps, but has also been documented inland in the San Bernardino Valley within alkaline meadows. Elevations range from sea level to 99 ft. amsl. The typical blooming period extends from May through July.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Peninsular Spineflower (*Chorizanthe leptotheca*)	-/-/4.2/ MSHCP(e)	This annual herb is found in alluvial fan and granitic soils within chaparral, coastal scrub, and lower montane coniferous forest. Elevation ranges from 984 ft. to 6,234 ft. amsl. It blooms from May through August. Uncommon in alluvial benches at the base of the Santa Ana and Agua Tibia Mountains (Roberts et al. 2004).	HP	Potentially suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. MSHCP: No suitable habitat for this species occurs within the MSHCP portion of the rare plant study area. In addition, this species was not observed during focused surveys in the spring of 2017. Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)	-/-/1B.1/ MSHCP(e)	This annual herb is found in sandy or rocky openings within coastal scrub, cismontane woodland, valley and foothill grassland, and chaparral habitats at elevations ranging from 902 ft. to 4,002 ft. amsl. The blooming period for this species is from April through June. Occurs in the Santa Ana River Valley and Perris Basin (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area and established populations are known nearby. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: Suitable habitat for this species occurs within the MSHCP portion of the rare plant study area in the public/quasi-public conserved lands and San Jacinto wildlife area additional acquisition. However, this species was not observed during focused surveys in the spring of 2017. Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.
Long-spined Spineflower (*Chorizanthe polygonoides var. longispina*)	-/-/1B.2/ MSHCP	This annual herb is found in clay soils within chaparral, coastal shrub, meadows and seeps, valley and foothill grassland, and vernal pools. Elevation ranges from 98 ft. to 5,020 ft. amsl. This species blooms from April through July. Occurs in the vicinity of Temecula, Lake Skinner, and the foothills of the Agua Tibia Mountains (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
White-bracted Spineflower (*Chorizanthe xanti* var. *leucotheca*)	-/-/1B.2/-	This annual herb occurs in sandy to gravelly soils in pinyon-juniper woodland and Mojavean desert scrub habitats at elevations ranging from 984 ft. to 3,937 ft. amsl. This species blooms from April through June.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Small-flowered Morning-glory (*Convolvulus simulans*)	-/-/4.2/MSHCP	This annual herb is found in openings in chaparral, coastal scrub, and valley and foothill grassland habitats in clay soil and serpentinite seeps. It occurs in elevations ranging from 98 ft. to 2,297 ft. amsl and blooms from March through July. Scarce in the Gavilan Hills, Temescal Valley, Murrieta, and Lake Skinner (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Peruvian Dodder (*Cuscuta obtusiflora* var. *glandulosa*)	-/-/2B.2/-	This parasitic annual vine occurs in freshwater marshes and swamps at elevations ranging from 49 ft. to 919 ft. amsl. It blooms from July through October.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Mojave Tarplant (*Deinandra mohavensis*)	-/E/1B.3/ MSHCP(e)	This annual herb is found in mesic soils within chaparral, coastal scrub, and riparian scrub. Elevation ranges from 3,000 ft. to 5,249 ft. amsl. This species blooms from June through October, also uncommonly blooms in May and November through January. Primarily occurs in the San Jacinto Mountains (Roberts et al. 2004).	HA	The rare plant study area occurs well outside the species' known elevation range. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: No suitable habitat for this species occurs within the rare plant study area. In addition, this species was not observed during focused surveys in the spring of 2017. Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.

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Paniculate Tarplant (*Deinandra paniculata*)	-/-/4.2/-	This annual herb is found in coastal scrub, valley and foothill grassland, and vernal pool habitats, generally in vernally mesic and sometimes sandy conditions. It occurs at elevations ranging from 82 ft. to 3,084 ft. amsl and blooms from April through November. Especially common in the vicinity of Murrieta and Menifee area (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Colorado Desert Larkspur (*Delphinium parishii ssp. subglobosum*)	-/-/4.3/-	This perennial herb is found within chaparral, cismontane woodland, pinyon and juniper woodland, and Sonoran desert scrub. Elevation ranges from 1,969 ft. to 5,906 ft. amsl. This species blooms from March through June.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Mt. Pinos Larkspur (*Delphinium parryi ssp. purpureum*)	-/-/4.3/-	This perennial herb is found within chaparral, Mojavean desert scrub, and pinyon and juniper woodland. Elevation ranges from 3,281 ft. to 8,530 ft. amsl. This species blooms from May through June.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Johnston's Monkeyflower (*Diplacus johnstonii*)	-/-/4.3/-	This annual herb is found in scree, disturbed areas, rocky or gravelly soil, and roadsides within lower montane coniferous forest. Elevation ranges from 3,199 ft. to 9,580 ft. amsl. This species blooms from May through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Slender-horned Spineflower (*Dodecahema leptoceras*)	E/E/1B.1/ MSHCP(b)	This annual herb is found on flood deposited fine sand terraces and washes in Riversidian alluvial fan sage scrub and is also associated with cismontane woodland and chaparral having suitable hydrology and fine sands. It is often associated with cryptogrammic soils. It is known from elevations ranging from 656 ft. to 2,493 ft. amsl. Its blooming period ranges from April through June. Occurs at San Jacinto River, Bautista Canyon, Temescal Valley (Indian Canyon), Arroyo Seco-Kolb Creek drainages, north base of Agua Tibia Mountains, and south of Vail Lake (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area and established populations are known nearby. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is a Narrow Endemic Plant Species. The rare plant study area lies outside of the MSHCP survey area for this species (Areas 1 and 5). Therefore, this species does not pose a constraint to the project and no further action is necessary.
Many-stemmed Dudleya (*Dudleya multicaulis*)	-/-/1B.2/ WRCMSHCP(b)/ LMMSHCP	Found on the coastal slopes of southern California from Los Angeles and San Bernardino counties south, from about 50 feet to 2,600 feet in elevation. It usually grows on poor soils, often on clay or at the margins of gabbroic rock outcrops in coastal sage scrub and grassland communities. This species primarily occurs on the western edge of Riverside County (Roberts et al. 2004).	HP	There are suitable grasslands within the study area, some of which occur on mapped clay soils. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: This is a Narrow Endemic Plant Species (Area 3) for the project; however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Santa Ana River Woollystar (*Eriastrum densifolium* ssp. *sanctorum*)	E/E/1B.1/ MSHCP	A perennial herb known from a single extended but heavily fragmented population in Riverside and San Bernardino counties; it formerly extended into Orange County. An inhabitant of alluvial fan sage scrub in sandy to gravelly soils that can be found at elevations ranging from 450 ft. to 2,000 ft. amsl. It typically blooms from June through August.	HP	Suitable habitat is present within the rare plant study area and established populations are known nearby. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Southern Alpine Buckwheat (*Eriogonum kennedyi var. alpigenum*)	-/-/1B.3/-	This perennial herb is found in granitic and gravelly soils within alpine boulder and rock field, and subalpine coniferous forest. Elevation ranges from 8,530 ft. to 11,483 ft. amsl. This species blooms from July through September.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Little Purple Monkeyflower (*Erythranthe purpurea*)	-/-/1B.2/-	This annual herb is found within meadows and seeps, pebble plain, and upper montane coniferous forest. Elevation ranges from 6,234 ft. to 7,546 ft. amsl. This species blooms from May through June.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Jacinto Mountains Bedstraw (*Galium angustifolium ssp. jacinticum*)	-/-/1B.3/ MSHCP(b)	This perennial herb is found in lower montane coniferous forest. Elevation ranges from 4,429 ft. to 6,890 ft. amsl. This species blooms from June through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: This species is a Narrow Endemic Plant Species. The rare plant study area lies outside of the MSHCP survey area for this species (Area 6). Therefore, this species does not pose a constraint to the project and no further action is necessary.
Johnston's Bedstraw (*Galium johnstonii*)	-/-/4.3/-	This perennial herb is found in chaparral, lower montane coniferous forest, pinyon and juniper woodland, and riparian woodland habitats at elevations ranging from 4,002 ft. to 7,546 ft. amsl. It blooms from June through July.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
San Bernardino Gilia (*Gilia leptantha ssp. leptantha*)	-/-/1B.3/-	This annual herb is found in sandy or gravelly soils within lower montane coniferous forest. Elevation ranges from 4,921 ft. to 8,399 ft. amsl. This species blooms from June through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Parish's alumroot (*Heuchera parishii*)	-/-/1B.3/-	This perennial rhizomatous herb is found in rocky, sometimes carbonate, soils within alpine boulder and rock field, lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest. Elevation ranges from 4,921 ft. to 12,467 ft. amsl. This species blooms from June through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Vernal Barley (*Hordeum intercedens*)	-/-/3.2/ MSHCP	This annual herb is found in mesic soils within coastal dunes, coastal scrub, valley and foothill grassland (in saline flats and depressions), and vernal pools. Elevation ranges from 16 ft. to 3,281 ft. amsl. This species blooms from March through June. Uncommon in the San Jacinto River floodplain and west of Hemet (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area and established populations are known nearby. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Mesa Horkelia (*Horkelia cuneata* var. *puberula*)	-/-/1B.1/-	This perennial herb grows in sandy and gravelly soils in chaparral, cismontane woodland, or coastal scrub at elevations from 230 ft. to 2,657 ft. amsl. It blooms from February through September. Historically present in the Jurupa Mountains, but has apparently been extirpated there (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Pygmy Hulsea (*Hulsea vestita* ssp. *pygmaea*)	-/-/1B.3/-	This perennial herb is found in granitic and gravelly soils within alpine boulder and rock field, and subalpine coniferous forest. Elevation ranges from 9,301 ft. to 12,795 ft. amsl. This species blooms from June through October.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
California Satintail (*Imperata brevifolia*)	-/-/2B.1/-	This perennial rhizomatous herb occurs in coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps (alkali), and riparian scrub habitats within mesic areas. It is found at elevations ranging from sea level to 3,986 ft. amsl. It blooms from September through May.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.

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Southern California Black Walnut (*Juglans californica*)	-/-/4.2/MSHCP	This perennial deciduous tree is found in riparian woodland, chaparral, coastal scrub, and cismontane woodland habitats in alluvial soils at elevations ranging from 164 ft. to 2,953 ft. amsl. It blooms from March to August. Most frequent along the Santa Ana River near Riverside (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Duran's Rush (*Juncus duranii*)	-/-/4.3/-	This perennial rhizomatous herb is found in mesic areas within meadows, seeps, and lower and upper montane coniferous forest habitats at elevations ranging from 5,800 ft. to 9,199 ft. amsl. Its blooming period is from July through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Coulter's Goldfields (*Lasthenia glabrata* ssp. *coulteri*)	-/-/1B.1/ MSHCP(d)	This wide-ranging annual herb is found in saline areas within coastal saltmarsh, inland playa, and vernal pool habitats at elevations ranging from sea level to 4,002 ft. amsl. It blooms from February through June. Common and sometimes abundant on seasonally flooded vernal alkali plains of the San Jacinto River and the Alberhill Creek wetlands, and less common near Hemet (Roberts et al. 2004).	HA	Suitable habitat is present nearby and established populations occur nearby, increasing the probability of this species' presence. However, suitable habitat does not occur within the rare plant study area. Additionally, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017 and suitable habitat does not occur within the rare plant study area. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Heart-leaved Pitcher Sage (*Lepechinia cardiophylla*)	-/-/1B.2/ MSHCP(d)	This perennial shrub is found in closed-cone coniferous forest, chaparral, and cismontane woodland. It occurs at elevations ranging from 1,280 ft. to 4,199 ft. amsl and blooms from April to July. Uncommon in the Santa Ana Mountains (Roberts et al. 2004).	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: The rare plant study area lies outside of the MSHCP survey area for this species (Criteria Areas 7 and 8); therefore, there is no survey requirement. Any potential impacts to the species would be fully mitigated by the MSHCP. No further action is necessary.
Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*)	-/-/4.3/-	This annual herb is found in dry soils in chaparral and coastal sage scrub openings at elevations ranging from sea level to 3,100 ft. amsl. Its blooming period is from January through July. Occurs in the Perris Basin, Santa Ana Mountains, and foothills of the Agua Tibia Mountains (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, known populations do not occur in the area and this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Ocellated Humboldt Lily (*Lilium humboldtii* ssp. *ocellatum*)	-/-/4.2/ MSHCP(f)	This perennial bulbiferous herb is found in openings in riparian woodland, coastal scrub, chaparral, cismontane woodland, and lower montane coniferous forest habitats at elevations ranging from 98 ft. to 5,905 ft. amsl. It blooms from March to August.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: The rare plant study area lies outside of Forest Service Land; therefore, there is no survey requirement. Any potential impacts to the species would be fully mitigated by the MSHCP. No further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Lemon Lily (*Lilium parryi*)	-/-/1B.2/ MSHCP(f)	This perennial bulbiferous herb is found in lower montane coniferous forest, meadows and seeps, riparian forest, and upper montane coniferous forest habitats in wet, mountainous terrain. It generally occurs in forested areas, on shady edges of streams and in open boggy meadows and seeps. Elevation ranges from 4,003 ft. to 9,006 ft. amsl and it blooms from July to August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: The rare plant study area lies outside of Forest Service Land; therefore, there is no survey requirement. Any potential impacts to the species would be fully mitigated by the MSHCP. No further action is necessary.
Torrey's Box-thorn (*Lycium torreyi*)	-/-/4.2/-	This perennial shrub is found in sandy and rocky soil within Mojavean and Sonoran desert scrub, particularly in washes, streambanks, and desert valleys. Elevation ranges from -164 ft. to 4,003 ft. amsl. This species blooms from March through June, uncommonly from January to February and September to November.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Parish's Bush-mallow (*Malacothamnus parishii*)	-/-/1A/-	This perennial deciduous shrub is found in chaparral and coastal scrub. Elevation ranges from 1,001 ft. to 1,493 ft. amsl. This species blooms from June through July.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Spiny-hair Blazing Star (*Mentzelia tricuspis*)	-/-/2B.1/-	This annual herb is found in sandy and gravelly slopes and washes within Mojavean desert scrub. Elevation ranges from 492 ft. to 4,199 ft. amsl. This species blooms from March through May.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Hall's Monardella (*Monardella macrantha ssp. hallii*)	-/-/1B.3/ MSHCP	This perennial rhizomatous herb is found within broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland. Elevation ranges from 2,395 ft. to 7,201 ft. amsl. This species blooms from June through October. Uncommon on north-facing slopes in the Santa Ana and Agua Tibia Mountains (Roberts et al. 2004).	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Crowned Muilla (*Muilla coronata*)	-/-/4.2/-	This perennial bulbiferous herb is found in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. Elevation ranges from 2,198 ft. to 6,430 ft. amsl. This species blooms from March through April, uncommonly in May.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Little Mousetail (*Myosurus minimus ssp. apus*)	-/-/3.1/ MSHCP(d)	This annual herb is found in alkaline soils within valley and foothill grassland and vernal pools. Elevation ranges from 66 ft. to 2,100 ft. amsl. This species blooms from March through June. Locally common in the alkaline vernal pools near Hemet, and scarce in Perris Basin and Santa Rosa Plateau (Roberts et al. 2004).	HP	Suitable habitat is present in the rare plant study area and established populations occur nearby, increasing the probability of this species' presence. However, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Mud Nama (*Nama stenocarpa*)	-/-/2B.2/ MSHCP(d)	This annual/perennial herb is found in marshes, swamps, lake margins, and riverbanks. Elevation ranges from 16 ft. to 1,640 ft. amsl. This species blooms from January through July. Scarce, known only from the northern shores of Mystic Lake (Roberts et al. 2004).	HA	Suitable habitat is present nearby and established populations occur nearby, increasing the probability of this species' presence. However, suitable habitat does not occur within the rare plant study area. Additionally, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies inside the MSHCP survey area for this species (Criteria Area 3); however, no individuals of this species were observed during the rare plant surveys in the spring of 2017 and suitable habitat does not occur within the rare plant study area. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
Spreading Navarretia (*Navarretia fossalis*)	T/-/1B.1/ MSHCP(d)	This annual herb is found within chenopod scrub, marshes and swamps, playas, and vernal pools. Elevation ranges from 98 ft. to 2,149 ft. amsl. This species blooms from April through June. Sometimes common in vernally wet areas along the San Jacinto River in the Lakeview-Perris area, vernal plains west of Hemet, and alkali wetlands near Elsinore. Scarce elsewhere in Perris Basin and Santa Rosa Plateau (Roberts et al. 2004).	HA	Suitable habitat is present nearby and established populations occur nearby, increasing the probability of this species' presence. However, suitable habitat does not occur within the rare plant study area. Additionally, this species was not observed during focused surveys in the spring of 2017. MSHCP: The rare plant study area lies outside of the MSHCP survey area for this species (Criteria Area 7); therefore, there is no survey requirement. Any potential impacts to the species would be fully mitigated by the MSHCP. No further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
California Orcutt grass (*Orcuttia californica*)	E/E/1B.1/ MSHCP(b)	Restricted to the deeper portions of undisturbed vernal pools. In Riverside County, this species is found in southern basaltic claypan vernal pools at the Santa Rosa Plateau and alkaline vernal pools as at Skunk Hollow and at Salt Creek west of Hemet.	HP	Alkaline soils occur within the study area, however no vernal pools are present. This species was not observed during focused surveys in the spring of 2017. MSHCP: This is a Narrow Endemic Plant Species (Area 3) for the project; however, no individuals of this species were observed during the rare plant surveys in the spring of 2017. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
Rock-loving Oxytrope (*Oxytropis oreophila var. oreophila*)	-/-/2B.3/-	This perennial herb is found in gravelly or rocky soil within alpine boulder and rock field, and subalpine coniferous forest. Elevation ranges from 11,155 ft. to 12,467 ft. amsl. This species blooms from June through September.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
San Bernardino Grass-of-Parnassus (*Parnassia cirrata var. cirrata*)	-/-/1B.3/-	This perennial herb is found in mesic, sometimes calcareous, soils within lower montane coniferous forest, meadows and seeps, and upper montane coniferous forest, including streamsides. Elevation ranges from 4,101 ft. to 8,005 ft. amsl. This species blooms from August through September.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Narrow-leaf Sandpaper-plant (*Petalonyx linearis*)	-/-/2B.3/-	This perennial shrub is found in sandy or rocky canyons within Mojavean and Sonoran desert scrub. Elevation ranges from 82 ft. to 3,658 ft. amsl. This species blooms from March through May, uncommonly in January through February and June through December.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Narrow-petaled Rein Orchid (*Piperia leptopetala*)	-/-/4.3/-	This perennial herb is found within cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Elevation ranges from 1,247 ft. to 7,300 ft. amsl. This species blooms from May through July.	HA	Suitable habitat does not occur within the rare plant study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
White Rabbit-tobacco (*Pseudognaphaliu m leucocephalum*)	-/-/2B.2/-	This perennial herb is found in sandy and gravelly soil within chaparral, cismontane woodland, coastal scrub, and riparian woodland. Elevation ranges from sea level to 6,890 ft. amsl. This species blooms from August through November, uncommonly in July and December.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Parish's Gooseberry (*Ribes divaricatum* var. *parishii*)	-/-/1A/-	This perennial deciduous shrub occurs in riparian woodland, specifically *Salix* spp. swales in riparian habitats, at elevations ranging from 213 ft. to 984 ft. amsl. It blooms from February through April.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Parish's Rupertia (*Rupertia rigida*)	-/-/4.3/-	This perennial herb is found within chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, pebble plain, and valley and foothill grassland. Elevation ranges from 2,297 ft. to 8,202 ft. amsl. This species blooms from June through August.	HA	The rare plant study area occurs well outside the species' known elevation range. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Davidson's Stonecrop (*Sedum niveum*)	-/-/4.2/-	This perennial rhizomatous herb is found in rocky soil within lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest. Elevation ranges from 6,808 ft. to 9,843 ft. amsl. This species blooms from June through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
San Gabriel Ragwort (*Senecio astephanus*)	-/-/4.3/-	This perennial herb occurs on rocky slopes within coastal bluff scrub and chaparral habitats at elevations ranging from 1,312 ft. to 4,921 ft. amsl. Its blooming period is from May through July.	HP	Potentially suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
Parish's Checkerbloom (*Sidalcea hickmanii* ssp. *parishii*)	-/R/1B.2/-	This perennial herb is found in chaparral, cismontane woodlands, and lower montane coniferous forest. Elevation ranges from 3,281 ft. to 8,199 ft. amsl. This species blooms from June through August, uncommonly in May.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Salt Spring Checkerbloom (*Sidalcea neomexicana*)	-/-/2B.2/-	This perennial herb is found in alkaline and mesic soils within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas. Elevation ranges from 49 ft. to 5,018 ft. amsl. It blooms from March through June. Within Riverside County, this species is scarce and tied to alkaline seeps and springs; perhaps extirpated (Roberts et al. 2004).	HP	Suitable habitat is present within the rare plant study area. However, this species is only known in alkaline seeps and springs within Riverside County. Additionally, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Laguna Mountains Jewelflower (*Streptanthus bernardinus*)	-/-/4.3/-	This perennial herb occurs in chaparral and lower montane coniferous forest habitats, specifically in clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. It is found at elevations ranging from 2,198 ft. to 8,202 ft. amsl and blooms from May through August.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
Southern Jewelflower (*Streptanthus campestris*)	-/-/1B.3/-	This perennial herb occurs in chaparral, lower montane coniferous forest, and pinyon-juniper woodland habitats, specifically in open, rocky areas. It is found at elevations ranging from 2,953 ft. to 7,546 ft. amsl and blooms from April through July.	HA	The rare plant study area occurs well outside the species' known elevation range and suitable habitat does not occur within the study area. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project.
San Bernardino Aster (*Symphyotrichum defoliatum*)	-/-/1B.2/-	This perennial rhizomatous herb is found in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland habitat. It can also occur near ditches and stream springs. It is found at elevations ranging from 6 ft. to 6,700 ft. amsl and blooms from July through November. Locally, only documented from Temescal and San Timoteo Canyons (Roberts et al. 2004).	HP	Suitable habitat is present in the rare plant study area. However, established populations are not known to occur nearby. Additionally, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.
California Screw Moss (*Tortula californica*)	-/-/1B.2/-	This moss is found in sandy soil within chenopod scrub, and valley and foothill grassland. Elevation ranges from 33 ft. to 4,790 ft. amsl.	HP	Suitable habitat is present within the rare plant study area. However, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Wright's Trichocoronis (*Trichocoronis wrightii var. wrightii*)	-/-/2B.1/ MSHCP(b)	This annual herb is found in meadows and seeps, marshes and swamps, riparian forest, and alkaline vernal pools. Elevation ranges from 16 ft. to 1,427 ft. amsl. This species blooms from May through September. May be abundant in seasonally inundated areas with muddy substrate along the San Jacinto River (Roberts et al. 2004).	HA	Suitable habitat is present nearby and established populations occur nearby, increasing the probability of this species' presence. However, suitable habitat does not occur within the rare plant study area. Additionally, this species was not observed during focused surveys in the spring of 2017. Species considered absent and does not pose a constraint to the project. MSHCP: This is a Narrow Endemic Plant Species (Area 3) for the project. However, no suitable habitat occurs within the rare plant study area. Therefore, the species is considered absent from the rare plant study area and no further action is necessary.
CRUSTACEANS				
Vernal Pool fairy shrimp (*Branchinecta lynchi*)	T/-/-/MSHCP(a)	Restricted to seasonal vernal pools and prefers cool-water pools that have low to moderate dissolved solids. These vernal pools are unpredictable and often short lived.	HA	There is no vernal pool habitat within the BSA or otherwise any habitat that would contain standing water long enough to support this species' presence. MSHCP: Surveys may be required for this species under the MSHCP if suitable wetland habitat is present. However, no suitable habitat was found and therefore this species is considered absent from the BSA and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Riverside fairy shrimp (*Streptocephalus wootoni*)	E/-/-/ MSHCP(a)	Found in shallow depressions containing a clay hard pan soil layer. Discontinuously distributed along coastal southern California and northern Baja California.	HA	There is no vernal pool habitat within the BSA or otherwise any habitat that would contain standing water long enough to support this species' presence. MSHCP: Surveys may be required for this species under the MSHCP if suitable wetland habitat is present. However, no suitable habitat was found and therefore this species is considered absent from the BSA and no further action is necessary.
INSECTS				
Crotch bumble bee (*Bombus crotchii*)	-/SC/-/-	Generally inhabits grasslands and scrublands and nests underground. In the winter this species probably inhabits soft, disturbed soil or winters under leaf litter or other loose debris. Utilizes plants in the genera *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	HP	There is marginal habitat for this species within pockets of the BSA, particularly in areas that are not overgrown with dense weeds.
FISH				
Steelhead - Southern California DPS (*Oncorhynchus mykiss irideus pop. 10*)	F/-/-/-	Occurs in flowing waters off the South Coast of California from the Santa Maria River to San Mateo Creek. Prefers warmer waters and can tolerate more variable conditions than northern populations.	HA	No suitable habitat occurs within the BSA. Drainages occurring in the study area are ephemeral.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Santa Ana Speckled Dace (*Rhinichthys osculus ssp. 3*)	-/CSC/-/-	This small cyprinid is found in perennial streams. Formerly widespread in mountain portions of the Santa Ana, San Gabriel, and Los Angeles watersheds. Populations were scattered in foothill areas, and rare in lowlands. This subspecies of speckled dace is assumed extirpated from most of the Santa Ana River (CDFG 1995, Moyle 2002).	HA	No suitable habitat occurs within the BSA. Drainages occurring in the study area are ephemeral.
AMPHIBIANS				
Southern Mountain Yellow-legged Frog (*Rana muscosa*)	E/E/-/ MSHCP(c)	This frog inhabits lakes, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains and Transverse Ranges from 1,210 ft. to 12,010 ft. amsl elevation. Occurs in open stream and lake edges; a gentle slope up to a depth of 2-3 inches seems to be preferred. Rarely occurs where predatory fishes have been introduced. Always encountered within a few feet of water.	HA	No suitable habitat occurs within the BSA. Drainages occurring in the study area are ephemeral. MSHCP: The project occurs outside of the MSHCP survey area for this species. No MSHCP-specific surveys are required and no further action is necessary.
Western Spadefoot (*Spea hammondii*)	-/CSC/-/ MSHCP	This toad is found primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools and seasonal ponds are essential for breeding and egg laying. It is found at sea level to 4,500 ft. amsl in elevation.	HP	Potentially suitable habitat is present in the nonnative grassland habitat in the central portion of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
REPTILES				

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Southern California Legless Lizard (*Anniella stebbinsi*)	-/CSC/-/-	This legless lizard is found in coastal sand dunes, sandy washes, and alluvial fans throughout southern California from the Transverse ranges into northern Baja California, Mexico (Papenfuss and Parham, 2013).	HP	Potentially suitable habitat is present in several washes containing sandy soil throughout the BSA.
California Glossy Snake (*Arizona elegans occidentalis*)	-/CSC/-/-	This snake inhabits arid scrub, rocky washes, grasslands, and chaparral. Elevation ranges from below sea level to 7,218 ft. amsl.	HP	Potentially suitable habitat is present within the fourwing saltbush scrub, brittle brush scrub, scale broom scrub, and nonnative grassland habitat throughout the BSA.
Orange-throated Whiptail (*Aspidoscelis hyperythra*)	-/-/-/ MSHCP	This whiptail occurs in semi-arid bushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral. Elevation ranges from sea level to 2,000 ft. amsl.	HP	Suitable habitat is present within the fourwing saltbush scrub and brittle brush scrub, specifically on rocky slopes on the northeast side of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Coastal Whiptail (*Aspidoscelis tigris stejnegeri*)	-/CSC/-/ MSHCP	This whiptail occurs in a wide variety of habitats in coastal and inland valleys and foothills, including coastal sage scrub, sparse grassland, and riparian woodland, in areas with sparse vegetation and open areas. Found from Ventura County to Baja California.	HP	Suitable habitat is present within the fourwing saltbush scrub, brittle brush scrub, scale broom scrub, and nonnative grassland habitat throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Southern Rubber Boa (*Charina umbratica*)	-/T/-/MSHCP(f)	Occurs in the San Bernardino and San Jacinto Mountains. Found near streams or wet meadows, often under rotting logs, rocky outcrops, and under surface litter.	HA	No suitable habitat occurs within the BSA. This is primarily a montane species and the BSA is outside of its known range. MSHCP: No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Red-diamond Rattlesnake (*Crotalus ruber*)	-/CSC/-/ MSHCP	This rattlesnake inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas.	HP	Suitable habitat is present within the fourwing saltbush scrub, brittle brush scrub, scale broom scrub, nonnative grassland, and developed/disturbed habitat throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Western Pond Turtle (*Emys marmorata*)	-/CSC/-/ MSHCP	This turtle is found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking.	HA	No suitable habitat occurs within the BSA. Drainages occurring in the study area are seasonal in nature. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
California Mountain Kingsnake (San Bernardino population) (*Lampropeltis zonata parvirubra)*	-/-/-/ MSHCP(f)	This kingsnake is a habitat generalist, found in diverse habitats including coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, and coastal sage scrub. Elevation ranges from 800 ft. to 9,000 ft. amsl.	HA	This species is typically found in montane habitats. The project is far removed from its typical distribution range and suitable habitat is not present on the site. MSHCP: The BSA lies outside of Forest Service Land; therefore, there is no survey requirement. Any potential impacts to the species would be fully mitigated by the MSHCP. No further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Coast Horned Lizard (*Phrynosoma blainvillii*)	-/CSC/-/ MSHCP	This horned lizard inhabits open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills. Elevation ranges from sea level to 8,000 ft. amsl.	HP	Suitable habitat is present in nonnative grassland and several washes containing sandy soil throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Coast Patch-nosed Snake (*Salvadora hexalepis virgultea*)	-/CSC/-/-	This patch-nosed snake inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. Elevation ranges from sea level to 7,000 ft. amsl.	HP	Suitable habitat is present within the fourwing saltbush scrub, brittle brush scrub, and scale broom scrub throughout the BSA.
Two-striped Gartersnake (*Thamnophis hammondii*)	-/CSC/-/-	This gartersnake often occurs in water and is rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. It will also inhabit large riverbeds if riparian vegetation is available, and even occurs in artificial impoundments if both aquatic vegetation and suitable prey items (small amphibians and fish) are present (Jennings and Hayes 1994).	HA	No suitable habitat occurs within the BSA. Drainages occurring in the study area are seasonal in nature.
BIRDS				

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Cooper's Hawk (*Accipiter cooperii*)	-/-/-/ MSHCP	This raptor occurs in mature forest, open woodlands, wood edges, and river groves. Nests in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby. Also found along trees along rivers through open country, and increasingly in suburbs and cities where some tall trees exist for nest sites. In winter may be in fairly open country, especially in the west. Nest site is in trees, either deciduous or coniferous, usually 25-50 ft. above the ground. Often placed on top of some pre-existing foundation, such as the old nest of a large bird or squirrel, or a clump of mistletoe.	P	This species was incidentally observed on-site during project surveys. Low-potential nesting habitat is present in developed areas and black willow thickets within the BSA, in large trees. Suitable foraging habitat occurs in adjacent areas within native scrub and nonnative grassland habitat in the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Tricolored Blackbird (*Agelaius tricolor*)	-/CSC/-/ MSHCP	This blackbird occurs in open country in western Oregon, California, and northwestern Baja California. Breeds near freshwater, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow (*Salix* spp.), blackberry (*Rubus* spp.), wild rose (*Rosa* spp.), tall herbs and forages in grassland and cropland habitats. Seeks cover for roosting in emergent wetland vegetation, especially cattails (*Typha* spp.) and tules (*Scirpus* spp.), and also in trees and shrubs.	P	A medium-sized flock of Tricolored Blackbirds was observed foraging in a disked field within the BSA in March 2018. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)	-/-/-/ MSHCP	This sparrow occurs in grassy or rocky slopes with sparse low bushes, and open pine-oak woods. Habitat varies in different parts of range, but always in brushy areas. In Southwest, usually in rocky areas of foothills and lower canyons, in understory of pine-oak woods, or in chaparral or coastal scrub.	HP	Suitable nesting habitat is present within the fourwing saltbush scrub and brittle brush scrub, specifically on rocky slopes on the northeast side of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Golden Eagle (*Aquila chrysaetos*)	-/FP/-/MSHCP	This raptor forages in grassland and open savannah of many types. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially California Ground Squirrels (*Spermophilus beecheyi*) and rabbits, but will occasionally take larger prey, such as Mule Deer (*Odocoileus hemionus*) fawns. Nests on cliffs of all heights, and occasionally in large trees in open areas, in rugged, open habitats with canyons and escarpments. It is very sensitive to human disturbance, especially near nest sites.	HP	Suitable nesting habitat does not exist within the BSA. Suitable foraging habitat occurs within nonnative grassland habitat in the central portion of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Bell's Sage Sparrow (*Artemisiospiza belli belli*)	-/-/-/ MSHCP	This sparrow occurs in coastal sage scrub, chaparral; in winter, also deserts. Found year-round in unique sage scrub habitat on the California coastal slope and foothills. In the interior, also breeds in saltbush, chamise, and other low shrubs of arid flats. In winter some spread eastward into open flats and deserts with scattered brush.	HP	Suitable nesting habitat is present within the fourwing saltbush scrub and brittle brush scrub, specifically on rocky slopes on the northeast side of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Burrowing Owl (*Athene cunicularia*)	-/CSC/-/ MSHCP(c)	This owl inhabits open, dry, nearly or quite level, grassland, prairie, desert floor, and shrubland habitats. Areas should be considered potential habitat if shrub cover is below 30% (CBOC 1997). In coastal southern California, a substantial fraction of birds are found in microhabitats highly altered by man, including flood control and irrigation basins, dikes, and banks, abandoned fields surrounded by agriculture, and road cuts and margins. There is a strong association between Burrowing Owls and burrowing mammals, especially ground squirrels (*Spermophilus* spp.); however, they will also occupy man-made niches such as banks and ditches, piles of broken concrete, and even abandoned structures (Haug et al. 1993).	P	This species was observed in the BSA during protocol surveys in March 2018. MSHCP: The project occurs within the MSHCP Survey Area for this species. As such, MSHCP-specific surveys are required.
Ferruginous Hawk (*Buteo regalis*)	-/-/-/ MSHCP	This raptor occurs in plains and prairies. Found at all seasons in very open and dry country. Inhabits dry grassland, sagebrush plains, saltbush and greasewood flats, rangeland, and desert. In winter, also in agricultural country, including over plowed fields. Nest site is usually in top of tree, 20-50 ft. above the ground, but can be as low as 6 ft. (available trees may be very short). Sometimes nests on a cliff or on the ground.	HP	Potentially suitable wintering habitat is present in nonnative grassland and disturbed areas throughout the BSA, particularly where the disturbed habitat is present in agricultural areas. This species was observed a short distance outside of the BSA in March 2018. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Swainson's Hawk (*Buteo swainsoni*)	-/T/-/MSHCP	This raptor is a breeding migrant from April to July. Suitable breeding habitat consists of areas containing Joshua trees, Fremont cottonwoods, or other large trees located adjacent to open fields, including agricultural fields. Forages in open desert, grasslands, agricultural fields, or livestock pastures.	P	Suitable nesting habitat does not exist within the BSA. Suitable foraging habitat occurs within nonnative grassland, disturbed, and developed areas throughout the BSA. This species was observed within the BSA during migration. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Coastal Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*)	-/CSC/-/ MSHCP	This wren is a non-migratory, obligate resident within a subset of coastal sage scrub habitats; require the presence of, but are not entirely restricted within, relatively arborescent (over 3 ft. tall) stands of several species of cactus (*Opuntia* spp.).	A	Per CDFW, this sensitive subspecies of cactus wren only occurs in coastal Orange and San Diego Counties. The occurrence near the project area is assumed to be an error in the CNDDB. Marginally suitable nesting habitat for general cactus wrens is present in several isolated California cholla (*Cylindropuntia californica*) stands found within brittle brush scrub in the foothills on the northeast side of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)	T/E/-/ MSHCP(a)	This cuckoo breeds and nests in extensive stands of dense cottonwood/willow riparian forest along broad, lower flood bottoms of larger river systems at scattered locales in western North America. Winters in South America.	HA	Suitable habitat does not exist within the BSA. Drainages occurring in the study area are seasonal in nature and do not contain the necessary extensive riparian habitat. MSHCP: This species is a Riparian/Riverine Area and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.
Black Swift (*Cypseloides niger*)	-/CSC/-/ MSHCP	This swift occurs in open sky over mountains and coastal cliffs. This species forages widely over any kind of terrain but is still very local in its occurrence, probably limited to regions with suitable nesting sites. Nest site is on a ledge sheltered by overhang or in a protected crevice on a cliff, along the rocky coast or in mountainous country. Mountain nest sites are often behind waterfalls, in spots where nest is continuously damp from spray.	HA	Suitable nesting habitat does not exist within the BSA. Mountains, cliffs, and waterfalls are not present within the study area.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
White-tailed Kite (*Elanus leucurus*)	-/FP/-/MSHCP	This raptor hunts in open country. This is a strongly lowland species, apparently rare anywhere in California above 2,000 ft. amsl. Nests are flimsy and are located low in trees and large shrubs near foraging areas in savannahs and at edges between open habitat and woodland or forest areas. Its diet is largely restricted to small mammals such as voles and mice.	P	Potentially suitable nesting habitat is present in developed areas and black willow thickets within the BSA, in large trees. Suitable foraging habitat occurs in adjacent areas within fourwing saltbush scrub, brittle brush scrub, nonnative grassland, disturbed, and developed areas throughout the BSA. This species was observed within the BSA during biological surveys. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	E/E/-/ MSHCP(a)	This flycatcher has a highly restricted distribution in southern California as a breeder. It occupies extensive riparian forests, wet meadows, and lower montane riparian habitats primarily below 4,000 ft. amsl. Occurs in riparian habitats along rivers, streams, or other wetlands, where dense growths of willows (*Salix* spp.), *Baccharis* spp., Arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.), Russian olive (*Eleagnus* spp.), or other plants are present, often with a scattered overstory of cottonwood (*Populus* spp.).	HA	Suitable habitat does not exist within the BSA. Drainages occurring in the study area are seasonal in nature and do not contain the necessary extensive riparian or wetland habitat. MSHCP: This species is a Riparian/Riverine Area and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
California Horned Lark (*Eremophila alpestris actia*)	-/-/-/ MSHCP	This lark occurs in prairies, fields, airports, and shores. Inhabits open ground, generally avoiding areas with trees or even bushes. May occur in a wide variety of situations that are sufficiently open: short-grass prairies, extensive lawns (as on airports or golf courses), plowed fields, stubble fields, beaches, lake flats, or high mountains.	P	This species was incidentally observed on-site during project surveys. Potentially suitable nesting and foraging habitat is present in open areas within nonnative grassland, disturbed, and developed areas on the southwest side of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Yellow-breasted Chat (*Icteria virens*)	-/CSC/-/ MSHCP	This chat nests in low thickets in dense riparian habitats. It eats a variety of invertebrates. It is a local and uncommon breeder and rare migrant across southern California.	HA	Suitable habitat does not exist within the BSA. Drainages occurring in the study area are seasonal in nature and do not contain the necessary dense riparian habitat. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Loggerhead Shrike (*Lanius ludovicianus*)	-/CSC/-/ MSHCP	This shrike nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oasis scrub, and washes. Prefers open country for hunting, with perches for scanning and fairly dense shrubs and brush for nesting.	P	This species was observed nesting within the BSA during project surveys in 2018. Potentially suitable nesting habitat is present in native scrub areas, as well as in low-growth trees found throughout the BSA. Suitable foraging habitat occurs in adjacent areas within fourwing saltbush scrub, brittle brush scrub, nonnative grassland, disturbed, and developed areas throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
White-faced Ibis (*Plegadis chihi*)	-/-/-/ MSHCP	This ibis occurs in fresh marshes, irrigated land, and tules. For foraging, favors very shallow water, as in marshes, flooded pastures, and irrigated fields. Sometimes in damp meadows with no standing water. Prefers fresh water marsh, but sometimes forages in salt marsh. Breeds in colonies. Nest site is usually in dense marsh growth (such as bulrush or cattails) or in low shrubs or trees above water, sometimes on ground on islands.	HA	Suitable nesting habitat, in the form of wetlands, does not exist within the BSA. Potentially suitable foraging habitat occurs within pastureland in the southwest/central area of the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Coastal California Gnatcatcher (*Polioptila californica californica*)	T/CSC/-/ MSHCP	This gnatcatcher is a year-round obligate, permanent resident of coastal sage scrub vegetation on mesas, arid hillsides, and in washes. Nests almost exclusively in California sagebrush. Occurs in low-lying foothills and valleys in cismontane southwestern California and Baja California.	P	This species was incidentally observed on-site during project surveys. Potentially suitable nesting and foraging habitat is present in fourwing saltbush scrub and, especially, brittle brush scrub found throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Purple Martin (*Progne subis*)	-/CSC/-/ MSHCP	This swallow occurs in towns, farms, semi-open country near water, and mountain forest. Nests in isolated colonies around woodland edges and clearings in mountain forest. Natural sites are in cavities, mostly old woodpecker holes, in trees.	HA	Suitable nesting and foraging habitat is not present - the required water habitat does not exist within or near the BSA MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Yellow Warbler (*Setophaga petechia*)	-/CSC/-/ MSHCP	This warbler nests in the upper story of riparian habitats in southern California. It is also a common, widespread migrant in spring and fall, occupying a wide variety of habitats at that time.	P	This species was incidentally observed on-site during project surveys. However, suitable breeding habitat does not exist within the BSA. Drainages occurring in the study area are seasonal in nature and do not contain the necessary extensive riparian habitat. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Least Bell's Vireo (*Vireo bellii pusillus*)	E/E/-/ MSHCP(a)	This vireo is found as a summer resident of southern California where it inhabits low riparian growth in the vicinity of water or in dry river bottoms below 2,000 ft. amsl. This species selects dense vegetation low in riparian zones for nesting; most frequently located in riparian stands between 5 and 10 years old; when mature riparian woodland is selected, vireos nest in areas with a substantial robust understory of willows, as well as other plant species (Goldwasser 1981).	HA	Suitable habitat does not exist within the BSA. Drainages occurring in the study area are seasonal in nature and do not contain the necessary extensive riparian habitat. MSHCP: This species is a Riparian/Riverine Area and Species-Specific Objectives species. No suitable habitat is present within the study area. Therefore, there is no MSHCP-survey requirement and no further action is necessary.
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)	-/CSC/-/-	This blackbird forages around marshes and also commonly in open pastures, plowed fields, cattle pens, and feedlots. Breeds in freshwater sloughs, marshy lake borders, and tall cattails growing in water up to 3-4' deep.	HP	Suitable nesting habitat does not exist within the BSA. Drainages occurring in the study area are seasonal in nature and do not contain the necessary wetland habitat. Suitable foraging habitat occurs within open fields in disturbed and developed areas, especially on the southwest side of the BSA.
MAMMALS				
Pallid Bat (*Antrozous pallidus*)	-/CSC/-/-	This bat occurs throughout southern California from coast to mixed conifer forest, grasslands, shrublands, woodlands, and forest. Most common in open, dry habitats with rocky areas for roosting. This species is a yearlong resident in most of its range. The species is not thought to migrate, so maternity colonies and winter roosts are expected to occur within the vicinity of one another. Roost sites include rock crevices, old buildings, bridges, caves, mines, and hollow trees.	HP	Suitable foraging habitat is present throughout the BSA. Potentially suitable roosting habitat in the form of bridges, culverts, and buildings are present within the BSA.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Dulzura Pocket Mouse (*Chaetodipus californicus femoralis*)	-/CSC/-/-	This pocket mouse inhabits a variety of habitats year-round, including coastal scrub, chamise-redshank and montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood-conifer, and montane hardwood habitats. Ranges in elevation from sea level to 7900 ft. amsl. This species occurs in brushy areas but probably is attracted to grass-chaparral edge. Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance.	A	Trapping surveys were conducted in summer and fall 2017 and were negative. This species is presumed absent from the BSA.
Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)	-/CSC/-/ MSHCP	This pocket mouse occurs in sandy herbaceous areas, usually in association with rocks and course gravel in southwest California- coastal and desert border areas in San Bernardino, Riverside, and San Diego counties. Elevation ranges from sea level to 6,000 ft. amsl. Vegetation community preferences include sage scrub, chamise-redshank chaparral, mixed chaparral, sage brush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, and annual grassland.	P	This species was captured in the BSA during small mammal trapping. Suitable habitat for this species occurs within nonnative grassland and, especially, brittle brush scrub throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	-/CSC/-/-	This bat occurs in a wide variety of habitats, but prefers mesic areas. Roost habits are limited primarily to, and distribution is strongly associated with, caves and mines. This species will also occasionally roost in hollow trees, buildings, bridges, and other human-made structures.	HP	Suitable foraging habitat is present throughout the BSA. Potentially suitably roosting habitat in the form of buildings is present within the BSA.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*)	E/CSC/-/ MSHCP(c)	This kangaroo rat prefers soils of sandy loam, occasionally to sandy gravel, in open to moderately shrubby habitats, especially intermediate seral stages of alluvial fan sage scrub up to 1,970 ft. amsl from active channels.	A	Trapping surveys were conducted in summer and fall 2017 and were negative. This species is presumed absent from the BSA. MSHCP: A few acres within the MSHCP survey area for this species are located along the east end of the BSA. As such, MSHCP-specific surveys will be required.
Stephens' Kangaroo Rat (*Dipodomys stephensi*)	E/T/-/MSHCP	This kangaroo rat is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50% during the summer. Avoids dense grasses and is more likely to inhabit areas where the annual forbs disarticulate in the summer and leave more open areas. Typically found in sandy and sandy loam soils with low clay to gravel content for burrowing; will sometimes utilize the burrows of other mammals. Tends to avoid rocky soils. In general, the highest abundances of species occur on gentle slopes less than 15%.	HP	Potentially suitable habitat for this species occurs within open areas in throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Western Mastiff Bat (*Eumops perotis californicus*)	-/CSC/-/-	This bat occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in the crevices in vertical cliff faces, high buildings, and tunnels and travels widely when foraging.	HP	Suitable foraging habitat is present throughout the BSA. Potentially suitable roosting habitat is lacking and this species is not expected to roost within the BSA.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Bernardino Flying Squirrel (*Glaucomys sabrinus californicus*)	-/CSC/-/ MSHCP(e)	This flying squirrel occurs in black oak or white fir dominated woodlands between 5,200 ft. to 8,500 ft. amsl in the San Bernardino and San Jacinto ranges. Needs cavities in trees/snags for nests and cover.	HA	The BSA occurs well outside this species known elevation range and does not contain suitable habitat. Therefore, this species is not reasonably expected to occur and does not pose a constraint to the project. MSHCP: No suitable habitat for this species occurs within the BSA. Therefore, no MSHCP-specific conservation requirements are necessary and no further action is required.
Western Yellow Bat (*Lasiurus xanthinus*)	-/CSC/-/-	This bat is found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms.	HP	Suitable foraging habitat is present throughout the BSA. Potentially suitably roosting habitat in the form of trees is present within the BSA.
Lesser Long-nosed Bat (*Leptonycteris yerbabuenae*)	E/-/-/-	This bat species is known from southern Arizona and New Mexico, to Honduras and El Salvador. Occasional individuals have been recorded outside the northern limits of the range of this species in Arizona and California (Cole and Wilson, 2006). This species occurs in thorn scrub and deciduous forest. Its range corresponds closely to the distribution of the mezcal plant (*Agave angustifolia*) in Mexico (Arita 1991). This bat roosts in caves and mines, often in colonies of several thousand.	HA	Suitable foraging habitat is present throughout the BSA. Potentially suitably roosting habitat is lacking and is not expected to roost within the BSA.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)	-/CSC/-/ MSHCP	This jackrabbit occurs in Los Angeles, Riverside, San Bernardino, and San Diego counties in herbaceous and desert shrub areas, sage scrub, grasslands, open chaparral, and woodland/forest areas. Relatively tolerant of disturbance.	P	This species was incidentally observed on-site during project surveys. Suitable habitat for this species occurs within nonnative grassland, fourwing saltbush scrub, brittle brush scrub, developed, and disturbed areas throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
San Diego Desert Woodrat (*Neotoma lepida intermedia*)	-/CSC/-/ MSHCP	This woodrat occurs in dry and/or sunny shrublands, especially (but not requiring) areas with cacti and abundant rocks and crevices. Does not require a source of drinking water. Sage scrub communities are frequently occupied.	P	This species was captured in the BSA during small mammal trapping. Marginally suitable habitat for this species occurs within fourwing saltbush and brittle brush scrub throughout the BSA. MSHCP: This species is fully covered by the MSHCP and, as such, any potential impacts would be fully mitigated by the MSHCP. No MSHCP-specific surveys are required and no further action is necessary.
Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)	-/CSC/-/-	This bat is found rarely in southwestern California, but occurs in southeastern deserts of California, with portions of western Riverside County apparently on the periphery of their range. Species roost in high rock crevices, bridges, roofs, buildings, and cliffs, and forage primarily on large moths, especially over water. Habitats are arid.	HP	Suitable foraging habitat is present throughout the BSA. Potentially suitable roosting habitat in the form of bridges and buildings is present within the BSA.

COMMON/ SCIENTIFIC NAME	STATUS FEDERAL/ STATE/CRPR/ MSHCP[a]	SPECIES REQUIREMENTS	SPECIFIC HABITAT PRESENT/ ABSENT[b]	RATIONALE
Southern Grasshopper Mouse (*Onychomys torridus ramona*)	-/CSC/-/-	This mouse inhabits arid habitats, particularly with friable soils, and includes coastal scrub, mixed chaparral, sagebrush, low sage, bitterbrush, and grassland habitats. Occurs in arid portions of southwestern California and northwestern Baja California.	HP	Potentially suitable habitat for this species occurs within fourwing saltbush scrub, brittle brush scrub, and nonnative grassland throughout the BSA.
Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)	-/CSC/-/ MSHCP(c)	This pocket mouse inhabits areas of open ground, prefers fine sandy soils (for burrowing), but is also found commonly on gravel washes and on stony soils, within brush and woodland habitats. It is rarely found on sites with a high cover of rocks.	A	Trapping surveys were conducted in summer and fall 2017 and were negative. This species is presumed absent from the BSA. MSHCP: The project occurs within the MSHCP Survey Area for this species. As such, MSHCP-specific surveys will be required.
American Badger (*Taxidea taxus*)	-/CSC/-/-	This mustelid is associated with large grassland and sparse sage scrub habitats. Occupies large dens/burrows and forages on small mammals (e.g., ground squirrels, rabbits), snakes, birds, and insects.	HP	Suitable habitat for this species occurs within nonnative grassland and brittle brush scrub throughout the BSA.
HABITATS OF CONCERN (DEPLETED NATURAL COMMUNITIES)				
Canyon Live Oak Ravine Forest	CNDDB	n/a	A	This community does not occur within the BSA.
Desert Fan Palm Oasis Woodland	CNDDB	n/a	A	This community does not occur within the BSA.
Riversidian Alluvial Fan Sage Scrub	CNDDB	n/a	A	This community does not occur within the BSA.
Southern Coast Live Oak Riparian Forest	CNDDB	n/a	A	This community does not occur within the BSA.
Southern Cottonwood Willow Riparian Forest	CNDDB	n/a	A	This community does not occur within the BSA.
Southern Mixed Riparian Forest	CNDDB	n/a	A	This community does not occur within the BSA.

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Southern Riparian Forest	CNDDB	n/a	A	This community does not occur within the BSA.
Southern Riparian Scrub	CNDDB	n/a	A	This community does not occur within the BSA.
Southern Sycamore Alder Riparian Woodland	CNDDB	n/a	A	This community does not occur within the BSA.
Southern Willow Scrub	CNDDB	n/a	A	This community does not occur within the BSA.

[a] Status Codes

Federal

E = Federally listed; Endangered
PE = Proposed Endangered
T = Federally listed; Threatened
FC = Federal Candidate for Listing
FSC = Federal Species of Concern
D = Delisted

State

T = State listed; Endangered
E = State listed; Threatened
SC = State Candidate for Listing
R = Rare (Native Plant Protection Act)
CSC = California Species of Special Concern
FP = California Fully Protected Species

Multiple Species Habitat Conservation Plan (MSHCP)

MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = These Covered Species will be considered to be Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the Forest Service that addresses management for these species on Forest Service Land.

[b] Habitat Presence/Absence Codes

P = The species is present.
HP =Habitat is or may be present. The species may be present.
HA = No habitat present and no further work needed.
A = This species is absent.

California Rare Plant Ranks (CRPR)

1A = Plants presumed extinct in California
1B = Plants rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California, but more common elsewhere
3 = Plants about which we need more information
4 = Limited distribution (Watch List)
0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California
CNDDB = Vegetation communities classified as depleted

Appendix F Plant Species Observed within the Biological Study Area

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