

# Ontario International Airport Connector Project



## APPENDIX D

# BIOLOGICAL RESOURCES TECHNICAL REPORT

October 2024

Prepared by:



San Bernardino County Transportation Authority  
1170 West Third Street, Second Floor  
San Bernardino, California 92410-1715

THIS PAGE INTENTIONALLY LEFT BLANK

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1-1</b>
<b>2</b>	<b>PROJECT DESCRIPTION.....</b>	<b>2-1</b>
2.1	Project Purpose and Objectives.....	2-1
2.2	Project Need.....	2-1
2.3	Alternatives Evaluated .....	2-2
2.3.1	No Project Alternative .....	2-2
2.3.2	Proposed Project .....	2-2
<b>3</b>	<b>REGULATORY SETTING .....</b>	<b>3-1</b>
3.1	Regulatory Requirements.....	3-1
3.1.1	Federal .....	3-1
3.1.2	State.....	3-2
3.1.3	Local.....	3-5
3.2	Studies Required.....	3-9
3.2.1	Literature Review .....	3-9
3.2.2	Field Reviews.....	3-10
3.2.3	Survey Methods.....	3-10
3.3	Agency Coordination and Professional Contacts.....	3-13
3.4	Limitations That May Influence Results .....	3-13
<b>4</b>	<b>ENVIRONMENTAL SETTING .....</b>	<b>4-1</b>
4.1	Description of the Existing Biological and Physical Conditions .....	4-1
4.1.1	Study Area.....	4-1
4.1.2	Physical Conditions.....	4-1
4.1.3	Biological Conditions .....	4-3
4.1.4	Habitat Connectivity .....	4-18
4.2	Regional Species and Habitats and Natural Communities of Concern .....	4-18
<b>5</b>	<b>CEQA THRESHOLDS OF SIGNIFICANCE.....</b>	<b>5-1</b>
<b>6</b>	<b>BIOLOGICAL RESOURCES, DISCUSSION OF IMPACTS, AND MITIGATION.....</b>	<b>6-1</b>
6.1	Habitats and Natural Communities of Special Concern.....	6-1
6.1.1	Discussion of Coastal Sage Scrub.....	6-1
6.1.2	Discussion of Jurisdictional Waters .....	6-17
6.1.3	Special-Status Plant Species.....	6-19
6.2	Special-Status Animal Species Occurrences .....	6-21
6.2.1	Discussion of Delhi Sands Flower-Loving Fly.....	6-21
6.2.2	Discussion of Crotch’s Bumble Bee .....	6-24
6.2.3	Discussion of Burrowing Owl .....	6-26
6.2.4	Discussion of Bats .....	6-27

6.2.5	Discussion of Other Nonlisted Special-Status Animal Species .....	6-36
<b>7</b>	<b>MITIGATION MEASURES AND IMPACTS AFTER MITIGATION.....</b>	<b>7-1</b>
7.1	Mitigation Measures for Biological Resources .....	7-1
7.2	CEQA Significance Conclusions.....	7-3
<b>8</b>	<b>REFERENCES .....</b>	<b>8-1</b>

## FIGURES

Figure 2-1:	Regional Location Map.....	2-4
Figure 2-2:	Proposed Project Site.....	2-5
Figure 2-3:	Typical Transit Tunnel Section View .....	2-7
Figure 2-4:	Cucamonga Station.....	2-9
Figure 2-5:	Ontario International Airport - Terminal 2 Station and Terminal 4 Station.....	2-10
Figure 2-6:	Vent Shaft Design Option 2 and Vent Shaft Design Option 4.....	2-12
Figure 4-1:	Biological Study Area and Survey Areas.....	4-2
Figure 4-2:	Vegetation and Potential Jurisdictional Features.....	4-4
Figure 6-1:	Vegetation and Potential Jurisdictional Features Impacts.....	6-3
Figure 6-2:	Delhi Sands Flower-Loving Fly and Crotch’s Bumble Bee Survey Areas .....	6-23
Figure 6-3:	Locations Where Potential Bat Roosting Habitat Was Observed.....	6-29

## TABLES

Table 2-1:	Stations, Maintenance and Storage Facility Construction Details.....	2-15
Table 3-1:	Survey Dates and Personnel .....	3-11
Table 4-1:	Vegetation and Other Land Cover Types Mapped within the Biological Study Area.....	4-3
Table 4-2:	Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur in the BSA.....	4-19
Table 6-1:	Impacts to Vegetation Communities in the BSA.....	6-2

## APPENDICES

- A: FEDERAL AND STATE LISTS OF SENSITIVE SPECIES
- B: PLANT AND ANIMAL SPECIES OBSERVED
- C: REPRESENTATIVE SITE PHOTOS
- D: DELHI SANDS FLOWER-LOVING FLY REPORT
- E: FOCUSED BAT ROOSTING HABITAT ASSESSMENT FOR THE ONT CONNECTOR PROJECT
- F: AVOIDANCE AND MINIMIZATION MEASURES



## ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
ac	acre/acres
ADA	Americans with Disabilities Act
a.m.	ante meridiem
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFP	California Fully Protected Species
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CSS	coastal sage scrub
CWA	Clean Water Act
D	Delisted State
DPS	Distinct population segment
DSF	Delhi sands flower-loving fly
EIR	Environmental Impact Report
EO	Executive Order
FAST Act	Fixing America's Surface Transportation Act
FC	Federal Candidate for Listing
FE	Federally Endangered
FESA	Federal Endangered Species Act
FSC	Federal Species of Concern
ft	foot/feet
FT	Federally Threatened
FTA	Federal Transit Administration
HA	Habitat Absent
HP	Habitat Present
I-10	Interstate 10
I-15	Interstate 15
IPaC	Information for Planning and Consultation
LED	light-emitting diode

m	meters
MAP	million annual passengers
MBTA	Migratory Bird Treaty Act
MEP	Mechanical, electrical, and plumbing
Mi	Mile/miles
MM	Mitigation Measure
mph	miles per hour
MSF	Maintenance and Storage Facility
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OIAA	Ontario International Airport Authority
ONT	Ontario International Airport
P	Present
PE	Proposed Endangered
p.m.	Post meridiem
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Project	Ontario International Airport Connector Project
PT	Proposed Threatened
RWQCB	Regional Water Quality Control Board
ROW	right-of-way
SA	California Special Animal
SANBAG	San Bernardino Associated Governments
SBCTA	San Bernardino County Transportation Authority
SCE	Candidate Endangered
SCRRA	Southern California Regional Rail Authority
SCT	Candidate Threatened
SDPS	Southern distinct population segment
SE	State Endangered
Sq-ft	Square-feet
SSC	California Species of Special Concern
ST	State Threatened
SWRCB	State Water Resources Control Board
TBM	tunnel boring machine
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service

USGS	United States Geological Survey
Vent shaft	Ventilation shaft
VMT	Vehicle Miles Traveled
WL	Watch List
YTD	year to date

THIS PAGE INTENTIONALLY LEFT BLANK

## 1 INTRODUCTION

San Bernardino County Transportation Authority (SBCTA), in cooperation with the Federal Transit Administration (FTA), proposes to construct a 4.2-mile-long transit service tunnel directly connecting the Southern California Regional Rail Authority (SCRRA) Cucamonga Metrolink Station to the Ontario International Airport (ONT). The proposed ONT Connector Project (Project) is to expand access options to ONT by providing a direct transportation connection from Cucamonga Metrolink Station to ONT. The proposed Project is subject to federal and state environmental review requirements pursuant to National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). FTA is the lead agency for NEPA, while SBCTA is the lead agency under CEQA. Partner agencies include the Ontario International Airport Authority (OIAA), Omnitrans, the City of Ontario and the City of Rancho Cucamonga.

ONT is located approximately two miles east of downtown Ontario in San Bernardino County. The airport services more than 25 major cities via 10 commercial carriers. ONT is owned and operated under a joint powers agreement between the City of Ontario and San Bernardino County. OIAA provides overall direction, management, operations, and marketing for ONT. In 2014, the San Bernardino Associated Governments (SANBAG), now SBCTA, prepared the Ontario Airport Rail Access Study (SANBAG 2014), which identified the need for a direct rail-to-airport connection to ONT to support its projected growth. ONT is one of the fastest growing commercial airports, forecasted to serve 14 million annual passengers by 2045 (OIAA 2019).

The purpose of this technical report is to evaluate potential environmental impacts/effects of biological resources that the Project may have within the proposed Project area. This technical report describes existing setting, applicable regulatory settings, methodology, and potential impacts from construction and operation of the proposed Project and the No Project Alternative. The information contained in this technical report will be used to prepare the required environmental documents under CEQA.

---

## 2 PROJECT DESCRIPTION

### 2.1 PROJECT PURPOSE AND OBJECTIVES

The purpose of the proposed Project is to expand access options to ONT by providing a direct transportation connection from Cucamonga Metrolink Station to ONT. This new connection would increase mobility and connectivity for transit patrons, improve access to existing transportation services, provide a connection to future Brightline West service to/from ONT, and support the use of clean, emerging technology for transit opportunities between Cucamonga Metrolink Station and ONT. More specifically, the proposed Project's objectives are as follows:

- Expand access options to ONT by providing a convenient and direct connection between ONT and the Metrolink network, and other transportation services at the Cucamonga Station.
- Reduce roadway congestion by encouraging a mode shift to transit from single-occupancy vehicles and provide reliable trips to and from ONT.
- Support autonomous electric vehicle technology usage for transit projects.

### 2.2 PROJECT NEED

The proposed Project need includes:

- Lack of direct transit connection coinciding with Metrolink trains and peak airport arrival and departure schedules. The lack of a direct transit connection between Cucamonga Metrolink Station and ONT creates mobility challenges for air passengers accessing ONT. In many cases, the lack of a last-mile connection between the Metrolink system and ONT forces airport passengers to use rideshare services or private single-occupancy vehicles, adding congestion to the local roads between the Cucamonga Metrolink Station and ONT. This congestion results in delays for the public to reach their destination, community services, and facilities.
- Roadway congestion affecting trip reliability and causing traffic delays. ONT travelers using rideshare services or private single-occupancy vehicles adds traffic volumes and increasing congestion on the local roads between Cucamonga Metrolink Station and ONT. Increases in future traffic volumes and roadway congestion affects trip reliability for travelers and commuters to and from ONT.
- Increasing Vehicle Miles Traveled (VMT) resulting from ONT travelers and lack of a direct transit connection.
- Increased greenhouse gas emissions within communities surrounding ONT from single-occupancy vehicle travel to and from ONT.

## 2.3 ALTERNATIVES EVALUATED

### 2.3.1 No Project Alternative

CEQA requires that existing conditions and the proposed Project be evaluated against a No Project Alternative in an Environmental Impact Report (EIR). The No Project Alternative represents the Project area if the proposed Project is not constructed, and additional municipal projects would still be developed in the area. The No Project Alternative is used for comparison purposes to assess the relative benefits and impacts of constructing a new transit project versus only constructing projects which are already funded and planned for in local and regional plans.

The No Project Alternative would result in no new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to Ontario International Airport (ONT). Omnitrans currently operates a limited-service bus route to ONT, known as ONT Connect or Route 380, which would remain operational under the No Project Alternative. ONT Connect currently operates Monday through Sunday, with bi-directional (northbound and southbound) service frequencies ranging from 35-60 minutes. However, ONT Connect travels with general/mixed traffic on existing roadways. The No Project Alternative assumes that the existing roadway system near ONT (such as the Interstate 10 [I-10] and Interstate 15 [I-15]) will implement some planned expansion and improvement projects and undergo routine maintenance activities. SBCTA and California Department of Transportation (Caltrans) propose to construct Express Lanes, including tolled facilities, in both directions of I-15. In addition, Caltrans is proposing to improve I-10 by constructing freeway lane(s) and other improvements through all or a portion of the 33-mile-long segment of I-10 from the Los Angeles/San Bernardino County line to Ford Street in San Bernardino County.

A detailed list of the planned projects included in the No Project Alternative is found in the Cumulative Impacts Technical Report (SBCTA 2024a).

### 2.3.2 Proposed Project

The proposed Project includes a 4.2-mile tunnel alignment, three passenger stations, a maintenance and storage facility (MSF), and an access and ventilation shaft (vent shaft) in the cities of Rancho Cucamonga and Ontario within the San Bernardino County (see Figure 2-1). The proposed Project would include autonomous electric vehicles that would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. The following sections provide additional details on the proposed Project location and land uses, and on the proposed design, construction, and operation, as applicable, for these project elements.

#### 2.3.2.1 Project Location

The proposed Project is located in the City of Rancho Cucamonga and in the City of Ontario within the San Bernardino County. Figure 2-1 illustrates the proposed Project site's regional location and vicinity. The

proposed Project alignment is a reversed L-shaped alignment consisting of the Cucamonga Metrolink Station, Milliken Avenue, East Airport Drive, and ONT. Figure 2-2 illustrates the proposed Project area. Cucamonga Metrolink Station is located at 11208 Azusa Court in the City of Rancho Cucamonga and serves the Metrolink San Bernardino Line commuter rail. ONT is located at 1923 East Aviation in the City of Ontario and provides international airport service with over 10 different airline partners. Information related to the proposed Project Design is found in Section 2.3.2.3.

### 2.3.2.2 Existing Land Uses

The northwestern portion of the proposed Project alignment includes the Cucamonga Metrolink Station. There are 980 standard parking stalls and 24 Americans with Disabilities Act (ADA) compliant stalls at the Cucamonga Metrolink Station (Metrolink 2022).

From the northwestern portion of the proposed Project site, the tunnel alignment travels under Milliken Avenue, which is a major north-south arterial roadway. Milliken Avenue consists of three travel lanes north of Inland Empire Boulevard and four travel lanes south of Inland Empire Boulevard. From Milliken Avenue, the alignment travels south crossing under the existing I-10. I-10 is an east-west cross-country highway and has six lanes in each direction at the proposed Project site. The alignment eventually connects to East Airport Drive, which is an east-west arterial roadway with three travel lanes in each direction.

The southwestern portion of the proposed Project tunnel alignment terminates at ONT. Parking Lots 2 through 5 are located on the northern side of ONT. Parking Lots 2, 3, and 4 are surface lots that provide general parking and are a short walk away from the terminals at ONT. Parking Lot 5 is a surface economy lot at which a shuttle service is available.

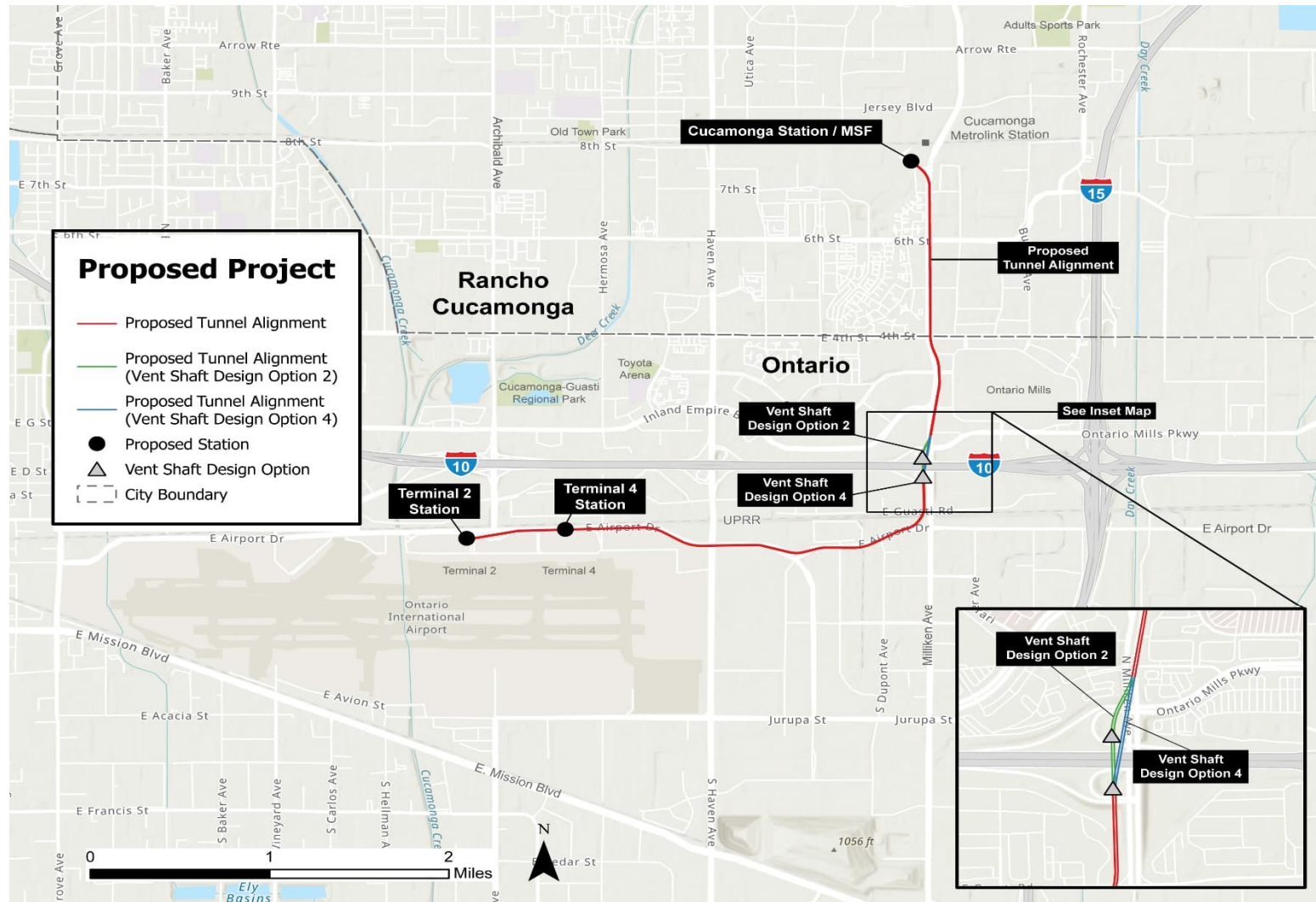


Figure 2-1: Regional Location Map



Source: AECOM 2024

Figure 2-2: Proposed Project Site



Source: AECOM 2024

#### 2.3.2.2.1 Surrounding Land Uses

Development in the immediate vicinity of the proposed Project site includes a mix of industrial, commercial, manufacturing, transportation, office, multi-family residential, hotel, and airport related land uses. The proposed Project site's surrounding land uses are located within the City of Rancho Cucamonga and City of Ontario. Immediately adjacent uses include the following:

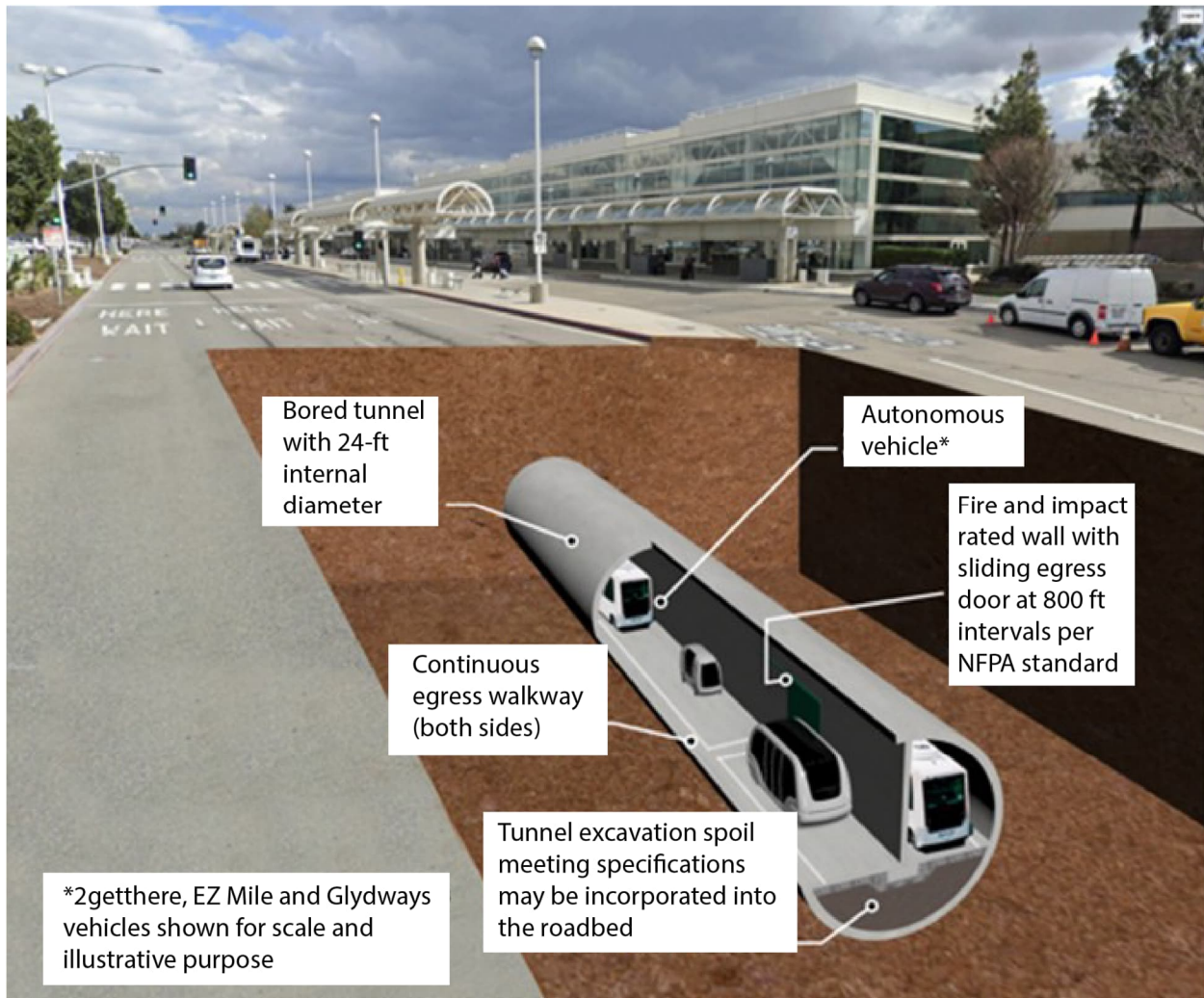
- North: Railroad tracks, industrial and manufacturing uses, trucking facilities, surface parking lots, Rancho Cucamonga Fire Station Number 174, and All Risk Training Center for the Rancho Cucamonga Fire Protection District.
- South: Industrial and manufacturing uses, along with trucking facilities, rental car facilities, parking lots, hotel uses, and other airport related uses. ONT includes two passenger terminals, general aviation facilities, air freight buildings, parking lots, and numerous airport and aircraft maintenance and support services.
- East: The eastern side of Milliken Avenue from 5th Street south to 4th Street consists primarily of hotel uses. Concentrated areas of commercial uses and restaurants are located along Milliken Avenue from 4th Street south to I-10, including Ontario Mills, which is a regional shopping mall complex. Hotel uses are also located adjacent to the Ontario Mills shopping mall.
- West: The western side of Milliken Avenue from approximately 7th Street south to 4th Street consists primarily of multi-family residential uses. Concentrated areas of large retail, commercial uses, restaurants, hotels, and the Toyota Arena are located along Milliken Avenue from 4th Street south to I-10.

#### 2.3.2.3 Proposed Project Design

The proposed Project includes construction of transit facilities, including three at-grade passenger stations, one MSF, and one emergency access and vent shaft. The proposed alignment would run primarily within a 4.2-mile single underground tunnel (24-foot inner diameter bi-directional tunnel) alignment that begins at the Cucamonga Metrolink Station and travels south along Milliken Avenue and crosses beneath 6th Street and 4th Street, I-10, and the Union Pacific Railroad (UPRR), before traveling west beneath East Airport Drive to connect to Terminals 2 and 4 at ONT. A tunnel configuration has been identified as the proposed Project based on technical analysis, evaluation, and stakeholder input. Figure 2-3 below depicts a typical transit tunnel section. Please see the Alternatives Considered Report for additional background on the development and refinement of the proposed Project design.



Figure 2-3: Typical Transit Tunnel Section View



Source: HNTB 2024

The three proposed at-grade stations would be constructed to serve Cucamonga Metrolink Station, ONT Terminal 2, and ONT Terminal 4. The MSF would be located adjacent to Cucamonga Metrolink Station and would support operations for the proposed Project by storing, maintaining, and cleaning autonomous electric transit vehicles, and it would also include employee amenities and parking. The access and vent shaft would be constructed to provide a means of emergency passenger egress and first responder access.

The proposed Project would include autonomous electric vehicles that would transport passengers on demand between Cucamonga Metrolink Station and ONT. The autonomous electric vehicles would run on rubber tires, and the vehicles are proposed to travel on a dedicated asphalt guideway within the proposed tunnel. The tunnel will include access ramps for the transit vehicles to surface to grade and provide access to the three proposed at-grade stations for passenger boarding and alighting.

### 2.3.2.3.1 Stations

The proposed Project includes three passenger stations. One station would be located in the northwestern corner of the existing Cucamonga Metrolink Station parking lot, which is owned and maintained by the City of Rancho Cucamonga. The other two proposed stations would be located within two of the existing parking lots at ONT, specifically Parking Lot 2 and Parking Lot 4, which are located across from Terminals 2 and 4. These proposed stations would be located at-grade and would connect to their associated tunnel portals along Terminal Way at ONT. Stations are proposed to be one to two stories and up to approximately 40 feet (ft) in height. All three stations would be connected to the bored tunnel via a cut-and-cover structure and an at-grade guideway. The guideway would be enclosed by fencing, and the walls would be buffered with landscaping. A pedestrian walkway would be provided bordering the outside of the guideway. Figure 2-4 and Figure 2-5 illustrate the overview of the proposed station footprint.

The proposed at-grade station Cucamonga Station would be approximately 8,000 square-feet (sq-ft) and would be located at the northwest corner of the existing Cucamonga Metrolink Station parking lot. The existing Cucamonga Metrolink Station parking lot is owned and maintained by the City of Rancho Cucamonga. Approximately 180 parking stalls would be permanently removed from the existing Cucamonga Metrolink Station parking lot to accommodate the proposed Cucamonga Station. Two other stations, each approximately 10,000 sq-ft, would be located at-grade within two of the existing parking lots at ONT Terminal 2 and Terminal 4. The Cucamonga Station also includes the proposed Project's MSF.



Figure 2-4: Cucamonga Station



Source: HNTB 2024



Figure 2-5: Ontario International Airport - Terminal 2 Station and Terminal 4 Station



Source: HNTB 2024

The two airport-serving stations would connect to their associated tunnel portals along Terminal Way via an at-grade connection. The proposed stations would be entirely located within the ONT right-of-way (ROW). Approximately 80 parking stalls would be permanently removed to accommodate the ONT Terminal 2 station, and approximately 115 spaces would be permanently removed to accommodate the ONT Terminal 4 station.

#### 2.3.2.3.2 Maintenance and Storage Facility

The proposed Cucamonga Station would include an adjacent maintenance and storage facility with enclosed bays to store, clean, and maintain vehicles. The MSF would be approximately 11,000 sq-ft, with an additional 5,000 sq-ft second story and would contain an operations control center with lockers, breakrooms, and restrooms. Employee parking for the facility would be provided at the existing parking lot owned by SBCTA, in the southeastern quadrant of the Milliken Avenue/Azusa Court intersection.

#### 2.3.2.3.3 Description of Vent Shaft Design Options

A vent shaft would be constructed to provide a means of emergency passenger egress and first responder access to and from the tunnel. Two locations are being considered west of Milliken Avenue on the north and south sides of I-10, as shown in Figure 2-6. A final decision about the location of the vent shaft would be made after the completion of the CEQA and NEPA environmental processes, and consideration of operational needs, environmental impacts, and stakeholder coordination.

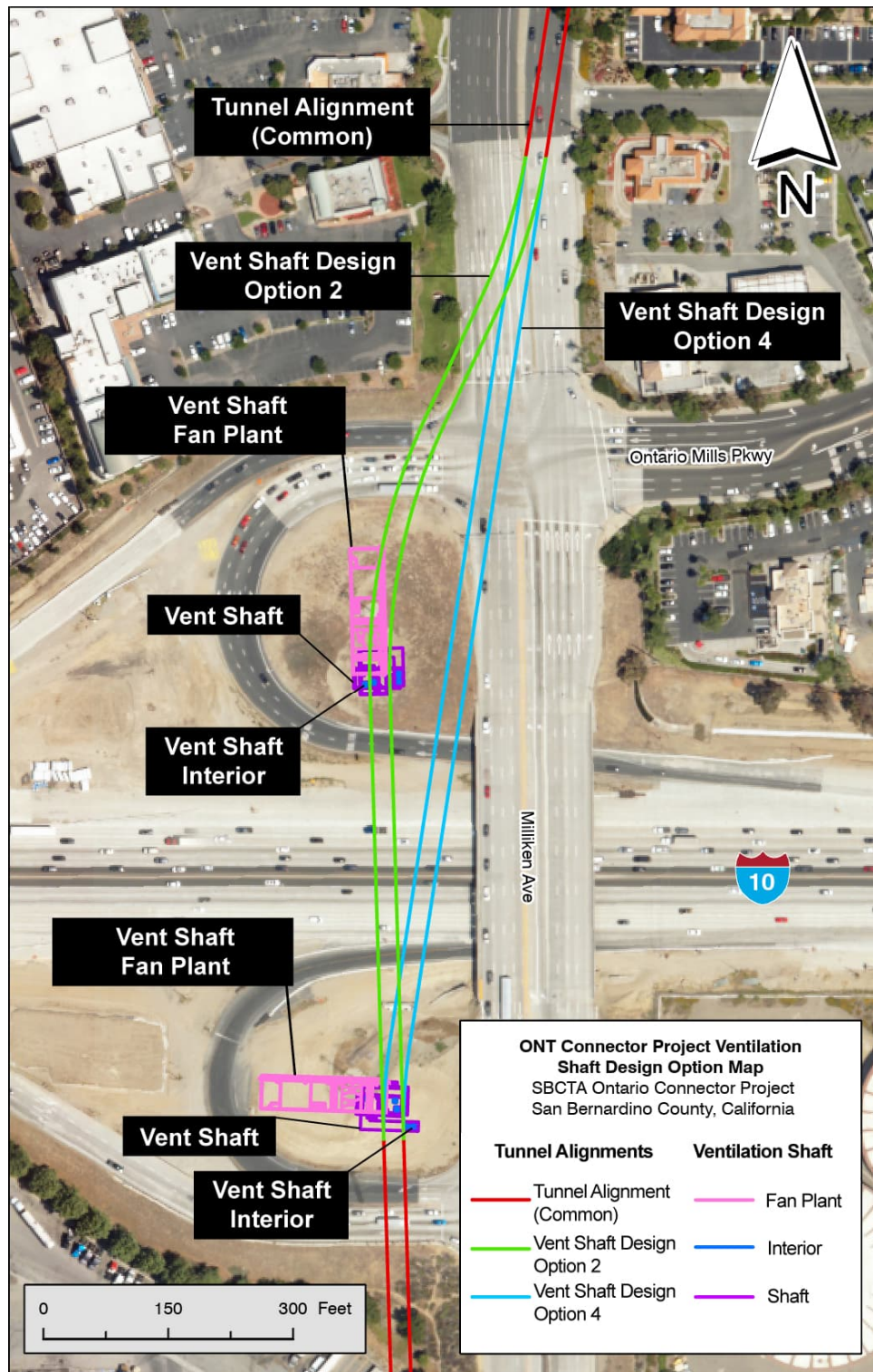
The location option on the north side of I-10 would be in the ROW for the westbound off-ramp and would provide surface ground access from the Milliken Avenue/I-10 westbound off ramp intersection or from the westbound off ramp right lane near the ramp termini or directly from Milliken Avenue. The location option on the south side of I-10 would be in the ROW for the eastbound on-ramp and would provide surface ground access from Milliken Avenue near the eastbound on-ramp.

The vent shaft would consist of both underground and above ground structures. The underground shaft would extend to the tunnel level and the surface structures would consist of a one-(1) story structure above ground.

Access points would include underground, surface, and road access for emergencies to and from the tunnel. The proposed vent shaft would include associated electrical and ventilation equipment, and access would be controlled via a lock and key.



Figure 2-6: Vent Shaft Design Option 2 and Vent Shaft Design Option 4



Source: HNTB 2024

#### 2.3.2.4 Proposed Operations

The proposed Project includes operation of autonomous electric vehicles to transport passengers to and from the proposed stations. The autonomous electric vehicles would be grouped and queued at their origin station and would depart toward the destination station once boarded with passengers. After the group of vehicles arrives at the destination station and passengers deboard, new passengers would board, and the group of vehicles would return to its origin station. If no new passengers are present, empty vehicles would be returned to the origin station to pick up new passengers. The proposed Project would provide a peak one-way passenger throughput of approximately a minimum of 100 per hour. Operations would be managed by Omnitrans, with on-demand service provided daily from 4:00 a.m. to 11:30 p.m., including weekends and holidays.

Fleet size and capacity of the vehicles will be up to the Operating System Provider and Design-Builder to determine to provide an initial operating system capable of transporting a minimum of 100 passengers per hour per direction and scalable to meet ridership demand. Based on the initial operating requirements and preliminary vehicle capacities, SBCTA is anticipating initial fleet sizes of between 7 and 60 vehicles to be required. Vehicles are rubber-tired electric autonomous vehicles.

#### 2.3.2.5 Proposed Construction

This section describes the construction approach for the proposed Project. Overall construction of the proposed Project would last approximately 56 months, with project elements varying in their specific construction duration, as discussed below. Construction is projected to start in 2025 and is anticipated to be completed in 2031. The Construction Methods Technical Report provides additional details regarding the construction approach and process for the key project elements (stations, MSF, tunnel construction, and vent shaft) associated with the proposed Project (SBCTA 2024b).

##### 2.3.2.5.1 Stations and Maintenance and Storage Facility Construction

A construction staging area would be required at each of the three proposed Project stations, which includes the MSF at Cucamonga Station, and at the vent shaft location. Construction staging areas would be used to store building materials and construction equipment, assemble the tunnel boring machine (TBM), temporarily store excavated materials, and serve as temporary field offices for the contractor. Heavy-duty, steel, track-out grates (i.e., rumble plates) would be staged at the entrance of the construction staging areas to capture dirt and soil debris from the wheels of trucks and construction equipment. Best management practices would minimize a public nuisance that can result from soil and mud tracks on the public roadway. For security purposes, construction staging areas would be equipped with fences, lighting, security cameras, and guards to prevent vandalism and theft.

Cut-and-cover sites would occur at each proposed station location. Cut-and-cover activities involve the excavation of a shallow underground guideway from the existing street surface. During the construction

phase, the cut-and-cover sites at Cucamonga Metrolink Station and Terminal 2 at ONT would be used as the TBM launching and receiving pits. Ultimately, the station cut-and-cover sites would serve as the vehicle ramps for the proposed Project's operations where the underground guideway would transition to at-grade.

Following the mass excavation and grading, the stations would require the installation of the waterproof membrane around the station box. The construction sequence for the station structures would typically commence with construction of the foundation base slab, followed by installation of exterior walls any interior column elements, and pouring of the station roof. Once station structure work is complete, the station excavation would be backfilled, and the permanent roadway would be constructed. Decking removal and surface restoration would then occur. Stations are proposed to be 1 to 2 stories, up to approximately 40 ft in height.

Generally, stations would be built simultaneously with or following guideway construction. However, construction of the Cucamonga Station may need to occur after the completion of all excavation and in-tunnel work. Truck haul routes, described in Table 2-1 below, would be designated for each staging site to transport excavated material from the staging sites. Additional construction details for the proposed stations and MSF are described below, in Table 2-1, and in the Construction Methods Technical Report. Table 2-2 provides an overview of the typical sequencing for transit construction activities (SBCTA 2024b).

#### *2.3.2.5.1.1 Construction Details for Cucamonga Station and Maintenance and Storage Facility*

Construction at the proposed Cucamonga Station would require a mass excavation and the TBM would be launched from the invert of the Cucamonga Station and retrieved from the ONT Terminal 2 Station construction site. Construction at the proposed Cucamonga Station would require approximately 3.2 acres. Approximately 170 parking stalls would be temporarily unavailable at the Cucamonga Metrolink Station parking lot. Construction at the Cucamonga Station would occur for up to 37 months. No road closures are anticipated for staging at the Cucamonga Station. Equipment needs would include the following: excavators, backhoes, a vertical conveyor system, a gantry crane, a crawler crane, concrete trucks, haul trucks, a wheel loader, Foamplant, cooling towers, a tunnel fan grout plant, segment cars, and flatcars.

Additionally, construction would not interrupt Metrolink service at the Cucamonga Metrolink Station, as construction activities and staging would occur within the existing Cucamonga Station parking lot. SBCTA will coordinate construction at Cucamonga Station with SCRRA, prior to the start of construction and throughout the construction period, to maintain station access and to coordinate station parking, as needed.

Table 2-1: Stations, Maintenance and Storage Facility Construction Details

Proposed	Construction Area	Duration	Haul Route
Cucamonga Station and MSF	Would require approximately 3.2 acres within the existing Cucamonga Metrolink Station parking lot. Approximately 170 parking stalls would be temporarily unavailable from the existing Metrolink parking lot.	Construction at the Cucamonga Station would occur for up to 37 months.	<p>Haul trucks are needed to support removal and transport of materials from the mass excavation for each construction site (for the stations and vent shaft) and from tunnel boring activities. Haul trucks would collect excavated material from the construction sites and transport it away from the sites, utilizing designated haul routes.</p> <p>Haul trucks would exit the staging area, travel north along Milliken Avenue, and turn right on Foothill Boulevard to access I-15. No road closures are anticipated for staging at the Cucamonga Station.</p>
ONT Terminal 2 Station	Would require approximately 3.4 acres within the existing ONT Terminal 2 parking lot. Approximately 300 parking stalls would be temporarily unavailable from the ONT parking lot.	Construction at ONT Terminal 2 would occur for up to 27 months.	<p>Haul trucks are needed to support removal and transport of materials from the mass excavation for each construction site (for the stations and vent shaft) and from tunnel boring activities. Haul trucks would collect excavated material from the construction sites and transport it away from the sites, utilizing designated haul routes.</p> <p>Haul trucks would exit the staging area, travel east along Terminal Way, and turn left on Haven Avenue to access I-10. No road closures are anticipated for staging at the Terminal 2 Station.</p>
ONT Terminal 4 Station	Would require approximately 3.2 acres within the existing ONT Terminal 4 parking lot. Approximately 300 parking stalls would be temporarily unavailable from the ONT parking lot.	Construction at ONT Terminal 4 would occur for up to 15 months.	<p>Haul trucks are needed to support removal and transport of materials from the mass excavation for each construction site (for the stations and vent shaft) and from tunnel boring activities. Haul trucks would collect excavated material from the construction sites and transport it away from the sites, utilizing designated haul routes.</p> <p>Haul trucks would exit the staging area, travel east along Terminal Way, and turn left on Haven Avenue to access I-10. No road closures are anticipated for staging at the Terminal 4 Station.</p>

Table 2-2: Typical Sequencing of Transit Construction Activities

At Grade or Underground	Activity	Typical Duration (Total Months)	Description
At Grade Construction Activities	Utility Relocation	7-14	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Project.
At Grade Construction Activities	Construction Staging Laydown Yard	3-6	Prepare existing lots to store construction equipment and materials, including the TBM, office space.
At Grade Construction Activities	Roadway	6-18	Reconfigure roadway, demolition of existing roadway installation of curb and gutter and other public ROW improvements.
At Grade Construction Activities	At-grade Guideway	6-18	Install asphalt and striping for guideway.
At Grade Construction Activities	Station Construction (overall)	24-48	Install mechanical, electrical, and plumbing (MEP), canopies, faregates, ticketing, finishes, stairs, and walkways.
At Grade Construction Activities	Parking	3-6	Restoring existing parking stalls temporarily unavailable due to construction, as applicable.
At Grade Construction Activities	MSF	8-12	Install MEP, fencing, enclosed bays, specialized washing equipment, and rebar installation, and concrete pours.
Underground Construction Activities	Utility Relocation	7-14	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Project.
Underground Construction Activities	Open Cut and Cut and Cover Construction	18-24	Supports the construction of the TBM launching and receiving pit, and of the access ramps connecting the tunnel with the at-grade stations. Install soldier piles for beam and lag support of excavation and excavation. Cover excavation with temporary decking.
Underground Construction Activities	Bored Tunnel	16-24	Underground guideway construction.
Underground Construction Activities	Ventilation and Emergency Access Shaft	6-8	Install ventilation and emergency access shaft.
Underground Construction Activities	Underground Guideway	12-18	Install asphalt and striping for guideway.



The proposed Cucamonga Station includes a MSF to store, clean, and maintain vehicles. The MSF would be approximately 11,000 sq-ft, with an additional 5,000 sq-ft second story and would contain an operations control center with lockers, breakrooms, and restrooms. The MSF would be constructed adjacent to the Cucamonga Station and would include enclosed bays.

#### *2.3.2.5.1.2 Construction Details for ONT Terminal 2 Station*

Construction staging at the proposed ONT Terminal 2 station would require approximately 3.4 acres within the existing ONT Terminal 2 parking lot. Approximately 300 parking stalls would be temporarily unavailable at the ONT Terminal 2 parking lot. Construction at the ONT Terminal 2 Station would occur for up to 27 months. No road closures are anticipated for staging at the ONT Terminal 2 Station. Equipment needs would include the following: a piling rig, a gantry crane, a crawler crane, excavators, concrete trucks, muck trucks, a wheel loader, Foamplant, cooling towers, a tunnel fan, a grout plant, segment cars, and flatcars.

#### *2.3.2.5.1.3 Construction Details for ONT Terminal 4 Station*

Construction Staging at the proposed ONT Terminal 4 station would require approximately 3.2 acres within the existing ONT Terminal 4 parking lot. Approximately 300 parking stalls would be temporarily unavailable at the ONT Terminal 4 parking lot. Construction at the ONT Terminal 4 Station would occur for up to 15 months. No road closures are anticipated for staging at the ONT Terminal 4 Station. Equipment needs would include the following: a piling rig, a crawler crane, concrete trucks, muck trucks, a compressor, a generator, a water treatment plant, a wheel wash, a wheel loader, backhoes, and excavators.

#### *2.3.2.5.2 Tunnel Construction*

The proposed Project will travel in a below grade tunnel configuration for most of its proposed alignment. A TBM will be utilized in the construction of the tunnel. TBMs are typically used in the construction of infrastructure projects to build deep underground tunnels by boring, or excavating, through soil, rocks, and/or other subsurface materials. The TBM would be launched from the Cucamonga Metrolink Station to construct the tunnel. Additional details regarding the underground construction process for the Proposed Project are included in the Construction Methods Technical Report (SBCTA 2024b).

The TBM would be launched from the invert of the Cucamonga Station and retrieved from the ONT Terminal 2 Station construction site. A large crane would be used to assemble and disassemble the TBM from the excavation and receiving pits. OIAA height limits at ONT and Rancho Cucamonga, 135 ft and 160 ft, respectively, would restrict crane heights. The TBM would operate six days a week, with maintenance occurring each Sunday. Construction of the entire tunnel would take approximately 22 months. Both ends of the tunnel would need to be constructed via direct excavation (cut and cover) to launch or retrieve the TBM. After mining is completed and TBM logistics are demobilized, both ends of the tunnel would be utilized to build the invert roadway, walkways, center wall and MEP systems, etc.

Vehicle ramps connecting to the tunnel would be constructed via direct excavation, as well. Equipment at the TBM launch site would include trucks, a crane, excavators, a grout plant, a compressor plant, a tunnel fan, and cooling towers. The launch area would also store tunnel construction materials (rail, pipe, ducts, etc.) and stockpile excavated material.

Truck haul routes at the proposed launch site at Cucamonga Station and the proposed retrieval site at ONT Terminal 2 Station are described in Table 2-1 above. The Construction Methods Technical Report includes additional details on the overall construction approach for the proposed tunnel (SBCTA 2024b).

#### 2.3.2.5.3 Vent Shaft Construction

Two vent shaft design options with different access points are being considered for the proposed Project. Vent shaft design option 2 would be located west of Milliken Avenue on the westbound off-ramp of the I-10. Vent shaft design option 4 would be located west of Milliken Avenue on the eastbound on-ramp of the I-10. The vent shaft will consist of both underground and above ground structures. The underground shaft will extend to the tunnel level and the surface structure will consist of a one-(1) story structure above ground. One vent shaft would be constructed along the tunnel alignment.

The vent shaft could be constructed before or after the construction of the tunnel and would be installed using a similar construction methodology to that of the tunnel and take approximately 6 months to complete. A drill rig would install up to 5 piles deep per day, each 70 ft deep. Piles would be drilled (i.e., no impact driving). The access shaft would then be excavated. The excavation would be supported by an internal bracing system. The vent shaft would require a construction staging area approximately 0.62-acres (27,000 sq-ft). Anticipated equipment at the location would include haul trucks, a drill rig, a crane, an excavator, a wheel loader, a compressor, and a ventilation fan. The staging area would include material storage, stockpiles of excavated material, water treatment, a workshop, a construction office, and an employee parking. Additional details regarding the construction process for the vent shaft are included in the Construction Methods Technical Report (SBCTA 2024b).

#### 2.3.2.5.4 Utilities

Utility relocations are anticipated at the launch and retrieval locations at the Cucamonga Metrolink Station site, ONT, and ventilation/emergency access shaft. Multiple utilities would be relocated to allow for the construction of the access shaft, including: potential electric underground distribution cables owned and operated by Southern California Edison; landscape irrigation line owned and operated by the City of Ontario; and Caltrans fiber optic duct bank. In a future project phase, coordination with the existing utility service providers prior to utility relocation would be conducted to reduce potential impacts to utility service and minimize disruptions. Relocations of existing utilities would be coordinated with utility service providers and would be in previously disturbed areas or established ROW close to their existing locations and would stay within the evaluated Project footprint.

### 2.3.2.6 Proposed Project Easements

The proposed Project would require easements from 19 properties. This includes the need for 12 permanent subsurface easements, two permanent surface easements, and five parcel acquisitions for both subsurface and surface easements. Seven of the easements would be for the three stations and would total approximately 2 acres. SBCTA would require these easements for construction and/or operation of the proposed Project. There are two locations that are options for the location of the Vent Shaft, both belonging to Caltrans. This document evaluates the impacts for both options without selection of a preferred site. The decision of the preferred site will depend in part on the CEQA and NEPA processes, including any potential input from the public. The final decision as to which option is preferred may occur after the completion of the CEQA/NEPA process. Land uses for the parcels where these easements would be required include industrial, transportation facilities, utilities, and commercial. The owners of these parcels include SBCTA and City of Rancho Cucamonga (Cucamonga Metrolink Station west and east parking lots), OIAA, a utility service provider, and some private owners. No relocations of businesses and residences would be required to construct the proposed Project.



## 3 REGULATORY SETTING

### 3.1 REGULATORY REQUIREMENTS

#### 3.1.1 Federal

##### 3.1.1.1 National Environmental Policy Act

NEPA of 1969 as amended (United States Code [USC] Title 42, Part 4321 et seq.) established a mandate for federal agencies to consider the potential environmental consequences of their proposals, document the analysis, and make this information available to the public for comment prior to implementation. NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the federal government be interpreted and administered in accordance with its environmental protection goals. NEPA requires the examination and avoidance of potential effects to the social and natural environment when considering approval of proposed transportation projects.

##### 3.1.1.2 Review of Jurisdiction Subject to Section 404 of the Clean Water Act

The United States Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into waters of the United States. These waters include wetlands and nonwetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. The USACE regulatory jurisdiction, pursuant to Section 404 of the Clean Water Act (CWA) and current regulatory definitions, is founded on a direct intermittent or perennial hydrological surface connection between the water body in question and waters subject to interstate commerce during typical years. In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic must meet a specific set of mandatory wetland criteria.

The discharge of dredged or fill material (temporarily or permanently) into waters of the United States (including wetlands) requires authorization from the USACE pursuant to Section 404 of the CWA.

##### 3.1.1.3 Federal Endangered Species Act

Under provisions of Section 7(a)(2) of the Federal Endangered Species Act (FESA), a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with the United States Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) if the activity may affect a listed endangered or threatened species or its designated critical habitat. The purpose of this consultation is to ensure that a federal agency's actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat.

#### 3.1.1.4 Migratory Bird Treaty Act

Native bird species and their nests are protected under the Migratory Bird Treaty Act (MBTA) (16 USC 703–712). The MBTA states that all migratory birds and their parts (including eggs, nests, and feathers) are protected. The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird or its eggs, parts, or nests, except as authorized under a valid permit.

This treaty with Canada, Japan, Mexico, and Russia makes it unlawful to pursue, hunt, take, capture, or kill migratory birds. Section 1439 of the Fixing America’s Surface Transportation Act (FAST Act) provides a temporary conditional authorization of take under the MBTA for nesting swallows on certain bridges.

#### 3.1.1.5 Executive Order 13112—Invasive Species

On February 3, 1999, President Clinton signed Executive Order (EO) 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as:

“... any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.”

### 3.1.2 State

#### 3.1.2.1 California Environmental Quality Act

Enacted in 1970, the CEQA requires State and local government agencies to inform decision-makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible. CEQA requires the disclosure of potential environmental impacts and the identification of enforceable measures to avoid or reduce environmental damage through feasible mitigation or project alternatives. A key feature of the CEQA process is the opportunity for the public to review and provide input throughout the environmental process. The CEQA process allows a robust public disclosure of a project’s potential environmental impact and provides for informed governmental decisions.

CEQA requirements apply to public agency projects including activities directly undertaken by a governmental agency, activities financed in whole or in part by a governmental agency, and private activities that require discretionary approval from a governmental agency; as well as private projects that involve governmental participation, financing, or approval.

### 3.1.2.2 Review of Jurisdiction Subject to Section 1600 of the California Fish and Game Code

Section 1600 et seq. of the California Fish and Game Code requires notifying the California Department of Fish and Wildlife (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 where it may pass into any river, stream, or lake. If, after this notification, the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will need to be obtained. The CDFW has not defined wetlands for jurisdictional purposes. The CDFW generally includes the jurisdictional limits of streams and lakes and any riparian habitat present. Typical riparian habitat includes willows, alders, sycamores, cottonwoods, and other vegetation associated with stream banks or lake shorelines. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Wetlands not associated with a lake, stream, or other regulated areas generally are not subject to CDFW jurisdiction.

### 3.1.2.3 Review of Jurisdiction Subject to Section 401 of the Clean Water Act and the California Porter-Cologne Water Quality Control Act

The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA. The RWQCB also asserts authority over waters of the State under waste discharge requirements pursuant to the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The definition of waters under the jurisdiction of the State of California is broad and includes any surface water or groundwater, including saline waters, within the boundaries of the State. Waters that meet the definition of waters of the United States are also considered waters of the State, but the jurisdictional limits of waters of the State may extend beyond the limits of waters of the United States. Isolated waters that may not be subject to regulations under federal law are considered waters of the State and regulated accordingly. While there is no formal statewide guidance for the delineation of nonwetland waters of the State, jurisdiction generally corresponds to the surface area of aquatic features that are at least seasonally inundated, as well as all areas within the banks of defined rivers, streams, washes, and channels, including associated riparian vegetation.

Currently, each RWQCB reserves the right to establish criteria for the regulation of nonwetland waters of the State. In order to be considered a jurisdictional wetland water of the State, an area must meet the definition set forth in the State Water Resources Control Board's (SWRCB) 2020 *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2020), which defines wetlands as having (1) continuous or recurrent saturation of the upper substrate caused by groundwater or shallow surface water, or both; (2) hydric substrates; and (3) vegetation dominated by hydrophytes or no vegetation. Each characteristic must meet a specific set of mandatory wetland criteria.

The discharge of dredged or fill material (temporarily or permanently) into waters of the State (including wetlands) requires authorization from the RWQCB pursuant to Section 401 of the CWA or pursuant to the Porter-Cologne Act in the absence of waters of the United States.

#### 3.1.2.4 California Endangered Species Act

The California Endangered Species Act (CESA) is administered by the CDFW and prohibits the “take” of plant and animal species identified as either threatened or endangered in the State of California by the Fish and Game Commission (California Fish and Game Code Sections 2050–2097). “Take” is defined as to hunt, pursue, catch, capture, or kill, or to attempt those activities. Sections 2080.1 and 2081 of CESA allow the CDFW to authorize exceptions to the “take” prohibition for State-listed threatened or endangered plant and animal species for purposes such as public and private development, provided the take is incidental to an otherwise lawful activity and is minimized and fully mitigated.

#### 3.1.2.5 Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code designate 37 fully protected species and prohibit the take or possession at any time of such species with certain limited exceptions.

#### 3.1.2.6 Bird Protections

Sections 3503, 3503.5, and 3513 of the California Fish and Game Code protect birds. Section 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 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 provisions, it is generally required that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

#### 3.1.2.7 Bat Protection

Bats and other nongame mammals are protected in California under California Fish and Game Code Sections 2000, 2002, 2014, and 4150 and California Code of Regulations (CCR) Section 251.1. California Fish and Game Code Section 4150 states that all nongame mammals, or parts thereof, may not be taken or possessed except as otherwise provided in the code or in accordance with regulations adopted by the California Fish and Game Commission. Thus, destruction of an occupied, nonbreeding bat roost resulting in the death of bats, or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young bats), is prohibited.

### 3.1.2.8 Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act (1991) was enacted to encourage broad-based planning to provide for effective protection and conservation of the State's wildlife resources while continuing to allow appropriate development and growth. Natural Community Conservation Plans (NCCPs) may be implemented that identify measures necessary to conserve and manage natural biological diversity within the planning area while allowing compatible and appropriate economic development, growth, and other human uses.

These plans represent collaborative planning efforts among a variety of parties, including landowners, developers, local governments, and resource agencies. The plans typically cover a variety of habitat types and plant and animal species, designate conservation areas, and provide regulatory processes for plan signatories for projects impacting covered resources within specific land designations.

### 3.1.3 Local

#### 3.1.3.1 San Bernardino County General Plan

The San Bernardino County General Plan, Natural Resources Element, sets forth goals and policies that regulate public services and recreation in the San Bernardino County (San Bernardino County 2020). The following goals and policies are applicable to the proposed Project:

Goal NR-5: Biological Resources. An interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors.

Policy NR-5.1: Coordinated Habitat Planning. We participate in landscape-scale habitat conservation planning and coordinate with existing or proposed habitat conservation and natural resource management plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions; and for land development and infrastructure permitting.

Policy NR-5.2: Capacity for Resource Protection and Management. We coordinate with public and nongovernmental agencies to seek funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species.

Policy NR-5.3: Multiple-Resource Benefits. We prioritize conservation actions that demonstrate multiple resource preservation benefits, such as biology, climate change adaptation and resiliency, hydrology, cultural, scenic, and community character.

Policy NR-5.4: Off-Base Recovery Efforts. We coordinate with military installations to facilitate off-base recovery of threatened and endangered species and landscape-scale conservation.

Policy NR-5.5: Mitigation and Future Responsibilities. We require that new development satisfy habitat conservation responsibilities without shifting conservation responsibilities onto military property.

Policy NR-5.6: Mitigation Banking. We support the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. We require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

Policy NR-5.7: Development Review, Entitlement, and Mitigation. We comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes.

Policy NR-5.8: Invasive Species. We require the use of non-invasive plant species with new development and encourage the management of existing invasive plant species that degrade ecological function.

### 3.1.3.2 City of Rancho Cucamonga General Plan

The City of Rancho Cucamonga General Plan, Resources Conservation Element, sets forth goals and policies that regulate public services and recreation in the City of Rancho Cucamonga (City of Rancho Cucamonga 2021). The following goals and policies are applicable to the proposed Project:

Goal RC-3: Habitat Conservation. Wildlife habitats that support various plants, mammals, and other wildlife species

Policy RC-3.1: Sensitive Habitat. Encourage the preservation of the integrity of sensitive land resources that have significant native vegetation and/or habitat value such as riparian habitat areas, creek corridors, Riversidean Alluvial Fan Sage Scrub (RAFSS), wetlands, and sensitive wildlife habitat that supports biological resources.

Policy RC-3.2: Biological Preserves. Allow and encourage the expansion of sensitive biological preserve areas (e.g., North Etiwanda Preserve, Day Creek Preserve, and San Sevaine Preserve) and other important habitat areas with an emphasis on wildlife connectivity between habitats and connectivity to the national forest.

Policy RC-3.3: Wildlife Corridors. Encourage the creation, maintenance, and protection of open space areas that provide strategic wildlife corridors and vital connectivity between habitat areas.

Policy RC-3.4: Landscape Design. Encourage new development to incorporate native vegetation materials into landscape plans and prohibit the use of species known to be invasive according to the California Invasive Plant Inventory.

Policy RC-3.5: Buffers from New Development. Require new developments adjacent to identified plant and wildlife habitat areas to establish and maintain a protective buffer.

Policy RC-3.6: Grading and Vegetation Removal. Limit grading and vegetation removal of new development activities to the minimum extent necessary for construction and to reduce erosion and sedimentation.

### 3.1.3.3 City of Rancho Cucamonga Tree Preservation Ordinance, Municipal Code Chapter 17.80, Tree Preservation

The City of Rancho Cucamonga Tree Preservation Ordinance, Chapter 17.80, includes provisions to protect trees (considered to be a community resource) from indiscriminate cutting or removal (City of Rancho Cucamonga 2022). Specifically, the provisions are to protect and expand eucalyptus windrows through planting of new spotted gum eucalyptus windrows along the established grid pattern as development occurs.

### 3.1.3.4 City of Rancho Cucamonga Municipal Code Section 17.16.080, Tree Removal Permit

Municipal Code Section 17.16.080, Tree Removal Permit, is intended to protect trees defined as heritage trees (City of Rancho Cucamonga 2022). According to the City ordinance, “heritage trees” are any tree, shrub, or plant that meets at least one of the following criteria:

- All eucalyptus windrows;
- All woody plants in excess of 30 ft in height and having a single trunk circumference of 20 inches or more, as measured 4.5 ft from ground level;
- Multitrunk tree(s) having a total circumference of 30 inches or more, as measured 24 inches from ground level;
- A stand of trees, the nature of which makes each dependent upon the others for survival; or
- Any other tree that may be deemed historically or culturally significant by the City of Rancho Cucamonga’s Planning Director because of size, condition, location, or aesthetic qualities.



Removal of heritage trees requires a tree removal permit from the City of Rancho Cucamonga's Planning Director.

### 3.1.3.5 City of Ontario General Plan

The City of Ontario General Plan, Environmental Resources Element, sets forth goals and policies that regulate public services and recreation in the City of Ontario (City of Ontario 2022). The following goals and policies are applicable to the proposed Project:

GOAL ER-5: Biological, Mineral and Agricultural Resources. Protected high value habitat and farming and mineral resource extraction activities that are compatible with adjacent development.

POLICY ER-5.1: Habitat Conservation Areas. The City supports the protection of biological resources through the establishment, restoration, and conservation of high-quality habitats areas.

POLICY ER-5.2: Entitlement and Permitting Process. The City complies with state and federal regulations regarding protected species.

### 3.1.3.6 City of Ontario Municipal Code, Volume II, Chapter 2, Parkway Tree Regulations (Ordinance 1664)

The City of Ontario Municipal Code, Chapter 2, Parkway Tree Regulations, is intended to preserve parkway trees; to regulate the maintenance and removal of such trees; to establish the varieties, minimum sizes, methods, and locations for the planting thereof; and other related matters (City of Ontario 2021). A "parkway" is defined as that portion of any public street road ROW between the ROW boundary line and the curb line, along with the area enclosed within the curb lines of a median divider. The property owner abutting upon public ROW is responsible for watering any tree located in the parkway and for trimming that can be done from the ground to preserve the neat appearance and unobstructed use of the parkway, while the City of Ontario is responsible for all major pruning. Removal or relocation of any parkway tree requires prior authorization from the Public Works Agency of the City of Ontario through a permit process, and planting of a replacement tree, whenever feasible, shall be a condition included in any permit issued by the City of Ontario for the removal of any parkway tree. Alternatively, a cash-in-lieu deposit may be accepted by the City of Ontario as an alternative to the actual planting of any required parkway tree based on a fair value established by the Public Facilities Manager.

### 3.1.3.7 City of Ontario Municipal Code, Section 6.05.020, Tree Preservation Policy and Protection Measures

The City of Ontario Municipal Code, Tree Preservation Policy and Protection Measures, are intended to establish policies and measures that will further the preservation, protection, and maintenance of



established and healthy heritage trees within Ontario to improve the community forest that provides environmental, aesthetic, and economic benefits and enhances the quality of life. It is pertinent to the public welfare that such trees be protected from indiscriminate cutting or removal. A “Heritage Tree” is defined as a tree designated for preservation pursuant to Section 4.02.060 (Historic Preservation—Historic Landmark and District Designations, and Architectural Conservation Areas) of this Development Code, a tree of historic or cultural significance, or a tree of importance to the community due to any one of the following factors:

- a. It is one of the largest or oldest trees of the species located in the city, with a trunk diameter of 18 inches or greater, measured at 54 inches above natural grade.
- b. It has historical significance due to an association with a historic building, site, street, person, or event.
- c. It is a defining landmark or significant outstanding feature of a neighborhood or district, or is typical of early Ontario landscapes, including:
  1. *Cinnamomum camphora* (camphor tree);
  2. *Cedrus deodara* (Deodar cedar);
  3. *Platanus acerifolia*;
  4. *Quercus suber* (cork oak);
  5. *Quercus ilex* (holly oak); and
  6. *Schinus molle* (Peruvian pepper).
- d. It is a native tree. The term “native tree” means any one of the following California native tree species that has a trunk diameter of more than 8 inches, measured at 54 inches above natural grade, including:
  1. *Platanus racemosa* (California sycamore);
  2. *Pinus torreyana* (Torrey pine);
  3. *Quercus agrifolia* (coast live oak);
  4. *Quercus engelmannii* (Engelmann oak);
  5. *Quercus lobata* (valley oak); or
  6. *Umbellularia californica* (California bay).

The project site does not contain trees that fall under the definition of a heritage tree, as noted.

## 3.2 STUDIES REQUIRED

### 3.2.1 Literature Review

A literature review and records search were conducted in June 2022 to identify the existence or potential occurrence of sensitive or special-status biological resources (e.g., plant and animal species) in or within

the vicinity of the proposed Project. Federal and State lists of sensitive species were examined and are included in Appendix A, Federal and State Lists of Sensitive Species. Current and historical aerial photographs were also reviewed on Google Earth (2022). Current database records that were reviewed include the following:

- USFWS Information for Planning and Consultation (IPaC). Website: <https://ecos.fws.gov/ipac/> (accessed April 12, 2024) (USFWS 2024).
- National Oceanic and Atmospheric Administration (NOAA). Website: [https://archive.fisheries.noaa.gov/wcr/maps\\_data/california\\_species\\_list\\_tools.html](https://archive.fisheries.noaa.gov/wcr/maps_data/california_species_list_tools.html) (accessed June 16, 2022) (NOAA 2022).
- CDFW California Natural Diversity Database (CNDDDB), Rarefind 5. California 7.5-minute United States Geological Survey (USGS) quadrangles searched: *Riverside West, Prado Dam, Guasti, Ontario, Fontana, Mt. Baldy, Devore, Cucamonga Peak, and Corona North* (accessed May 14, 2024) (CDFW 2024).

Prior biological resources survey data and environmental reports prepared for other projects at or near the proposed Project location were also reviewed.

### 3.2.2 Field Reviews

The general survey and habitat mapping were conducted on September 1 and 9, 2022, to characterize the biological resources of the Biological Study Area (BSA) and to ascertain the presence or absence of sensitive plants and animals or the likelihood of their occurrence in the BSA. The BSA includes the entire proposed ground disturbance area (temporary and permanent) associated with the project design and a 500-ft buffer (refer to Figure 4-1 for areas of ground disturbance).

### 3.2.3 Survey Methods

On-site field investigations were conducted on September 1 and 9, 2022, as shown in Table 3-1, Survey Dates and Personnel, to identify existing vegetation communities, suitable habitats for special-status species, potential jurisdictional waters, and other biological resource issues. The field investigations focused on undeveloped habitats in the BSA. Field investigations of undeveloped habitat in the northern portion of the BSA were not conducted due to lack of legal rights to access. These areas were viewed in the field, as feasible, from adjacent areas using binoculars. In addition, these areas were assessed via desktop review of aerial photographs (Google Earth 2022). Based on the literature review and initial field investigations, field surveys were completed as follows:

Table 3-1: Survey Dates and Personnel

Survey Type	Survey Date(s)	Survey Personnel
General Habitat Suitability Survey	September 1 and 9, 2022	Stan Spencer
Burrowing Owl Habitat Assessment/Survey	July 9, 15, 2021	Stan Spencer and Denise Woodard
Crotch's Bumble Bee Habitat Assessment/Survey	July 9, 13, 16, 19, 26, and 27, 2021	Stan Spencer
Bat Habitat Assessment	September 21, 2022	Jill Carpenter and Jessica Lieuw
Delhi Sands Flower-Loving Fly Habitat Assessment/Survey	July 9, 22, 23, 24, 25, 26, 26, 27, 28, and 30; August 2, 4, 9, 13, 17, 19, 23, and 27; and September 1, 3, 8, 10, 14, 17, and 20, 2021	Denise Woodard and Stan Spencer

Source: LSA Associates, Inc. (2022)

- **General Habitat Suitability Survey:** During the course of biological surveys conducted on September 1 and 9, 2022, biologists noted wildlife species and habitat conditions within the BSA. All plant and wildlife species observed during the surveys were documented and are included in Appendix B, Plant and Animal Species Observed.
- **Burrowing Owl Survey:** A burrowing owl habitat assessment was conducted on July 9 and 15, 2021. Biologists conducted a single burrowing owl breeding season survey in accordance with the CDFW's 2012 *Staff Report on Burrowing Owl Mitigation* due to the project initiation date occurring late in the survey season on July 15, 2021. The protocol requires four site visits to be conducted during the breeding season: one between February 15 and April 15 (if possible), and three, at least 3 weeks apart, between April 15 and July 15, with at least one of these after June 15. Surveys were conducted by walking transects spaced up to 65 ft apart throughout the BSA, which included the project site plus adjacent habitat within 500-ft where access was permitted. Surveys were conducted between morning civil twilight and 10:00 a.m. or between 2 hours before sunset and evening civil twilight. All burrowing owl sightings, occupied burrows, and potentially suitable burrows were mapped. Since the full protocol survey was unable to be completed, another focused protocol survey is recommended prior to construction.
- **Crotch's Bumble Bee, Year 1 (2021):** A Crotch's bumble bee habitat assessment was conducted on July 9, 2021. Visual Crotch's bumble bee surveys, conducted within undeveloped portions of the BSA, that have the potential to support Crotch's bumble bee. The visual surveys were conducted under dry-weather conditions with temperatures between 80 degrees Fahrenheit (°F) and 90°F and sustained winds of less than 5 miles per hour (mph) as averaged over a 30-second period. The visual survey began at least 2 hours after sunrise and ended at least 4 hours before sunset. Surveys were conducted by walking transects through the vegetation within the BSA. Survey transects were spaced approximately 30 ft apart or closer if needed for visual coverage of

potential nest sites. Surveys consisted of looking for potential nest sites (e.g., holes, crevices), as well as looking for Crotch's bumble bees on the ground or in vegetation and following them to an active nest.

- **Delhi Sands Flower-Loving Fly Survey, Year 1 (2021):** A Delhi sands flower-loving fly (DSF) habitat assessment was conducted on July 9, 2021. A single-year survey was conducted by a qualified biologist for DSF in areas of the BSA containing potentially suitable habitat within mapped Delhi soils and where access was permitted. The surveys were conducted in accordance with the terms of obtained Federal 10(a)(1)(A) Permit TE-777965 and the *Interim General Survey Guidelines for the Delhi Sands Flower-Loving Fly* (USFWS 1996). The survey protocol was modified to accommodate a late start on the DSF survey season, which begins July 1 and ends September 20 (see the Record of Correspondence with USFWS provided in Appendix D). To make up for approximately 2 weeks of missing DSF survey data, four extra surveys were completed during Weeks 4 and 5 of the survey season. The survey consisted of 23 site visits from July 22 through September 20, 2021. Biologists conducted the surveys pursuant to Federal 10(a)(1)(A) Permit TE 777965-11 (May 3, 2018–May 2, 2023).
- **Bat Habitat Assessment:** During the daylight hours on September 21, 2022, a qualified bat specialist conducted a daytime bat habitat suitability assessment at all of the bridge and culvert structures within the proposed Project footprint and a 500-ft buffer. During the habitat assessment, potential roost sites were identified by examining the sides and underside of each structure with a high-powered light-emitting diode (LED) spotlight for any structural features such as crevices or recessed spaces that may be suitable for use as day- or night-roosting habitat. Structural features suitable for day-roosting bats include crevices (e.g., hinges or expansion joints), weep holes, or cavities, while structural features used by night-roosting bats include features suitable for day roosting, as well as recessed areas (e.g., concrete girders that can trap warm air, or the walls of concrete box culverts). Each structure was also inspected for the presence of bats or any bat sign (e.g., guano, urine staining, or vocalizations) indicating current or past use of an area by roosting bats. Features suitable for use as day-roosting habitat were also assessed for potential use as maternity roost sites based on indications that the observed roost feature supports or may support a large congregation of bats. Potential foraging habitat was also assessed within and adjacent to the structures on the basis of vegetation composition, presence of water, and connectivity to other areas providing suitable foraging or roosting habitat. The presence of large trees and palm trees within the study area that are suitable for foliage-roosting species were noted during the assessment, although roosting activity at these locations is difficult to confirm due to the nature of this roosting behavior (i.e., these species tend to roost singly, beneath leaves, and may roost in a different location each night).

The biologists involved in the field surveys are well versed in all habitat types found within the BSA and are authorized by the CDFW and the USFWS to conduct surveys for and monitor special-status species that occur within the vicinity of the BSA, including roosting bats, plants, and other mammals, amphibians, reptiles, and birds.

### 3.3 AGENCY COORDINATION AND PROFESSIONAL CONTACTS

The following agency coordination activities were conducted at the time of preparation of this Biological Resource Assessment:

- USFWS – Carlsbad: Unofficial USFWS species list received (April 2024)
- USFWS – First-Year Focused Survey for the Delhi Sands Flower-Loving Fly for the Emerging Technology Tunnel to Ontario Airport Project in Ontario and Rancho Cucamonga (January 31, 2022): The project is designed to avoid impacts to listed plant and animal species. If it is determined that the project may adversely affect a listed species, the appropriate resource agency (or agencies) shall be contacted prior to project construction activities. An effects determination was made for each of the listed species on the NOAA and USFWS species lists as part of agency coordination and is included in Section 8.2.1 of this document.

### 3.4 LIMITATIONS THAT MAY INFLUENCE RESULTS

The collection of biological field data is normally subject to environmental factors that cannot be controlled or reliably predicted. Consequently, the interpretation of field data must be conservative and must consider the uncertainties and limitations necessarily imposed by the environment. However, due to the experience and qualifications of the consulting biologists involved in the surveys, this limitation is not expected to severely influence the results or substantially alter the findings.

In addition, where access was not available or safe, when possible, binoculars were used. Although information was gathered from the entire BSA, project impacts discussed in this report are considered for biological resources that fall within the project footprint and in adjacent areas that may be directly or indirectly impacted by the proposed Project. Project plans are subject to change.

## 4 ENVIRONMENTAL SETTING

As described in *The Jepson Manual* (Baldwin et al. 2012), the BSA is located in the South Coast subregion of the Southwestern California region of the California Floristic Province. The South Coast subregion is characterized by valleys and small hills extending from the coast inland to the foothills of the Transverse and Peninsular Mountain Ranges. Much of the subregion is extensively developed with urban, suburban, and agricultural uses. The natural vegetation of the subregion consists primarily of chaparral, coastal sage scrub (CSS), nonnative annual grassland, and some riparian scrub and woodland. Much of the natural vegetation occurs in scattered, often fragmented patches on hills or in other areas not easily developed and/or protected under regional or local land use plans. Specifically, the proposed Project is located within portions of developed and maintained areas along Milliken Avenue and East Airport Drive.

### 4.1 DESCRIPTION OF THE EXISTING BIOLOGICAL AND PHYSICAL CONDITIONS

#### 4.1.1 Study Area

The BSA includes the Cucamonga Metrolink Station, ONT, and the 4.2 mi long footprint for the underground tunnel that generally travels south along Milliken Avenue and East Airport Drive, and crosses beneath Guasti Road, I-10, and the UPRR before traveling west beneath East Airport Drive to connect the Cucamonga Metrolink Station to ONT. Additionally, the BSA includes the ROW of Milliken Avenue and East Airport Drive where impacts would occur, along with indirect project-related impacts such as temporary noise and vibration. The BSA is located in San Bernadino County, within the USGS 7.5-minute series topographic quadrangle of *Guasti, California*. Figure 4-1 shows the BSA overlaid onto a high-definition aerial photograph taken in June 2020.

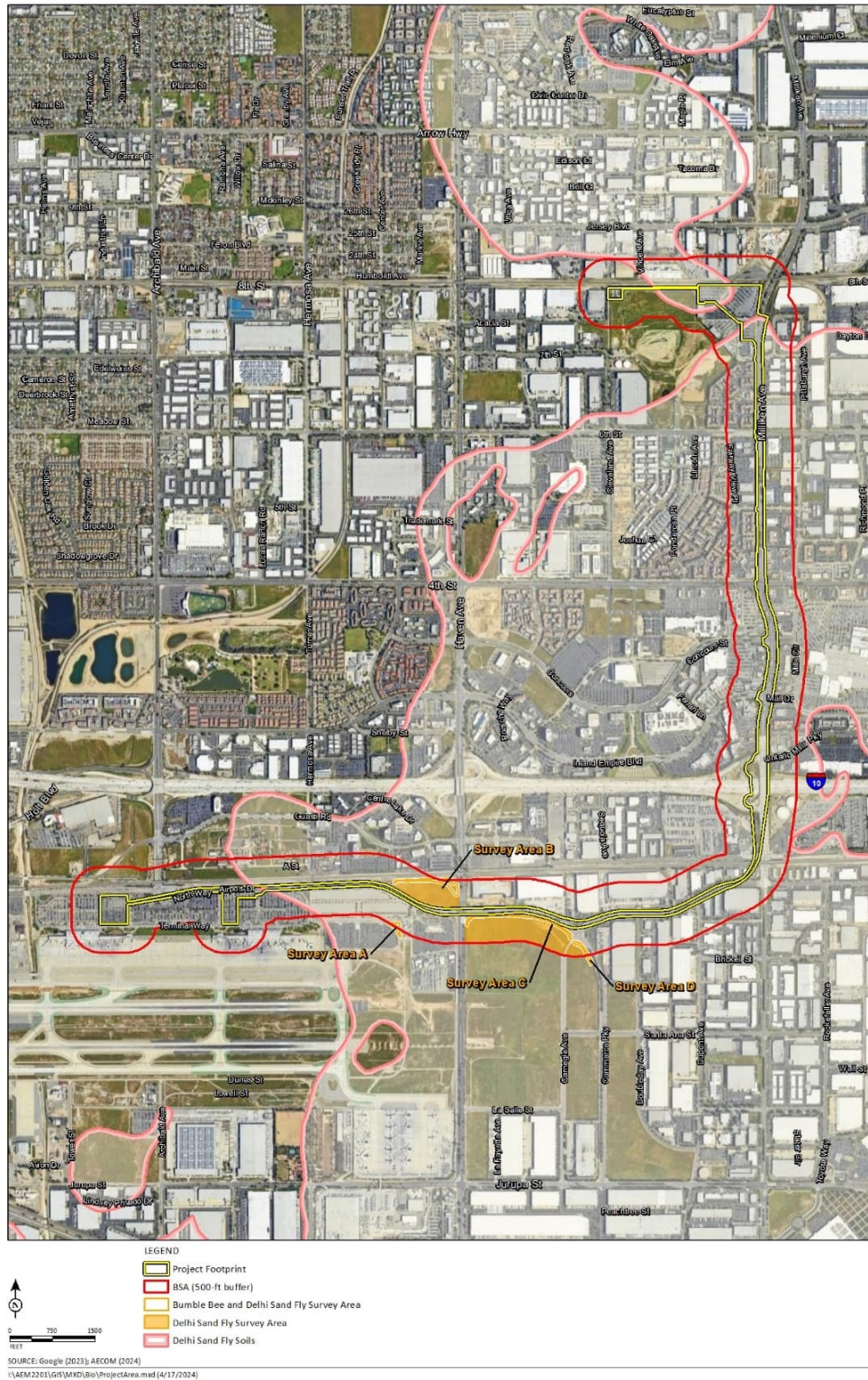
#### 4.1.2 Physical Conditions

Much of the BSA consists of urban development and ornamental landscaping. Undeveloped areas within the BSA contain a mixture of CSS, nonnative annual grassland, and ornamental vegetation along Milliken Avenue and East Airport Drive and surrounding the residential and commercial developments that are affected by regular vehicular traffic, noise and anthropogenic uses. Mapped vegetation communities in the BSA include nonnative annual grassland, CSS, and developed/disturbed. There are two concrete lined drainage channels, one cobble ditch, and two earthen channels that are potentially jurisdictional features within the BSA.

Elevations in the BSA range from approximately 955 to 1,127 ft above mean sea level. The topography within the BSA is relatively flat with slight topographic variation.



Figure 4-1: Biological Study Area and Survey Areas



The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and moderately mild, wet winters). The average annual precipitation is approximately 14 inches. Although most of the precipitation occurs from November through May, thunderstorms may occur at all times of the year and can cause extremely high precipitation rates. Average annual temperatures typically range between 43 and 93°F.

The BSA is located within the Lower and Upper Cucamonga Creek Watersheds. Soil types vary throughout the BSA, and most of the soils have been impacted by development.

#### 4.1.3 Biological Conditions

The BSA primarily consists of urban development, developed/disturbed, nonnative annual grassland, and CSS. Natural areas supporting native CSS vegetation occur along of the western slope of Milliken Avenue, south of I-10 and north of the intersection of Milliken Avenue and Guasti Road. Prominent vegetation types within the BSA are discussed in the subsection below and are shown on Figure 4-2.

##### 4.1.3.1 Vegetation/Natural Communities

Land cover types existing within the BSA were mapped and classified based on existing conditions at the time of the surveys. The BSA currently contains three vegetation communities and land cover types. Figure 4-2 shows the mapped land cover types within the BSA; Appendix C, Representative Site Photos, provides site photographs; and Table 4-1 shows the acreage of each vegetation type and land use within the BSA. The vegetation communities within the BSA are discussed below.

Table 4-1: Vegetation and Other Land Cover Types  
Mapped within the Biological Study Area

Vegetation	Acreage Total
Coastal Sage Scrub	0.85
Nonnative annual grassland	76.14
Developed/Disturbed	622.12
Total	699.11

Note: calculated using GIS software



Figure 4-2: Vegetation and Potential Jurisdictional Features (Sheet 1 of 13)

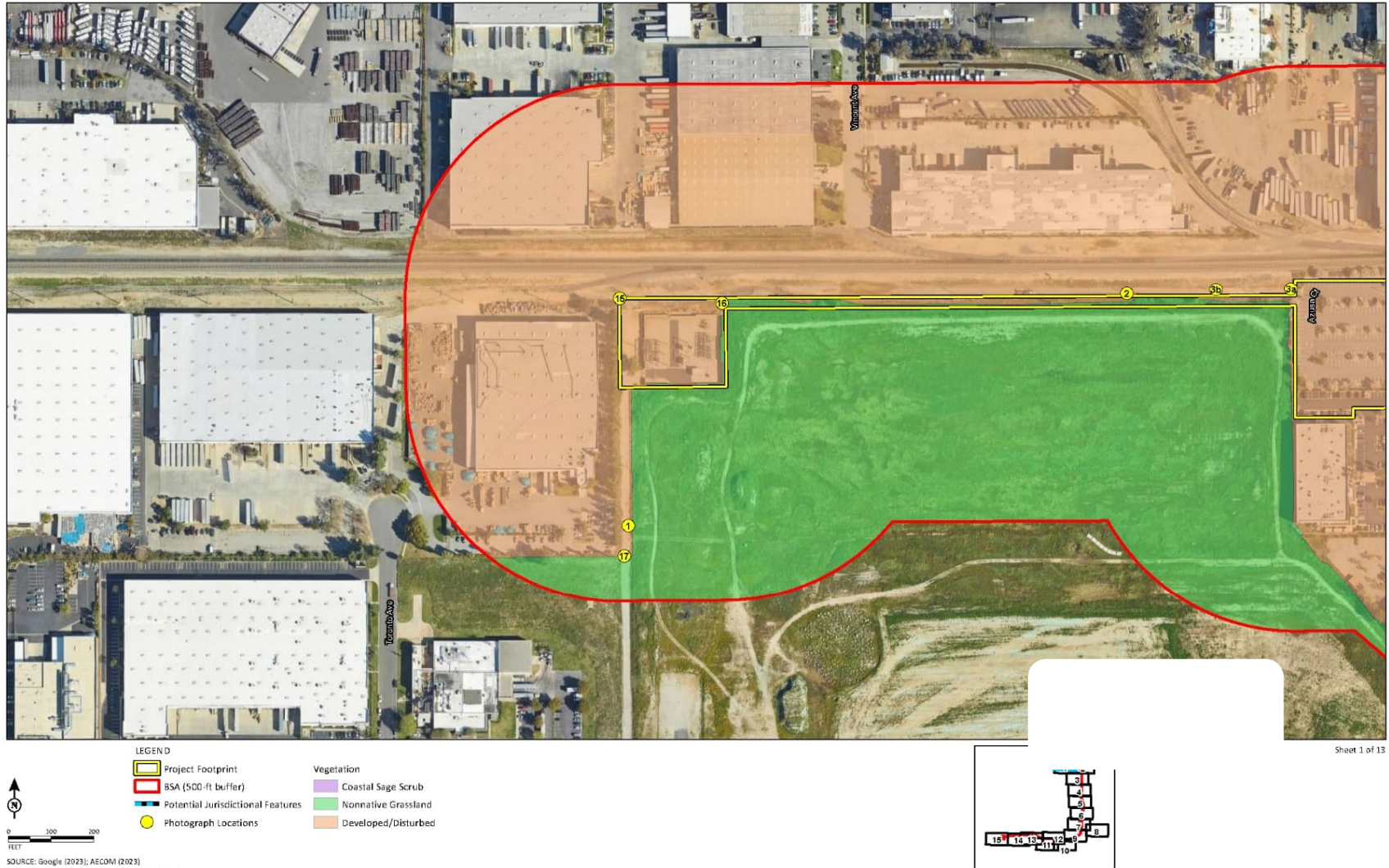




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 2 of 13)

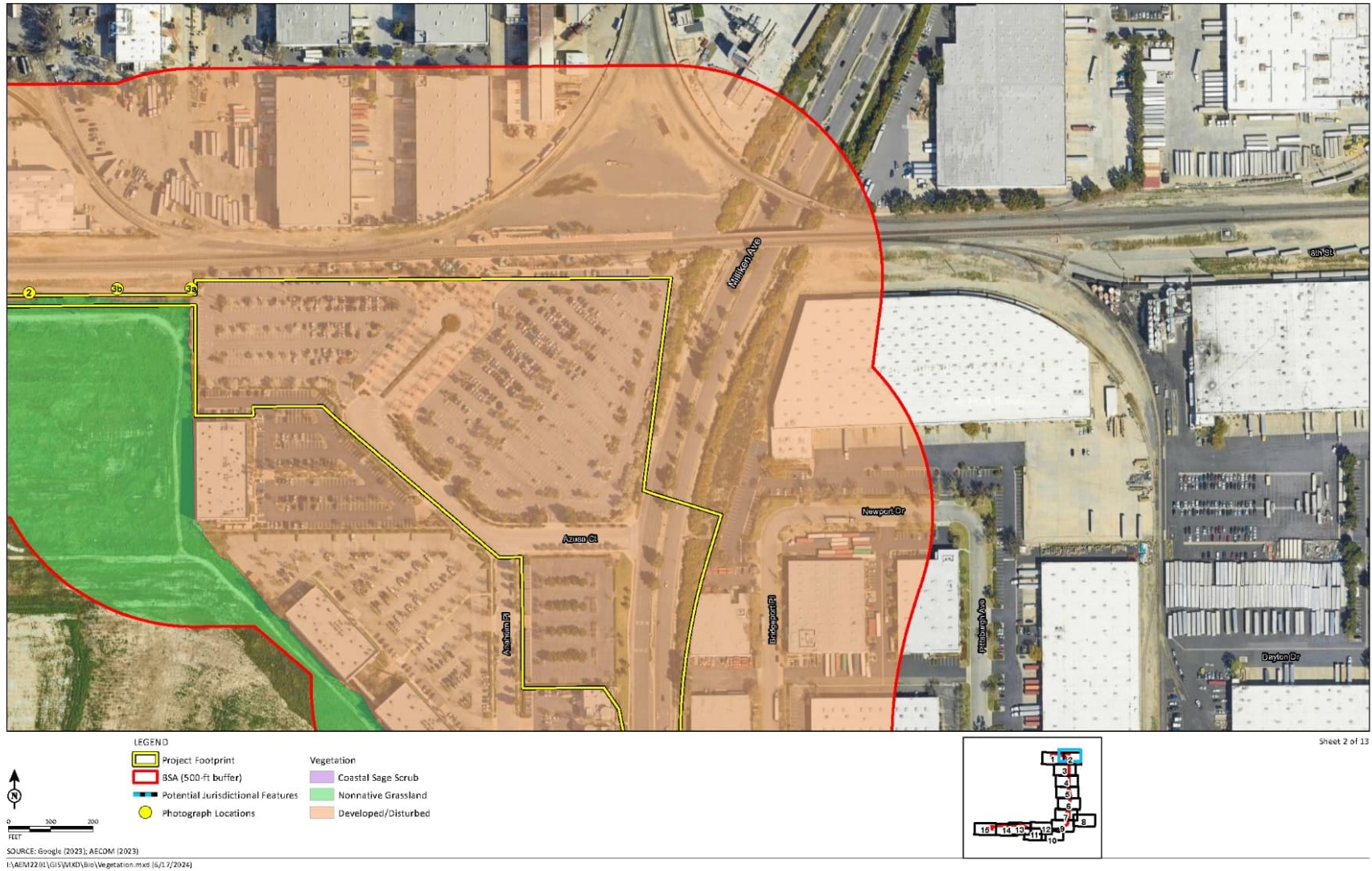




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 3 of 13)

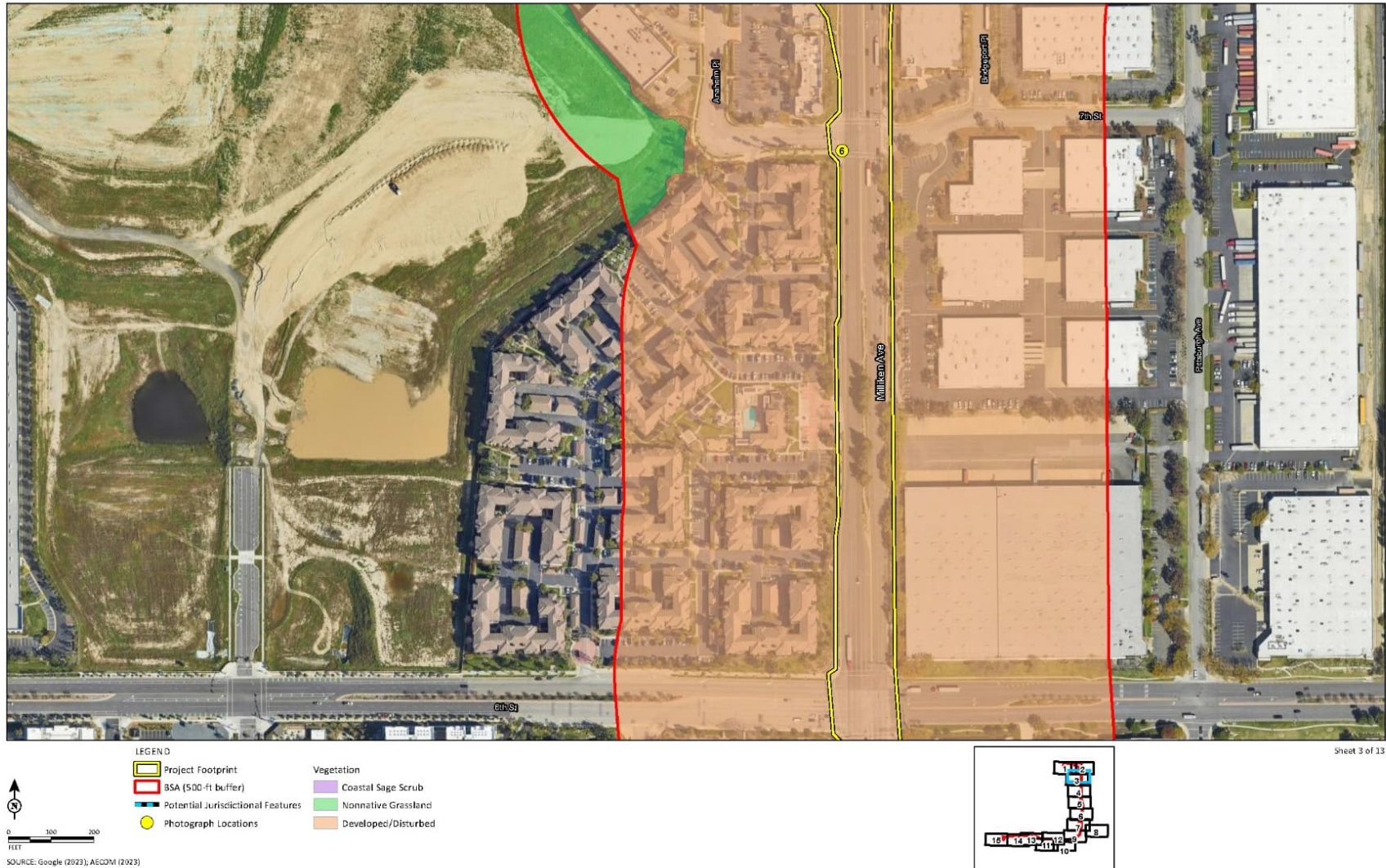




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 4 of 13)

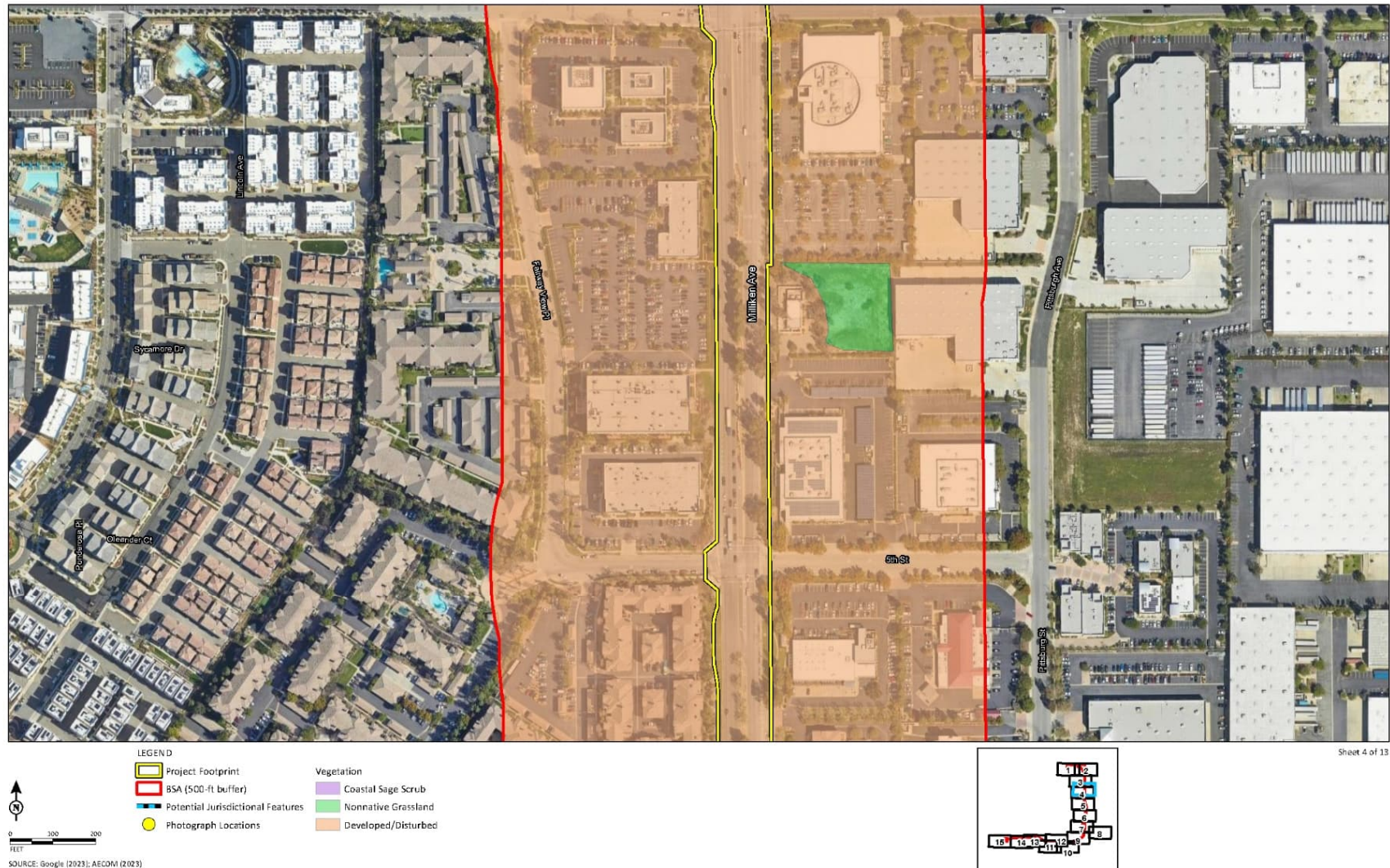




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 5 of 13)

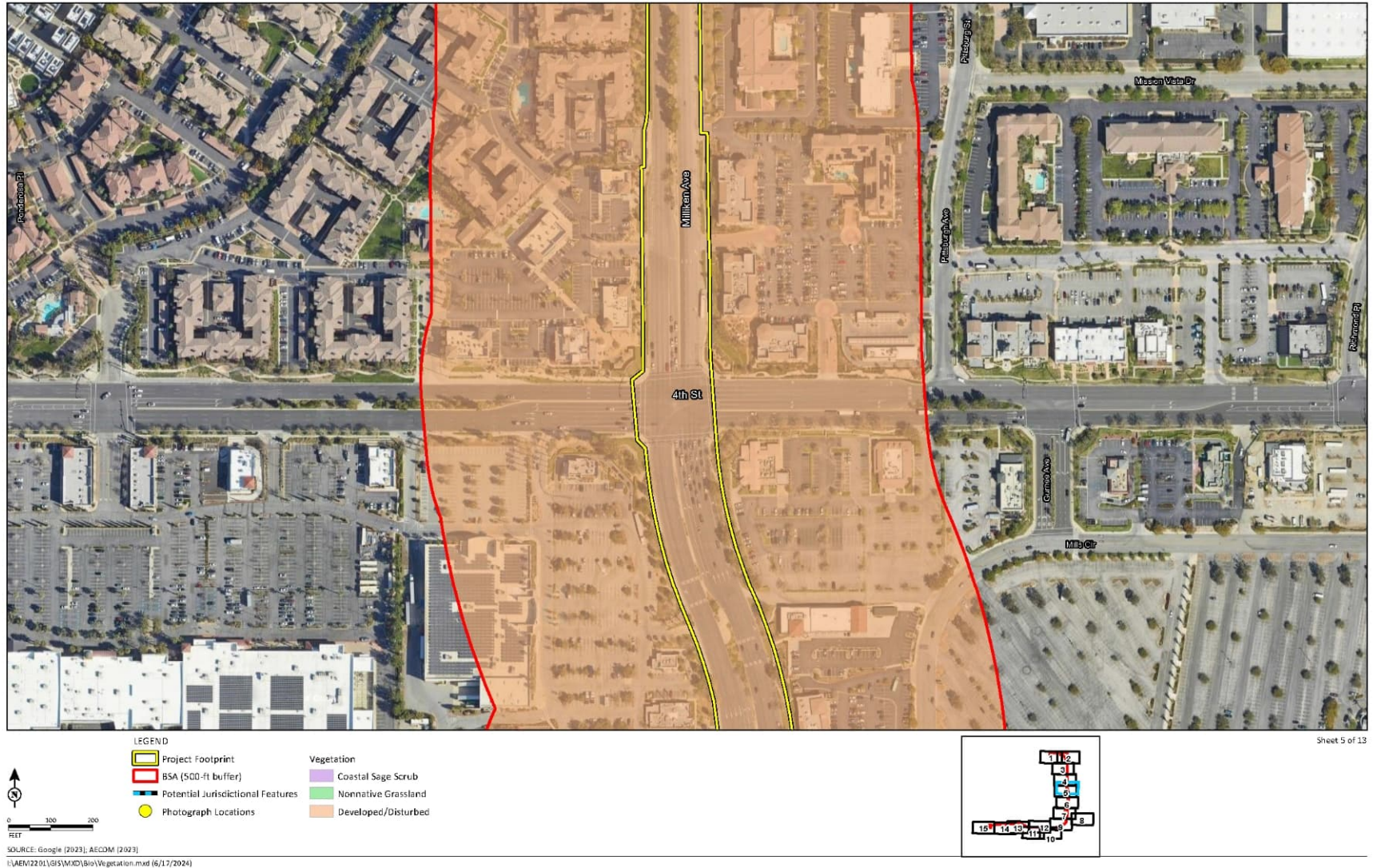




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 6 of 13)





Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 7 of 13)





Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 8 of 13)

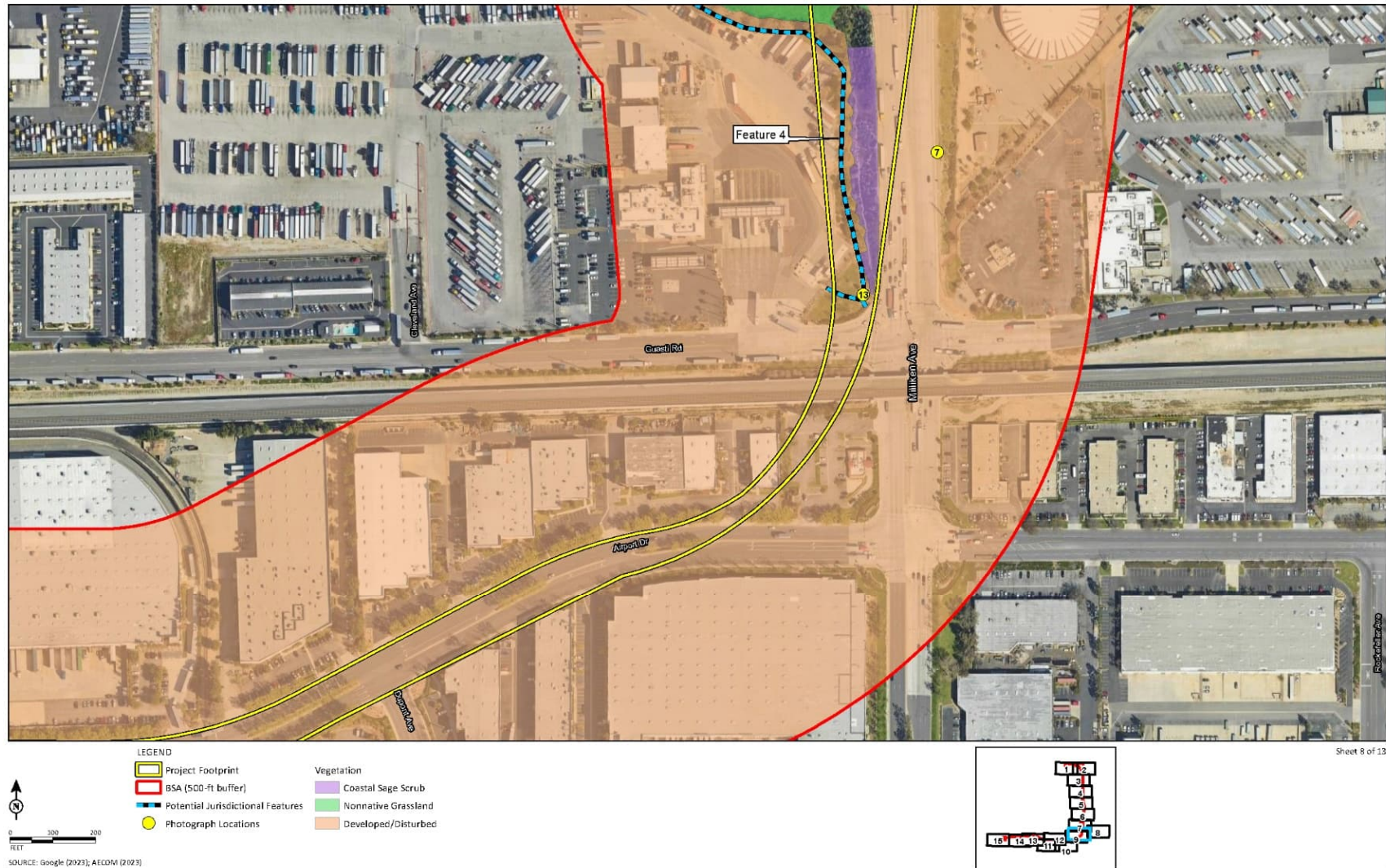




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 9 of 13)



Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 10 of 13)

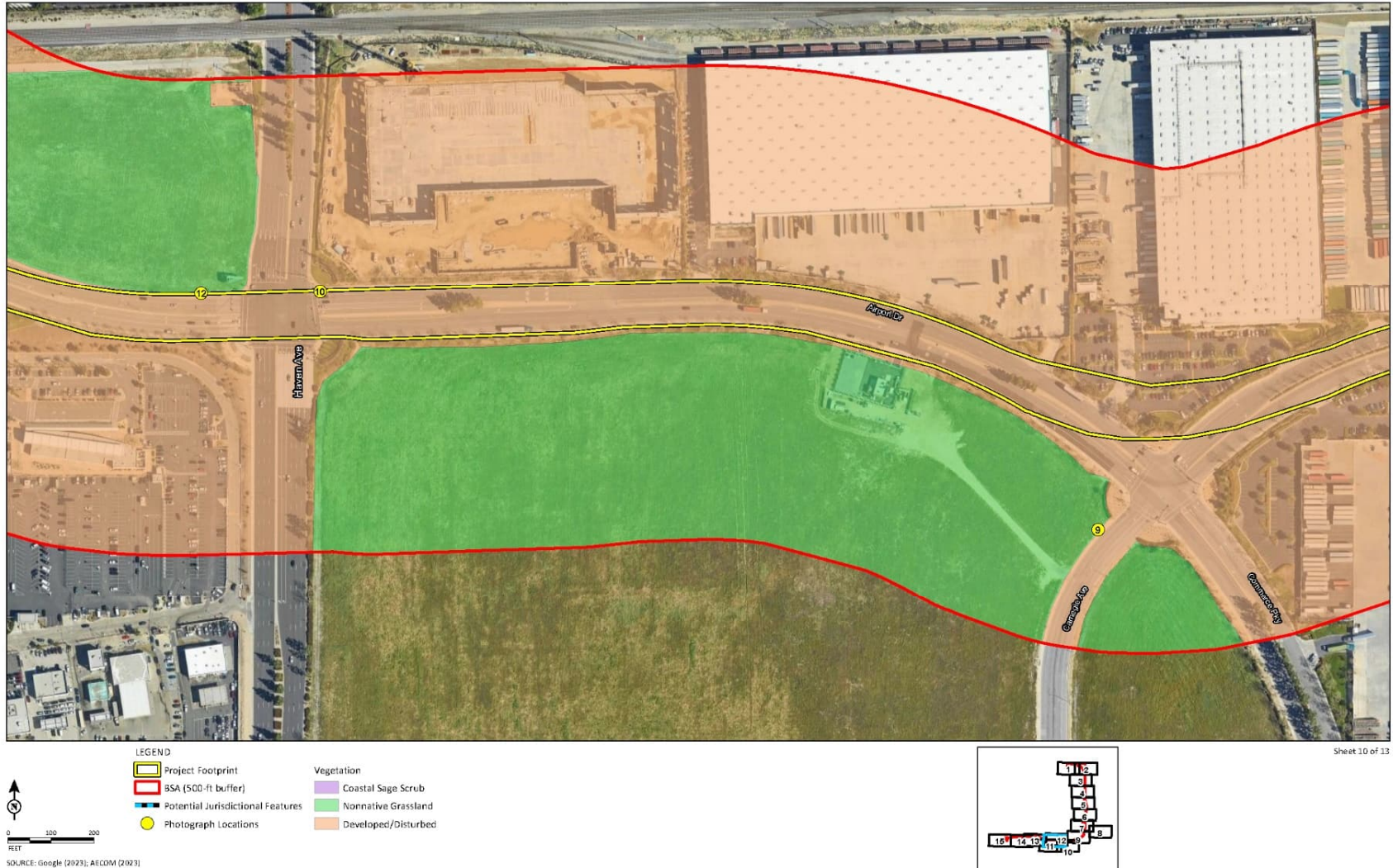




Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 11 of 13)





Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 12 of 13)

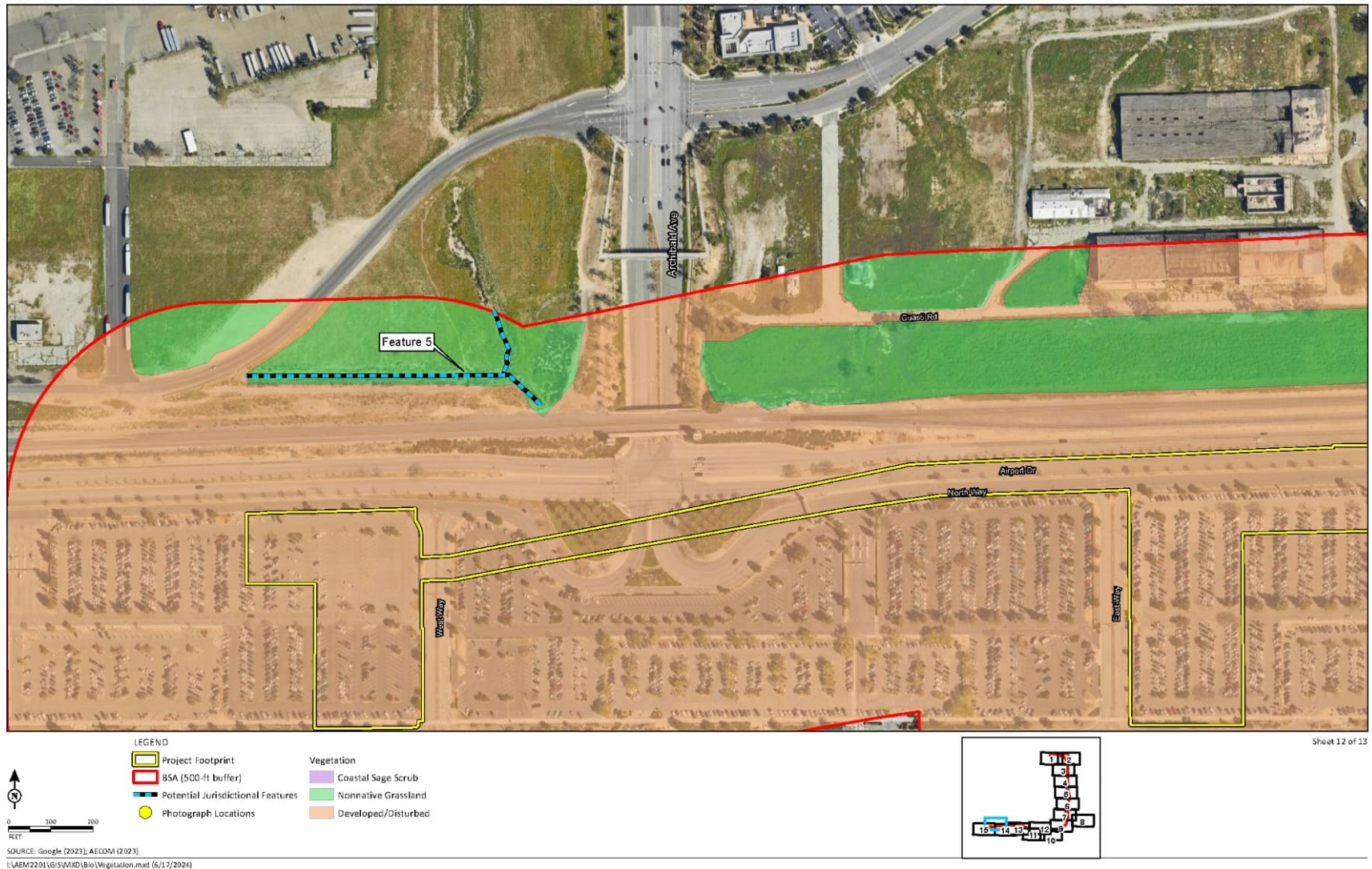
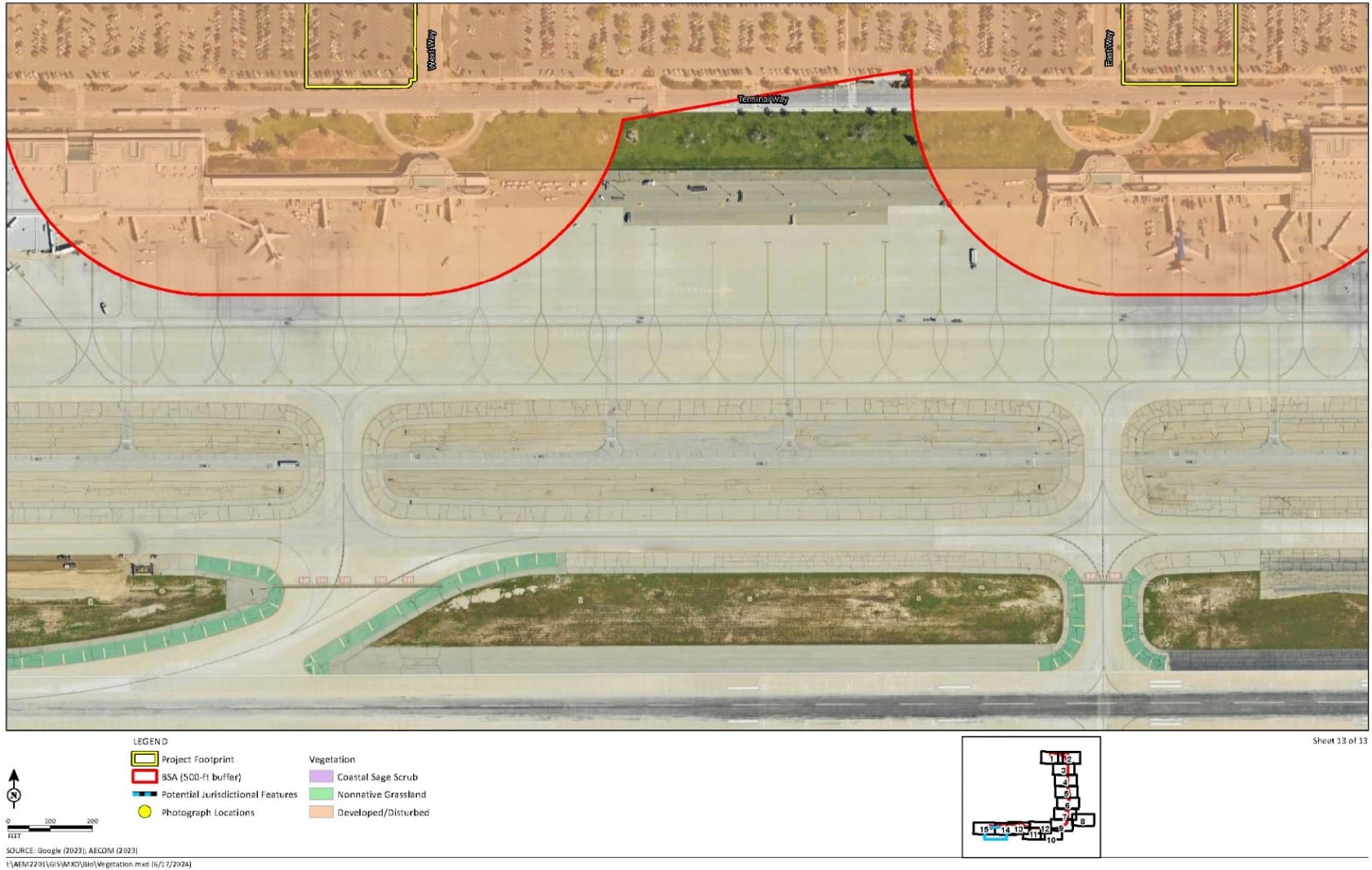


Figure 4-2: Vegetation and Potential Jurisdictional Features (Page 13 of 13)





- Coastal Sage Scrub: Areas classified as CSS were composed of native drought-deciduous shrubs forming a dense but patchy matrix, frequently interspersed ornamental shrubs, and native and nonnative annuals. CSS was encountered on disturbed and revegetated slopes located on the western side of Milliken Road, south of I-10. Characteristic species included rubber rabbitbrush (*Ericameria nauseosa*), California buckwheat (*Eriogonum fasciculatum*), and California sagebrush (*Artemisia californica*).
- Nonnative Annual Grassland: Areas classified as nonnative annual grassland are dominated by annual grasses that are primarily Mediterranean in origin. Dominant plant species include ripgut grass (*Bromus diandrus*), wild oat (*Avena fatua*), and mouse barley (*Hordeum murinum*). Many species of native forbs and bulbs, as well as naturalized annual forbs, are found in annual grassland, such as shortpod mustard (*Hirschfeldia incana*). Nonnative annual grasslands are located along the road shoulders and in areas of high disturbance (i.e., former golf course) within the BSA.
- Developed/Disturbed: Areas classified as developed/disturbed consist of buildings, roadways, and other paved areas that contain ornamental landscaping. These developed/disturbed areas are regularly disturbed by anthropogenic uses and contain patches of areas with bare ground and ruderal/weedy vegetation cover.

#### 4.1.3.2 Animal Species

Most animal species observed within the BSA during the September 2022 field surveys are characteristic of those found throughout most of Southern California and include 44 invertebrate species, 2 reptile species, 13 bird species, and 3 mammal species (a complete list of observed or otherwise detected animal species is provided in Appendix B, Plant and Animal Species Observed). No special-status animal species were observed during the field survey.

#### 4.1.3.3 Aquatic Resources

Delineated aquatic resources within the BSA include two concrete-lined drainage channels, one cobble ditch, and two earthen channels that are potentially jurisdictional features within the BSA, as shown on Figure 4-2.

Features 1 and 2 are concrete-lined channels, Feature 4 is a cobble ditch, and Features 3 and 5 are earthen drainages. Features 2 and 5 could be considered nonwetland waters of the United States, as these features have connection to traditionally navigable waters. Therefore, Features 2 and 5 could also be subject to jurisdiction by the CDFW under Section 1600 of the California Fish and Game Code and by the RWQCB under Section 401 of the CWA as well as under the Porter-Cologne Act. Features 1, 3, and 4 would be considered nonjurisdictional drainage features because they were excavated on dry lands and are shallow features that convey ephemeral stormwater runoff into the storm drain system from surrounding

(developed) upland areas. Section 6.1.2 provides further information regarding these delineated potentially jurisdictional features. These drainage features do not support aquatic plants. In addition, aquatic animals requiring perennial water flows (e.g., fish) are not supported by the drainage features within the BSA. These features may, however, support common amphibian species such as the western toad (*Anaxyrus boreas*).

#### 4.1.4 Habitat Connectivity

Wildlife movement within the BSA is limited to those species that occupy urban landscapes. Vegetated areas within the BSA have no connections to contiguous undeveloped lands or open space areas. The BSA does contain a natural vegetation community, CSS; however, this community is surrounded by development and roads with no connection to open space. No other natural vegetation communities, riparian vegetation, or other commonly utilized corridors for wildlife movement occur within the BSA. The BSA does not correspond to any natural landscape blocks or essential connectivity areas as documented in the California Essential Habitat Connectivity Project report (Spencer et al. 2010).

## 4.2 REGIONAL SPECIES AND HABITATS AND NATURAL COMMUNITIES OF CONCERN

For the purposes of this Biological Resource Assessment, special-status species are considered to be those listed under FESA and/or CESA, California Fully Protected Species, animal species designated as “California Species of Special Concern” and “California Special Animals” by CDFW, and plant species with a California Rare Plant Rank (CRPR) of 1, 2, or 3. All of the plants constituting CRPRs 1A, 1B, 2A, and 2B are intended to meet the status definitions of “threatened” or “endangered” in CESA and the California Fish and Game Code, and are considered by the California Native Plant Society (CNPS) to be eligible for State listing. At the discretion of the CEQA Lead Agency, impacts to these species may be analyzed as such, pursuant to *State CEQA Guidelines* Sections 15125(c) and 15380. Plants in Rank 3 (limited information; review list), Rank 4 (limited distribution; watch list), or that are considered Locally Unusual and Significant may be analyzed under CEQA if there is sufficient information to assess potential significant impacts. It should also be noted that “California Species of Special Concern” and “California Special Animal” are administrative designations made by the CDFW and carry no formal legal protection status. However, Section 15380 of the *State CEQA Guidelines* indicates that these species should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein. Table 4-2, below, lists special-status species evaluated for potential occurrence in the BSA.

No coastal and marine species were identified in the literature review as potentially occurring within the USGS topographic quadrangle surrounding the BSA (refer to Appendix A, Federal and State Lists of Sensitive Species, for the NOAA Fisheries Species List). Suitable habitat for coastal and marine species are not present within the BSA. Therefore, coastal and marine species will not be affected by the proposed Project.



Table 4-2: Listed, Proposed, and Special-Status Species Potentially Occurring or Known to Occur in the BSA

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Abronia villosa</i> var. <i>aurita</i>	Plants	Chaparral sand-verbena	US: – CA: – CNPS: 1B.1	Annual or perennial herb. Sandy areas (generally flats and benches along washes) in chaparral and CSS, and improbably in desert dunes or other sandy areas, below 1,615 m (5,300 ft) in elevation.	HP	Not Expected. Although CSS is located in the BSA, the CSS is on the slopes of Milliken Avenue and adjacent to commercial development, and the habitat is not located in a sandy, flat, or wash area and is subject to regular disturbance. No chaparral or desert dunes habitat is present in the BSA.
<i>Ambrosia monogyra</i>	Plants	Singlewhorl burrobush	US: – CA: – CNPS: 2B.2	Perennial shrub. Sandy soils in washes and ravines in chaparral and desert scrub below 500 m (1,640 ft) in elevation. In California, known from Riverside, San Bernardino, and San Diego counties. Also occurs in Arizona, New Mexico, Texas, and Mexico.	HA	Absent. No chaparral habitat is present in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Ambrosia pumila</i>	Plants	San Diego ambrosia	US: FE CA: – CNPS: 1B.1	Perennial herb. Occurs in open habitats in coarse substrates near drainages, and in upland areas on clay slopes or on the dry margins of vernal pools. This species occurs in a variety of associations dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. Known populations in Riverside County are associated with silty alkaline soils in open, gently sloped grasslands. Known from western San Diego County, southwestern Riverside County (at Skunk Hollow and north of Lake Elsinore along Nichols Road), and Baja California from 21 to 488 m (70 to 1,600 ft) in elevation.	HA	Absent. No clay soils or vernal pools occur in the BSA.
<i>Aphyllon validum</i> ssp. <i>validum</i>	Plants	Rock Creek broomrape	US: – CA: – CNPS: 1B	Parasitic on various chaparral shrubs. Found in granitic soils of chaparral, pinyon-juniper woodland at 1,250 to 2,000 meters (4,100 to 6,600 ft) elevation. Known only from Inyo, Los Angeles, San Bernardino and Ventura Counties, California.	HA	Absent. No chaparral or pinyon-juniper woodland occur in the BSA.
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	Plants	San Gabriel manzanita	US: – CA: – CNPS: 1B.1	Evergreen shrub. Rocky areas in chaparral from 595 to 1,500 m (1,950 to 5,000 ft) in elevation. Known only from Los Angeles, Santa Barbara, and San Bernardino counties, California.	HA	Absent. No chaparral habitat is present in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Arenaria paludicola</i>	Plants	Marsh sandwort	US: FE CA: CE CNPS: 1B.1	Perennial herb. Boggy areas in freshwater marshes and swamps below 170 m (560 ft) in elevation (formerly higher). Known to presently occur only in San Luis Obispo County (at Oso Flaco Lake and Morro Bay). Believed extirpated from Los Angeles, San Francisco, Santa Cruz, Riverside, and San Bernardino counties and from the State of Washington. The last known record of this species in Riverside, San Bernardino, or Los Angeles counties is from 1900.	HA	Absent. No freshwater marshes or swamps are present in the BSA.
<i>Astragalus brauntonii</i>	Plants	Braunton's milk-vetch	US: FE CA: – CNPS: 1B.1	Perennial herb. Generally shallow calcium carbonate soils derived from marine substrates, although it is occasionally found downstream of known occurrences on noncarbonate soils, where survivorship of plants may be reduced. Usually on sandstone with carbonate layers following fire but may follow other disturbance and occur on stiff, gravelly clay soils over granite. Typically associated with the fire-dependent chaparral habitat on limestone and on down-wash sites below 640 m (2,100 ft) in elevation. Known only from Los Angeles, Orange, Riverside, and Ventura counties.	HA	Absent. No chaparral or limestone habitat is present in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Atriplex coulteri</i>	Plants	Coulter's saltbush	US: – CA: – CNPS: 1B.2	Perennial herb. Alkaline or clay soils in ocean bluffs and ridge tops and alkaline low places in coastal bluff scrub, coastal dunes, CSS, and valley and foothill grasslands below 460 m (1,500 ft) in elevation. In California, known only from Los Angeles, Orange, Santa Barbara, San Bernardino, San Luis Obispo, Ventura, and San Diego counties. Also occurs in Mexico.	HA	Absent. No ocean bluffs, coastal dunes, or alkaline low places like coastal bluff scrub habitats are present in the BSA.
<i>Berberis nevini</i>	Plants	Nevin's barberry	US: FE CA: CE CNPS: 1B.1	Perennial evergreen shrub. Gravelly wash margins in alluvial scrub or coarse soils and rocky slopes in chaparral at 70 to 825 m (220 to 2,700 ft) in elevation. Known occurrences at higher elevations are planted (not natural). Known only from Los Angeles, San Bernardino, Riverside, and San Diego counties, California.	HA	Absent. No washes, alluvial scrubs, rocky slopes or chaparral habitats are present in the BSA
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Plants	Slender mariposa lily	US: – CA: – CNPS: 1B.2	Perennial bulbiferous herb. Chaparral, CSS, and grassland in the Transverse Ranges at 320 to 1,000 m (1,050 to 3,300 ft) in elevation. Known only from the western transverse ranges and San Gabriel Mountains of Los Angeles and Ventura counties, California.!!	HP	Not Expected. Marginal CSS habitat exists in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the disturbed nature limits the probability of occurrence. This species was not observed during the field surveys.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Calochortus weedii</i> var. <i>intermedius</i>	Plants	Intermediate mariposa lily	US: – CA: – CNPS: 1B.2	Perennial bulbiferous herb. Occurs in chaparral, coastal scrub, and valley and foothill grasslands. Often in dry, rocky soils from 120 to 855 m (395 to 2,805 ft) in elevation. In the western Riverside County area, this species is known from the hills and valleys west of Lake Skinner and Vail Lake (The Vascular Plants of Western Riverside County, California, F.M. Roberts et al., 2004). Appears to intergrade with <i>Calochortus plummerae</i> , which is mostly east and north of the Santa Ana Mountains.	HP	Not Expected. Marginal CSS habitat exists in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the disturbed nature limits the probability of occurrence. This species was not observed during the field surveys.
<i>Calystegia felix</i>	Plants	Lucky morning-glory	US: – CA: – CNPS: 1B.1	Annual rhizomatous herb. Wetland and marshy areas, sometimes alkaline, sometimes artificially watered, from 30 to 215 m (100 to 700 ft) in elevation. All of the known extant occurrences are associated with well-watered landscaping on recently completed industrial, commercial, and residential developments in the city of Chino within a historical area of artesian springs. Older collections are from areas that are now heavily urbanized (including one from South Los Angeles and another from Pico Rivera in Los Angeles County). Known to occur only in western San Bernardino County. Presumed extirpated from Riverside and Los Angeles counties.	HA	Absent. No wetlands or marshy areas occur in the BSA.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Calystegia sepium</i> ssp. <i>binghamiae</i>	Plants	Santa Barbara morning-glory	US: – CA: – CNPS: 1A	Annual rhizomatous herb. Coastal marshes below 220 m (720 ft) in elevation. In California, known only from San Bernardino and Orange counties. Believed extirpated from Los Angeles and Santa Barbara counties. Presumed extinct from 1999 until rediscovered near entrance to Chaffey College in Chino in 2011.	HA	Absent. No coastal marshes occur in the BSA.
<i>Camissoniopsis lewisii</i>	Plants	Lewis' evening-primrose	US: – CA: – CNPS: 3	Annual herb. Sandy or clay areas in CSS, grassland, and woodland below 300 m (1,000 ft) in elevation. In California, known only from Los Angeles and San Diego counties. Believed extirpated from Orange County. Also occurs in Mexico.	HP	Not Expected. No clay soils occur in the BSA.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	Plants	Smooth tarplant	US: – CA: – CNPS: 1B.1	Annual herb. Occurs in alkaline areas in chenopod scrub, meadows, playas, riparian woodland, valley, and foothill grassland below 488 m (1,600 ft) in elevation.	HA	Absent. No vernal pools, playas, freshwater marshes, or similar habitats occur in the BSA.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Plants	Salt marsh bird's-beak	US: FE CA: CE CNPS: 1B.1	Annual herb. Coastal dunes and salt marshes. In California, known from Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura counties.	HA	Absent. No coastal dunes or salt marshes occur in the BSA.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Plants	Parry's spineflower	US: – CA: – CNPS: 1B.1	Annual herb. Sandy or rocky soils in chaparral, CSS, oak woodlands, and grassland at 30 to 1,707 m (100 to 5,600 ft) in elevation.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the habitat is limited and disturbed, reducing the probability of occurrence. This species was not observed during the field surveys.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Plants	White-bracted spineflower	US: – CA: – CNPS: 1B.2	Annual herb. Coastal scrub, Mojavean desert scrub and pinyon/juniper woodlands. Riverside, San Bernadino and San Diego counties.	HA	Absent. No clay soils occur in the BSA.
<i>Cladium californicum</i>	Plants	California saw-grass	US: – CA: – CNPS: 2B.2	Perennial rhizomatous herb. Marshes and seeps below 600 m (2,000 ft) in elevation. In California, known from Inyo, Riverside, Santa Barbara, San Bernardino and San Luis Obispo counties. Believed to be extirpated from Los Angeles and perhaps San Bernardino counties. Also occurs in Arizona, New Mexico, Nevada, Texas Utah, and Mexico.	HA	Absent. No marshes or seeps occur in the BSA.
<i>Claytonia peirsonii</i> ssp. <i>peirsonii</i>	Plants	Peirson's spring beauty	US: – CA: – CNPS: 1B.2	Perennial herb. This subspecies known only from San Bernardino County in subalpine and upper montane coniferous forest of the San Gabriel Mountains; gravelly soils or scree; elevations of 2,135 to 2,750 m (7,000 to 9,000 ft). Occurs in San Bernardino County.	HA	Absent. No suitable habitat for this species is present in the BSA, and the BSA is outside the elevational range of this species.
<i>Cryptantha incana</i>	Plants	Tulare cryptantha	US: – CA: – CNPS: 1B.3	Annual herb. Occurs in lower montane coniferous forest between 1,430 and 2,150 m (4,690 and 7,055 ft) in elevation.	HA	Absent. No suitable habitat for this species is present in the BSA, and the BSA is outside the elevational range of this species.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Dodecahema leptoceras</i>	Plants	Slender-horned spineflower	US: FE CA: SE CNPS: 1B.1	Annual herb. Occurs in sandy, cobbly riverbed alluvium in alluvial fan sage scrub (usually late seral stage), on floodplain terraces and benches that receive infrequent overbank deposits from generally large washes or rivers. Additionally, it is most often found in shallow, silty depressions dominated by leather spineflower ( <i>Lastarriaea coriacea</i> ) and other native annual species and is often associated with cryptogamic soil crusts composed of bryophytes, algae, and/or lichens. Occurs at 183 to 762 m (600 to 2,500 ft) in elevation.	HA	Absent. No alluvial fan sage scrub on floodplain terraces and benches occurs in the BSA.
<i>Dudleya multicaulis</i>	Plants	Many-stemmed dudleya	US: – CA: – CNPS: 1B.2	Perennial herb. Occurs in chaparral, CSS, and valley and foothill grasslands, usually in heavy, often clay soils. From 14 to 722 m (45 to 2,370 ft) in elevation.	HP	Not Expected. No clay soils occur in the BSA.
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Plants	Santa Ana River woollystar	US: FE CA: SE CNPS: 1B.1	Perennial herb. Riversidean alluvial fan sage scrub and chaparral in sandy or gravelly soils of floodplains and terraced fluvial deposits of the Santa Ana River and larger tributaries (Lytle and Cajon creeks, and lower portions of City and Mill creeks) at 90 to 625 m (300 to 2,100 ft) in elevation in San Bernardino and Riverside counties. Presumed extirpated from Orange County.	HA	Absent. No alluvial fan sage scrub and chaparral occur in the BSA.
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Plants	Johnston's buckwheat	US: – CA: – CNPS: 1B.3	Perennial deciduous shrub. Upper montane and subalpine coniferous forest of the San Gabriel Mountains; 1,800 to 2,900 m (5,900 to 9,500 ft) in elevation.	HA	Absent. No suitable habitat for this species is present in the BSA, and the BSA is outside the elevational range of this species.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Horkelia cuneata</i> var. <i>puberula</i>	Plants	Mesa horkelia	US: – CA: – CNPS: 1B.1	Perennial herb. Sandy or gravelly soils in chaparral, or rarely in cismontane woodland or CSS at 70 to 825 m (200 to 2,700 ft) in elevation. Known only from San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Bernardino counties, California. Believed extirpated from Riverside and San Diego counties.	HP	Not Expected. Marginal CSS habitat exists in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the disturbed nature limits the probability of occurrence. This species was not observed during the field surveys.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Plants	Coulter's goldfields	US: – CA: – CNPS: 1B.1	Annual herb. Vernal pools and alkaline soils in marshes, playas, and similar habitats below 1,219 m (4,000 ft) in elevation.	HA	Absent. No vernal pools or similar habitats occur in the BSA.
<i>Lilium parryi</i>	Plants	Lemon lily	US: – CA: – CNPS: 1B.2	Perennial herb. Bulbiferous perennial herb of wet areas in meadows and riparian and montane coniferous forests at 1,219 to 2,804 m (4,000 to 9,200 ft) in elevation.	HA	Absent. No suitable habitat is present, and the BSA is outside the elevational range of this species.
<i>Linanthus concinnus</i>	Plants	San Gabriel linanthus	US: – CA: – CNPS: 1B.2	Annual herb. Dry rocky slopes in lower and upper montane coniferous forest at 1,520 to 2,800 m (5,000 to 9,200 ft) in elevation; known only from Los Angeles and San Bernardino counties.	HA	Absent. No lower and upper montane coniferous forest is present in the BSA, and the BSA is outside the elevation range of this species.
<i>Lycium parishii</i>	Plants	Parish's desert-thorn	US: – CA: – CNPS: 2B.3	Perennial shrub. Coastal scrub and Sonoran desert scrub at 135 to 1,000 m (440 to 3,300 ft) in elevation. In California, known from Imperial and San Diego counties. Report from Riverside County is based on a misidentification. Known only historically from San Bernardino County (benches and/or foothills north of San Bernardino).	HA	Absent. Considered absent from the BSA. This species is outside the known range of this species.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Malacothamnus parishii</i>	Plants	Parish's bush-mallow	US: – CA: – CNPS: 1A	Perennial deciduous shrub. Known only from one occurrence in 1895, in chaparral and CSS at 490 m (1,600 ft) in elevation in the vicinity of San Bernardino. Presumed extinct.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the habitat is limited and disturbed, reducing the probability of occurrence. This species was not observed during the field surveys.
<i>Monardella australis</i> ssp. <i>jokerstii</i>	Plants	Jokerst's monardella	US: – CA: – CNPS: 1B.1	Perennial rhizomatous herb. Steep scree or talus slopes between breccia and secondary alluvial benches along drainages and washes, in lower montane coniferous forest and chaparral at 1,350 to 1,750 m (4,430 to 5,740 ft). Known only from the San Gabriel Mountains of San Bernardino County, California.	HA	Absent. No alluvial benches occur in the BSA.
<i>Monardella brewerii</i> ssp. <i>glandulifera</i>	Plants	Monardella brewerii ssp. glandulifera	US: – CA: – CNPS: 1B.2	Annual herb. Dry, grassy openings, ridgetops, in lower montane coniferous forest and chaparral 500-2,000 m (1,640 to 6,560 ft). Known only from the San Gabriel Mountains of San Bernardino County, California.	HA	Absent. No grassy openings in lower montane coniferous forest and chaparral slopes occur in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Plants	Hall's monardella	US: – CA: – CNPS: 1B.3	Perennial rhizomatous herb. Dry slopes and ridges in openings in chaparral, woodland, and forest at 695 to 2,195 m (2,280 to 7,200 ft) in elevation. Known only from Los Angeles, San Diego, Orange, Riverside, and San Bernardino counties, California. In the western Riverside County area, known only from higher elevations in the Santa Ana and Agua Tibia Mountains (The Vascular Plants of Western Riverside County, California, F.M. Roberts et al., 2004).	HA	Absent. No slopes, ridges, or chaparral occur in the BSA.
<i>Monardella pringlei</i>	Plants	Pringle's monardella	US: – CA: – CNPS: 1A	Annual herb. Sandy hills in CSS at 300 to 400 m (980 to 1,300 ft) in elevation. Known only from two occurrences west of Colton. Last seen in 1941. Habitat lost to urbanization. Presumed extinct.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development. However, the habitat is limited and disturbed, reducing the probability of occurrence. This species is considered extirpated in San Bernardino County. This species was not observed during the field surveys.
<i>Muhlenbergia utilis</i>	Plants	Aparejo grass	US: – CA: – CNPS: 2B.2	Perennial rhizomatous herb. Wet sites along streams and ponds within meadows, CSS, chaparral, and cismountain woodland below 2,325 m (7,627 ft) in elevation. In California, known from Inyo, Kern, Monterey, San Bernardino, San Luis Obispo, Santa Barbara, and Ventura counties. Also occurs in Arizona, Nevada, New Mexico, and Mexico.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development. However, the habitat is limited and disturbed, reducing the probability of occurrence. This species was not observed during the field surveys.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Navarretia prostrata</i>	Plants	Prostrate vernal pool navarretia	US: – CA: – CNPS: 1B.1	Perennial rhizomatous herb. Marshes from 6 to 335 m (20 to 1,100 ft) in elevation.	HA	Absent. No marshes occur in the BSA.
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	Plants	Short-joint beavertail	US: – CA: – CNPS: 1B.2	Perennial stem. Sandy soil or coarse, granitic loam in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland at 425 to 1,800 m (1,400 to 5,900 ft) n elevation in the Providence Mountains and desert slopes of the San Gabriel and San Bernardino Mountains. Known only from Los Angeles and San Bernardino counties, California.	HA	Absent. No clay soils, vernal pools, or alkaline soil occur in the BSA.
<i>Oreonana vestita</i>	Plants	Woolly mountain-parsley	US: – CA: – CNPS: 1B.3	Perennial herb. Scree, talus, or gravel on high ridges in subalpine coniferous forest and upper montane coniferous forest at 1,615 to 3,500 m (5,300 to 11,500 ft) in elevation. Known only from Kern, Los Angeles, and San Bernardino counties, California.	HA	Absent. No suitable habitat is present, and the BSA is outside the elevational range of this species.
<i>Orobanche valida</i> ssp. <i>valida</i>	Plants	Rock Creek broomrape	US: – CA: – CNPS: 1B.2	Perennial herb. Parasitic on various chaparral shrubs. Found in granitic soils of chaparral, pinyon-juniper woodland at 1,250 to 2,000 m (4,100 to 6,600 ft) in elevation. Known only from Inyo, Los Angeles, San Bernardino and Ventura counties, California.	HA	Absent. No granitic soils or pinyon juniper woodland occurs in the BSA. The BSA is outside the elevational range of this species.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Phacelia stellaris</i>	Plants	Brand's star phacelia	US: – CA: – CNPS: 1B.1	Annual herb. Dunes and sandy openings in CSS communities at 5 to 400 m (20 to 1,300 ft) in elevation. In western Riverside County, this species appears to be restricted to sandy washes and benches in alluvial floodplains. Known only from Los Angeles (believed extirpated), Riverside, and San Diego counties, California. The most recent record of this species from Los Angeles County was in 1943.	HP	Not Expected. Marginal CSS is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development, but the CSS is not located within a dune or sandy openings. Furthermore, the disturbed nature limits the probability of occurrence. This species was not observed during the field surveys.
<i>Pseudognaphalium leucocephalum</i>	Plants	White rabbit-tobacco	US: – CA: – CNPS: 2B.2	Perennial herb. Sand and gravel at the edges of washes or mouths of steep canyons at 0 to 2,134 m (0 to 7,000 ft) in elevation.	HA	Absent. No sandy gravel or washes occur in the BSA.
<i>Sagittaria sanfordii</i>	Plants	Sanford's arrowhead	US: – CA: – CNPS: 2B.2	Perennial rhizomatous herb. Marshes and swamps below 650 m (2,100 ft) in elevation. Occurs in standing or slow-moving fresh water (ponds, marshes, and ditches). Known only from Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Placer, Sacramento, Shasta, San Joaquin, and Tehama counties. Believed extirpated from Southern California.	HA	Absent. No marshes or swamps occur in the BSA.
<i>Senecio aphanactis</i>	Plants	Chaparral ragwort	US: – CA: – CNPS: 2B.2	Annual herb. Openings (especially alkaline flats) in cismontane woodland, CSS, and chaparral at 15 to 800 m (50 to 2,600 ft) in elevation. Known in California from Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, Santa Barbara, Santa Clara, San Diego, San Luis Obispo, Solano, and Ventura counties. Also occurs in Baja California.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development. However, the habitat is limited and disturbed, reducing the probability of occurrence. This species was not observed during the field surveys.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Sidalceane omexicana</i>	Plants	Salt spring checkerbloom	US: – CA: – CNPS: 2B.2	Perennial herb. Occurs in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas at 15 to 1,530 meters (50 and 5,020 ft) in elevation. Kern, Orange, Riverside, San Bernardino, San Diego, Ventura, and Kern counties.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development. However, the habitat is limited and disturbed, reducing the probability of occurrence. This species was not observed during the field surveys.
<i>Sphenopholis obtusata</i>	Plants	Prairie wedge grass	US: – CA: – CNPS: 2B.2	Perennial herb. Wet meadows, stream banks, and ponds at 300 to 2,000 m (1,000 to 6,600 ft) in elevation. Widely distributed. In Southern California, known only from San Bernardino, Riverside (Santa Ana River), and perhaps San Diego counties.	HA	Absent. No meadows, streams, banks, or ponds occur in the BSA.
<i>Symphotrichum defoliatum</i>	Plants	San Bernardino aster	US: – CA: – CNPS: 1B.2	Perennial herb. Vernal wet sites (such as ditches, streams, and springs) in many plant communities below 2,042 m (6,700 ft) in elevation.	HA	Absent. No vernal wet sites occur in the BSA.
<i>Symphotrichum greatae</i>	Plants	Greata's aster	US: – CA: – CNPS: 1B.3	Perennial rhizomatous herb. Mesic places in canyons in chaparral and woodland habitats at 300 to 2,010 m (1,000 to 6,600 ft) in elevation. Known only from Los Angeles, San Bernardino, and Ventura counties.	HA	Absent. No canyons, chaparral or woodlands occur in the BSA.
<i>Thysanocarpus rigidus</i>	Plants	Rigid fringepod	US: – CA: – CNPS: 1B.2	Annual herb. Dry rocky slopes, in oak, pine, or juniper woodland at 600 to 2,200 m (2,000 to 7,200 ft) in elevation. In California, known from Los Angeles, Riverside, San Bernardino, and San Diego counties. Also occurs in Mexico.	HA	Absent. No suitable habitat is present, and the BSA is outside the elevational range of this species.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Viola pinetorum</i> ssp. <i>grisea</i>	Plants	Grey-leaved violet	US: – CA: – CNPS: 1B.2	Perennial herb. Dry mountain peaks and slopes in meadows and upper montane and subalpine coniferous forest at 1,500 to 3,400 m (5,000 to 11,000 ft) in elevation. Known only from Fresno, Inyo, Kern, Los Angeles, Madera, San Bernardino, Tulare, and Ventura counties, California.	HA	Absent. No suitable habitat is present, and the BSA is outside the elevational range of this species.
<i>Bombus crotchii</i>	Invertebrates	Crotch's bumble bee	US: – CA: SA	Inhabits open grassland and scrub habitats primarily in California. Food plant genera include snapdragons ( <i>Antirrhinum</i> spp.), <i>Phacelia</i> spp., <i>Clarkia</i> spp., <i>Dendromecon</i> spp., <i>Eschscholzia</i> spp., and buckwheat ( <i>Eriogonum</i> spp.).	HP	Low Probability of Occurrence. The species is known to occur in the vicinity of the BSA, but it was not observed in the BSA during the 2021 focused survey for this species.
<i>Bombus pensylvanicus</i>	Invertebrates	American bumble bee	US: – CA: SA	Inhabits open farmland and fields throughout the U.S. Also occurs in Canada and Mexico. Primarily nests at the ground surface in tall grass, but occasionally underground. Suitable bumble bee habitat requires the continuous availability of flowers on which to forage throughout the duration of the colony (spring through fall), colony nest sites, and overwintering sites for the queens.	HP	Low Probability of Occurrence. Open fields occur in the vicinity of the BSA, but it was not observed in the BSA during the 2021 focused survey for this species.
<i>Danaus plexippus</i> plexippus pop. 1	Invertebrates	Monarch butterfly (California overwintering population)	US: FC CA: SA	Winter roosts are located in wind-protected tree groves (Eucalyptus, Monterey Pine, Cypress) with nectar and water sources nearby.	HA	Absent: No tree groves suitable for an overwintering population.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Euphydrys editha quino</i>	Invertebrates	Quino checkerspot	US: FE CA: –	Historically occupied open grassy sites from the vicinity of Los Angeles and Riverside south to northern Baja California, always in the vicinity of the larval food plants, California plantain ( <i>Plantago erecta</i> ) and purple owl's-clover ( <i>Castilleja exserta</i> ). In California, the species is now known from a few sites in San Diego and western Riverside counties.	HA	Absent. The BSA is outside the known range of this species.
<i>Rhaphiomidas terminatus abdominalis</i>	Invertebrates	Delhi Sands flower-loving fly	US: FE CA: –	Open, sandy (Delhi) dune areas commonly supporting buckwheat, croton, telegraph weed, Camissonia, and Oenothera.	HP	Low Probability of Occurrence. Delhi soils are present in the BSA but are heavily affected by surrounding development and land uses (e.g., weed abatement practices). Marginal CSS and grassland habitats are present in the BSA. However, the habitat is limited and disturbed, reducing the probability of occurrence. No Delhi Sands flower-loving fly was observed during the focused 2021 survey.
<i>Catostomus santaanae</i>	Fish	Santa Ana sucker	US: FE CA: –	The Santa Ana sucker's historical range includes the Los Angeles, San Gabriel, and Santa Ana River drainage systems in Southern California. An introduced population also occurs in the Santa Clara River drainage system in Southern California. Found in shallow, cool, running water.	HA	Absent. No suitable aquatic habitat for this species is present in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Gila orcuttii</i>	Fish	Arroyo chub	US: – CA: SSC	Perennial streams or intermittent streams with permanent pools, and slow-water sections of streams with mud or sand substrates. Spawning occurs in pools. Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita River systems; introduced in Santa Ynez, Santa Maria, Cuyama, and Mojave River systems and smaller coastal streams.	HA	Absent. No suitable aquatic habitat for this species is present in the BSA.
<i>Oncorhynchus mykiss irideus</i>	Fish	Southern California steelhead DPS	US: FE CA: SA	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	HA	Absent. No suitable aquatic habitat for this species is present in the BSA.
<i>Rhinichthys osculus</i> ssp. 8	Fish	Santa Ana speckled dace	US: – CA: SSC	Found in the headwaters of the Santa Ana and San Gabriel River drainages. Found in riffles in small streams and shore areas with abundant gravel and rock.	HA	Absent. No suitable aquatic habitat for this species is present in the BSA.
<i>Anaxyrus californicus</i>	Amphibians	Arroyo toad	US: FE CA: SSC	Washes and arroyos with open water, sand, or gravel beds for breeding, pools with as well as sparse overstory vegetation. Coastal and a few desert streams from Santa Barbara County to Baja California.	HA	Absent. The BSA does not contain adequate water for breeding pools or suitable aquatic habitat.
<i>Rana boylei</i>	Amphibians	Foothill yellow-legged frog	US: – CA: SE	Partly shaded, shallow streams and riffles with a rocky (at least some cobble-sized) substrate for egg-laying, and with water for at least 15 weeks until metamorphosis. Historically occurred in much of Northern and Central California, south along the western foothills of the Sierra Nevada to the edge of the Tehachapi Mountains, and south along the coast ranges to the San Gabriel Mountains (south to the San Gabriel River) in Los Angeles County.	HA	Absent. No suitable habitat for this species is present in the BSA.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Rana muscosa</i>	Amphibians	Southern mountain yellow-legged frog	US: FE CA: SE	Ponds, lakes, and streams at moderate to high elevations; appears to prefer bodies of water with open margins and a gently sloping bottom. Transverse Ranges in Southern California from 370 to 2,290 m (1,200 to 7,500 ft) in elevation. Restricted to streams in ponderosa pine, montane hardwood-conifer, and montane riparian habitats.	HA	Absent. No ponds, lakes, or streams occur in the BSA.
<i>Spea hammondi</i>	Amphibians	Western spadefoot	US: PT CA: SSC	Grasslands and occasionally hardwood woodlands; largely terrestrial but requires rain pools or other ponded water persisting at least 3 weeks for breeding; burrows in loose soils during the dry season. Occurs in the Central Valley and adjacent foothills, the nondesert areas of Southern California, and Baja California.	HA	Absent. The BSA does not contain adequate water for breeding pools or woodlands.
<i>Taricha torosa</i>	Amphibians	Coast range newt	US: – CA: SSC	Breeds in ponds, reservoirs, and slow-moving streams with long-lasting (at least through July), clean water; uses nearby upland areas including grassland, chaparral, and woodland; coastal drainages from Mendocino County south to San Diego County, with populations from San Luis Obispo County south designated as sensitive.	HA	Absent. No ponds, reservoirs, or slow-moving streams are present in the BSA.
<i>Anniella stebbinsi</i>	Reptiles	Southern California legless lizard	US: – CA: SSC	Inhabits coastal dunes, sandy washes, and alluvial fans where there is moist loose soil with sufficient plant cover and/or leaf litter.	HA	Absent. No coastal dunes, sandy washes or alluvial fans occur within the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Arizona elegans occidentalis</i>	Reptiles	California glossy snake	US: – CA: SSC	Found in a wide variety of habitat types, including open desert, grassland, shrublands, chaparrals, and woodlands. Records show that this species occurs in relatively open patches in a surrounding matrix of denser vegetation.	HP	Not Expected. Marginal CSS and grassland habitats are present in the BSA. However, the habitat is limited and disturbed, reducing the probability of occurrence.
<i>Aspidoscelis hyperythra</i>	Reptiles	Orange-throated whiptail	US: – CA: SA	Prefers washes and other sandy areas with patches of brush and rocks, in chaparral, CSS, juniper woodland, and oak woodland from sea level to 914 m (3,000 ft) in elevation. Perennial plants required.	HP	Low Probability of Occurrence. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the CSS is not within a wash or sandy area. Furthermore, the habitat is limited and disturbed, reducing the probability of occurrence.
<i>Aspidoscelis tigris stejnegeri</i>	Reptiles	Coastal whiptail	US: – CA: SSC	Found in a wide variety of habitats including CSS, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.	HP	Low Probability of Occurrence. Marginal CSS and grassland habitats are present in the BSA. However, the habitat is limited and disturbed, reducing the probability of occurrence.
<i>Coleonyx variegatus abbotti</i>	Reptiles	San diego banded gecko	US: – CA: SSC	Often associated with rocks. Found in CSS and chaparral, most often on granite or rocky outcrops in these habitats, from interior Ventura County south.	HA	Not Expected. Marginal CSS is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development, but does not contain rocks, granite or rock outcrops.
<i>Crotalus ruber</i>	Reptiles	Red-diamond rattlesnake	US: – CA: SSC	Desert scrub, thornscrub, open chaparral and woodland; occasional in grassland and cultivated areas. Prefers rocky areas and dense vegetation. Morongo Valley in San Bernardino and Riverside counties to the west and south into Mexico.	HP	Low Probability of Occurrence. Marginal CSS and grassland habitats are present in the BSA. However, the habitat is limited and disturbed, reducing the probability of occurrence.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Emys marmorata</i> ( <i>Actinemys</i> ) <i>marmorata</i>	Reptiles	Western pond turtle	US: – CA: SSC	Inhabits permanent or nearly permanent water. Absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Requires basking sites such as partially submerged logs, rocks, or open mud banks.	HA	Absent. No permanent aquatic habitat is present in the BSA.
<i>Phrynosoma blainvillii</i>	Reptiles	Coast horned lizard	US: – CA: SSC	Primarily in sandy soil in open areas, especially washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs west of the deserts from northern Baja California north to Shasta County below 2,438 m (8,000 ft) in elevation.	HP	Low Probability of Occurrence. Marginal CSS and grassland habitats are present in the BSA. However, the habitat is limited and disturbed, reducing the probability of occurrence.
<i>Thamnophis hammondi</i>	Reptiles	Two-striped garter snake	US: – CA: SSC	Highly aquatic. Only in or near permanent sources of water. Streams with rocky beds supporting willows or other riparian vegetation. From Monterey County to northwest Baja California.	HA	Absent. No permanent aquatic habitat is present in the BSA.
<i>Accipiter cooperii</i> (nesting)	Birds	Cooper’s hawk	US: – CA: SA (breeding)	Forages in a wide range of habitats, but primarily in forests and woodlands. These include natural areas as well as human-created habitats, such as plantations and ornamental trees in urban landscapes. Usually nests in tall trees (6 to 12 m [20 to 60 ft]) in extensive forested areas (generally woodlots of 4 to 8 hectares [10 to 20 acres] with canopy closure of greater than 60 percent). Occasionally nests in isolated trees in more open areas.	HP	Low to Moderate Probability of Nesting. Suitable nesting and foraging habitat is present in ornamental landscaping in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/ Absent	Rationale
<i>Agelaius tricolor</i>	Birds	Tricolored blackbird	US: – CA: ST	Open country. Forages in grassland and cropland habitats. Nests in large groups near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, or tall herbs. Seeks cover for roosting in emergent wetland vegetation, especially cattails and tules, and also in trees and shrubs. Occurs in western Oregon, California, and northwestern Baja California.	HA	Absent. No freshwater or emergent wetland vegetation is present.
<i>Aimophila ruficeps canescens</i>	Birds	Southern California rufous-crowned sparrow	US: – CA: SA	Steep, rocky, CSS and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.	HP	Nesting Not Expected. Marginal CSS and grassland habitats are present in the BSA. The CSS on the slopes of Milliken Avenue and adjacent to commercial development is not located in a steep, rocky area or mixed with grasslands. Furthermore, the habitat is limited and disturbed, reducing the probability of occurrence.
<i>Ammodramus savannarum</i>	Birds	Grasshopper sparrow	US: – CA: SSC	Grasslands, agricultural fields, prairie, old fields, and open savanna. Uncommon and very local summer resident on grassy slopes and mesas west of the deserts. Only rarely in migration and in winter. Coastal Southern California.	HP	Low Probability of Foraging and Nesting. Marginal grassland habitat is present in the BSA.
<i>Aquila chrysaetos</i>	Birds	Golden eagle	US: – CA: CFP	Generally open country of the Temperate Zone worldwide. Nests primarily in rugged mountainous country. Uncommon resident in Southern California.	HP	Low Probability of Foraging, Nesting Not Expected. Marginally suitable foraging habitat is present (grasslands) in the BSA. No cliffs or old growth are present in the BSA that provide suitable nesting habitat.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Amphispiza belli</i>	Birds	Bell's sage sparrow	US: – CA: SA	Nests in chaparral dominated by dense stands of chamise. Found in CSS in south of range. Nest located on the ground beneath a shrub or in a shrub 6–18 inches above ground. Territories about 50 yards apart.	HP	Low Probability of Foraging, Nesting Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the CSS present in the BSA lacks dense stands of chamise. This species may forage in the vicinity of BSA, but the BSA lacks suitable nesting characteristics.
<i>Asio otus</i>	Birds	Long eared owl	US: – CA: SSC	Scarce and local in forests and woodlands throughout much of the Northern Hemisphere. Rare resident in coastal Southern California. Nests and roosts in dense willow-riparian woodland and oak woodland, but forages over wider areas. Breeds from valley foothill hardwood up to ponderosa pine habitat.	HA	Absent. No suitable forest or woodland habitat is present in the BSA.
<i>Athene cunicularia</i> (burrow sites)	Birds	Burrowing owl	US: – CA: SSC (breeding)	Open country in much of North and South America. Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and rangelands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes human-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. Avoids thick, tall vegetation; brush; and trees, but may occur in areas where brush or tree cover is less than 30 percent.	HP	High Probability of Occurrence. Suitable foraging habitats and burrows are present in the grassland habitat. Several suitable burrows were observed during the 2021 survey; however, they did not contain signs of occupancy at the time of the survey.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Buteo swainsoni</i>	Birds	Swainson's hawk	US: – CA: ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	HP	Nesting Not Expected, Low Probability of Foraging. Marginally suitable foraging habitat (grassland) is present in the BSA. The BSA lacks suitable nesting sites.
<i>Campylorhynchus brunneicapillus sandiegensis</i>	Birds	Coastal cactus wren	US: – CA: SSC	Inhabits CSS, nesting almost exclusively in thickets of cholla ( <i>Opuntia prolifera</i> ) and prickly pear ( <i>Opuntia littoralis</i> and <i>Opuntia oricola</i> ), typically below 150 m (500 ft) in elevation. Found in coastal areas of Orange County and San Diego counties, and extreme northwestern Baja California, Mexico.	HP	Nesting and Foraging Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the CSS does not contain thickets of cholla or prickly pear. Furthermore, the CSS is limited and disturbed, reducing the probability of occurrence.
<i>Coccyzus americanus occidentalis</i>	Birds	Western yellow-billed cuckoo	US: FT CA: SE	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	Absent. No dense riparian habitat is present in the BSA. No suitable foraging and nesting habitat is present in the BSA.
<i>Coturnicops noveboracensis</i>	Birds	Yellow rail	US: – CA: SSC	Inhabits freshwater marshes as a very local breeder in the northeastern interior of California and as a winter visitor (early October to mid-April) on the coast and in the Suisun Marsh region.	HA	Absent. No freshwater marshes are present in the BSA. No suitable foraging and nesting habitat is present in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Cypseloides niger</i>	Birds	Black swift	US: – CA: SSC	Most frequently seen in the air feeding on tiny airborne insects. Usually seen near cliffs in mountainous regions; occasionally coastal. Nests in crevices in deep canyon cliffs near waterfalls or in sea cliffs. In California, breeds very locally in the Sierra Nevada and Cascade Range; the San Gabriel, San Bernardino, and San Jacinto Mountains; and coastal bluffs and mountains from San Mateo County south to probably San Luis Obispo County.	HA	Absent. No suitable foraging and nesting habitat is present in the BSA.
<i>Elanus leucurus</i> (nesting)	Birds	White-tailed kite	US: – CA: CFP	Typically nests in riparian trees such as oaks, willows, and cottonwoods at low elevations. Forages in open country. Found in South America and in southern areas and along the western coast of North America.	HP	Nesting Not Expected, Low Probability of Foraging. Marginally suitable foraging habitat (grassland) is present in the BSA. Suitable nesting habitat (riparian trees) is not present in the BSA.
<i>Empidonax traillii</i> <i>extimus</i>	Birds	Southwestern willow flycatcher	US: FE CA: SE	Rare and local breeder in extensive riparian areas of dense willows or (rarely) tamarisk, usually with standing water, in the southwestern United States and possibly extreme northwestern Mexico. Winters in Central and South America. Below 1,829 m (6,000 ft) in elevation.	HA	Absent. No riparian habitat is present in the BSA. No suitable foraging and nesting habitat is present in the BSA.
<i>Icteria virens</i> (nesting)	Birds	Yellow-breasted chat	US: – CA: SSC (breeding)	Riparian thickets of willow, brushy tangles near watercourses. Nests in riparian woodland throughout much of western North America. Winters in Central America.	HA	Absent. No riparian habitat is present in the BSA. No suitable foraging and nesting habitat is present in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Laterallus jamaicensis coturniculus</i>	Birds	California black rail	US: – CA: ST, CFP	Requires shallow water in salt marshes, freshwater marshes, wet meadows, or flooded grassy vegetation. Prefers areas of moist soil vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges, with scattered small pools. Known from coastal California, northwestern Baja California, the lower Imperial Valley, and the lower Colorado River of Arizona and California. Now extirpated from virtually all of coastal Southern California.	HA	Absent. No salt marshes, freshwater marshes, wet meadows, or flooded grassy vegetation habitat are present in the BSA.
<i>Polioptila californica</i>	Birds	Coastal California gnatcatcher	US: FT CA: SSC	Inhabits CSS in low-lying foothills and valleys up to about 500 m (1,640 ft) in elevation in cismontane southwestern California and Baja California.	HP	Nesting and Foraging Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the CSS is limited in size and does not contain dense CSS cover that is required for this species.
<i>Setophagia petechia (nesting)</i>	Birds	Yellow warbler	US: – CA: SSC (breeding)	Found in riparian woodland while nesting in the western United States and northwestern Baja California; more widespread in brushy areas and woodlands during migration.	HA	Absent. No riparian woodland habitat is present in the BSA. No suitable foraging and nesting habitat is present in the BSA.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Spinus lawrencei</i>	Birds	Lawrence's goldfinch	US: – CA: SA	Usually inhabits oak woodlands, but also uses chaparral; riparian woodlands; coastal scrub; forests; pinyon-juniper woodlands; plantings of cypress, cedars, or junipers; and tall weedy and adjacent rural residential areas. A water source such as a stream, small lake, or farm pond within 0.5 kilometer (0.3 mile) is probably required. Nests throughout much of the nondesert portion of California and Baja California.	HP	Nesting Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the CSS is limited in size and disturbed, limiting probability of occurrence. May use the BSA during foraging activities.
<i>Vireo bellii pusillus</i>	Birds	Least Bell's vireo	US: FE CA: SE	Found in riparian forests and willow thickets. The most critical structural component of least Bell's vireo habitat in California is a dense shrub layer 0.6 to 3 m (2 to 10 ft) aboveground.	HA	Absent. No riparian forest or willow thickets are present in the BSA. No suitable foraging and nesting habitat is present in the BSA.
<i>Antrozous pallidus</i>	Mammals	Pallid bat	US: – CA: SSC	Most common in open, dry habitats with rocky areas for roosting. Day roosts in caves, crevices, rocky outcrops, tree hollows or crevices, mines, and occasionally buildings, culverts, and bridges. Night roosts may be more open sites, such as porches and open buildings. Grasslands, shrublands, woodlands, and forest in western North America.	HP	Low to Moderate Probability of Roosting. Suitable roosting habitat (palm trees) is present in the BSA.
<i>Chaetodipus fallax</i>	Mammals	Northwestern San Diego pocket mouse	US: – CA: SSC	Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in coastal scrub, chaparral, grasslands, and sagebrush, from Los Angeles County through southwestern San Bernardino, western Riverside, and San Diego counties to northern Baja California.	HP	Low Probability of Occurrence. Marginal grassland habitat is present in the BSA; however, the grasslands are subject to regular disturbance, limiting the probability of occurrence.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Chaetodipus fallax pallidus</i>	Mammals	Pallid San Diego pocket mouse	US: – CA: SSC	Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in desert wash, desert scrub, desert succulent scrub, pinyon-juniper woodlands, etc., in desert border areas of Southern California into Mexico.	HA	Absent. No sandy herbaceous areas, rocks or coarse gravel in desert wash, desert scrub, desert succulent scrub, or pinyon-juniper woodlands occur in the BSA.
<i>Dipodomys merriami parvus</i>	Mammals	San Bernardino kangaroo rat	US: FE CA: SSC	Gravelly and sandy soils of alluvial fans, braided river channels, active channels, and terraces; San Bernardino Valley (San Bernardino County) and San Jacinto Valley (Riverside County). In San Bernardino County, this species occurs primarily in the Santa Ana River and its tributaries north of Interstate 10, with small remnant populations in the Etiwanda alluvial fan, the northern portion of the Jurupa Mountains in the south Bloomington area, and Reche Canyon. In Riverside County, this species occurs along the San Jacinto River east of approximately Sanderson Avenue, and along Bautista Creek. Remnant populations may also occur within Riverside County in Reche Canyon, San Timoteo Canyon, Laborde Canyon, the Jurupa Mountains, and the Santa Ana River Wash north of State Route 60.	HA	Absent. No alluvial fans, braided river channels, or terraces occur in the BSA.

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Dipodomys stephensi</i>	Mammals	Stephens' kangaroo rat	US: FE CA: ST	Found in plant communities transitional between grassland and CSS, with perennial vegetation cover of less than 50 percent. Most commonly associated with <i>Artemisia tridentata</i> , <i>Eriogonum fasciculatum</i> , and <i>Erodium</i> sp. Requires well-drained soils with compaction characteristics suitable for burrow construction (neither sandy nor too hard). Not found in soils that are highly rocky or sandy, less than 20 inches deep, or heavily alkaline or clay, or in areas exceeding 25 percent slope. Occurs only in western Riverside County, northern San Diego County, and extreme southern San Bernardino County, below 914 m (3,000 ft) in elevation. In northwestern Riverside County, known only from east of Interstate 15. Reaches its northwest limit in south Norco, southeast Riverside, and in the Reche Canyon area of Riverside and extreme southern San Bernardino counties.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the CSS is on the slopes of Milliken Avenue and adjacent to commercial development. The area is not located in a transitional plant community.
<i>Eumops perotis californicus</i>	Mammals	Western mastiff bat	US: – CA: SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels. Has also been documented roosting in palm trees. Travels widely when foraging.	HP	Low to Moderate Probability of Roosting. Suitable roosting habitat (palm trees) is present in the BSA.
<i>Lasiurus cinereus</i>	Mammals	Hoary bat	US: – CA: SSC	Forages over a wide range of habitats but prefers open habitats with access to trees for roosting, and water. Ranges throughout most of California.	HP	Low to Moderate Probability of Roosting. Suitable roosting habitat (palm trees) is present in the BSA

Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Lasiurus xanthinus</i>	Mammals	Western yellow bat	US: – CA: SSC	Found mostly in desert and desert riparian areas of the southwest United States but is also expanding its range with the increased usage of native and nonnative ornamental palms in landscaping. Individuals typically roost amid dead fronds of palms in desert oases but has also been documented roosting in cottonwood trees. Forages over many habitats.	HP	Low to Moderate Probability of Roosting. Suitable roosting habitat (palm trees) is present in the BSA
<i>Lepus californicus bennettii</i>	Mammals	San Diego black-tailed jackrabbit	US: – CA: SSC	Found in a variety of habitats, including herbaceous and desert scrub areas, early stages of open forest, and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of Southern California, extending from the coast to the Santa Monica, San Gabriel, San Bernardino, and Santa Rosa mountain ranges.	HA	Absent. No desert scrub, open forest, or chaparral habitat occur in the BSA.
<i>Neotoma lepida intermedia</i>	Mammals	San Diego desert woodrat	US: – CA: SSC	Found in desert scrub and CSS habitat, especially in association with cactus patches. Builds stick nests around cacti or on rocky crevices. Occurs along the Pacific slope from San Luis Obispo County to northwest Baja California.	HP	Not Expected. Marginal CSS habitat is present in the BSA on the slopes of Milliken Avenue and adjacent to commercial development; however, the habitat lacks cactus and rock crevices. The habitat is limited in size and disturbed, reducing the probability of occurrence.
<i>Nyctinomops femorosaccus</i>	Mammals	Pocketed free-tailed bat	US: – CA: SSC	Usually associated with cliffs, rock outcrops, or slopes. May roost in buildings (including roof tiles) or caves. Rare in California, where it is found in Riverside, San Diego, Imperial, and possibly Los Angeles counties. More common in Mexico.	HA	Absent. No cliffs or rock outcrops occur in the BSA.



Species Scientific Name	Species Type	Species Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Nyctinomops macrotis</i>	Mammals	Big free-tailed bat	US: – CA: SSC	Inhabits rugged, rocky canyon country in southwestern United States. Found from northern South America and the Caribbean Islands northward to the western United States. In the southwestern United States, populations appear to be scattered.	HA	Absent. No rocky canyons occur in the BSA.
<i>Perognathus longimembris brevinasus</i>	Mammals	Los Angeles pocket mouse	US: – CA: SSC	Prefers sandy soil for burrowing but has been found on gravel washes and stony soils. Found in CSS in Los Angeles, Riverside, and San Bernardino counties.	HP	Not Expected. Marginal CSS habitat is present in the BSA; however, the habitat is limited and is not located in a wash.

Source: California Natural Diversity Database. Special Animals List. (CDFW 2022b).

<p>Status:</p> <p>Federal</p> <p>FE = Federally Endangered</p> <p>PE = Proposed Endangered</p> <p>PT = Proposed Threatened</p> <p>FT = Federally Threatened</p> <p>FC = Federal Candidate for Listing</p> <p>FSC = Federal Species of Concern</p> <p>D = Delisted</p> <p>State</p> <p>SE = State Endangered</p> <p>SCE = Candidate Endangered</p> <p>ST = State Threatened</p> <p>SCT = Candidate Threatened</p> <p>SSC = California Species of Special Concern</p> <p>SA = California Special Animal</p> <p>CFP = California Fully Protected Species</p> <p>WL = Watch List</p>	<p>CNPS = California Native Plant Society</p> <p>CNPS California Rare Plant Ranking (CRPR) Designations:</p> <p>1A = Plants presumed extinct in California</p> <p>1B = Plants rare and endangered in California and throughout their range</p> <p>2 = Plants rare, threatened, or endangered in California but more common elsewhere in their range</p> <p>3 = Plants needing more information (a review list)</p> <p>4 = Plants of limited distribution (a watch list) – not included in this list</p> <p>CNPS CRPR Threat Codes:</p> <p>0.1 = Seriously endangered in California</p> <p>0.2 = Fairly endangered in California</p> <p>0.3 = Not very endangered in California</p>	<p>Numbered Footnotes:</p> <p>1 HA = Habitat Absent HP = Habitat Present</p> <p>2 Months in parentheses are uncommon.</p> <p>Definitions:</p> <p>BSA = Biological Study Area</p> <p>CDFW = California Department of Fish and Wildlife</p> <p>CSS = coastal sage scrub</p> <p>DPS = distinct population segment</p> <p>m = meter(s)</p> <p>P = Present (species observed within the BSA during surveys)</p> <p>SDPS = southern distinct population segment</p>
--	--	---

## 5 CEQA THRESHOLDS OF SIGNIFICANCE

Under CEQA, a “significant impact” represents a substantial or potentially substantial adverse physical change to the environment. In evaluating specific effects, this document identified thresholds of significance for each effect, evaluates the potential environmental change associated with each effect, and then characterizes the effects as impacts in the following categories:

- Less than Significant- Result in substantial adverse change to existing environmental conditions.
- Potentially Significant- Constitutes a substantial adverse change to existing environmental conditions that can be mitigated to less than significant level by implementation of feasible mitigation measures.
- Significant and Unavoidable- Constitutes a substantial adverse change to existing environmental conditions that cannot be fully mitigated by implementation of all feasible mitigation measures.

The following Thresholds of Significance are based on Appendix G to the 2024 CEQA Guidelines. For the purposes of this EIR, implementation of the proposed Project may have a significant adverse impact if implementation of the proposed Project would:

- a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

## 6 BIOLOGICAL RESOURCES, DISCUSSION OF IMPACTS, AND MITIGATION

The potential for species to occur within the BSA has been determined based on the results of the literature review, field surveys of the BSA, vegetation types present in the BSA, and experience in the region.

Based on the current project design, the majority of the project would occur underground at a minimum depth of 60 ft below the existing grade, avoiding almost all vegetation and potential jurisdictional features. Ground disturbance would be limited to the areas proposed for the vent shaft, station, and MSF construction as shown on Figure 6-1, Vegetation and Potential Jurisdictional Features Impacts; therefore, specific analysis of the tunnel component is not included. Furthermore, the existing uses in the BSA would continue (i.e., vehicle traffic, noise, highway maintenance) and are not anticipated to result in an increase in impacts to biological resources within the BSA due to the highly disturbed nature of the vicinity. Mapped vegetation within the area of temporary impacts is limited to nonnative annual grassland, with a majority of permanent impacts occurring to developed/disturbed area (see Figure 6-1 below). Impacts to vegetation communities in the BSA are shown in Table 6-1.

Avoidance and minimization measures are included as part of the project to avoid or minimize direct and indirect impacts on biological resources to the extent practicable. The applicable project features and measures are included in Section 7 and Appendix F, Avoidance and Minimization Measures.

### 6.1 HABITATS AND NATURAL COMMUNITIES OF SPECIAL CONCERN

Habitats are considered to be of special concern based on (1) federal, State, or local laws regulating their development, (2) limited distributions, and/or (3) the habitat requirements of special-status plants or animals occurring in the BSA. Such sensitive habitats are often designated by the CDFW as natural communities of special concern. Such habitats may be formally protected and warrant mitigation for impacts when occupied by special-status species. A natural community of special concern within the BSA is CSS. This natural community of special concern are shown on Figure 6-1.

#### 6.1.1 Discussion of Coastal Sage Scrub

CSS is a broad vegetation class found in diverse mosaics of many species and is dominated by a suite of shrub species found in Southern California. Shrub cover is dense and often continuous but sometimes patchy, with low moisture content. CSS has been displaced by spreading urbanization and livestock grazing. Many rare and endangered species occur in CSS and associated vegetation communities.

##### 6.1.1.1 Survey Results

Approximately 0.85 acre of CSS habitat is located along the western slope of Milliken Avenue, south of I-10 and north of the intersection of Milliken Avenue and Guasti Road.

Table 6-1: Impacts to Vegetation Communities in the BSA

Vegetation Communities	Temporary Impacts Vent Shaft Design Option 2 (acres)	Permanent Impacts Vent Shaft Design Option 2 (acres)	Temporary Impacts Vent Shaft Design Option 4 (acres)	Permanent Impacts Vent Shaft Design Option 4 (acres)	Temporary Impacts Cucamonga Station (acres)	Permanent Impacts Cucamonga Station (acres)	Temporary Impacts T2 Station (acres)	Permanent Impacts T2 Station (acres)	Temporary Impacts T4 Station (acres)	Permanent Impacts T2 Station (acres)	Temporary Impacts Utilities (acres)	Permanent Impacts Utilities (acres)	Total in BSA (Acres)
Nonnative Annual Grassland	0.81	0.19	0	0	0	0	0	0	0	0	0.50	0	1.5
Coastal Sage Scrub	0	0	0.17 (indirect)	0	0	0	0	0	0	0	0	0	0.17
Total	0.81	0	0.17	0	0	0	0	0	0	0	0.50	0	1.67

Source = LSA 2024



Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Sheet 1 of 13)

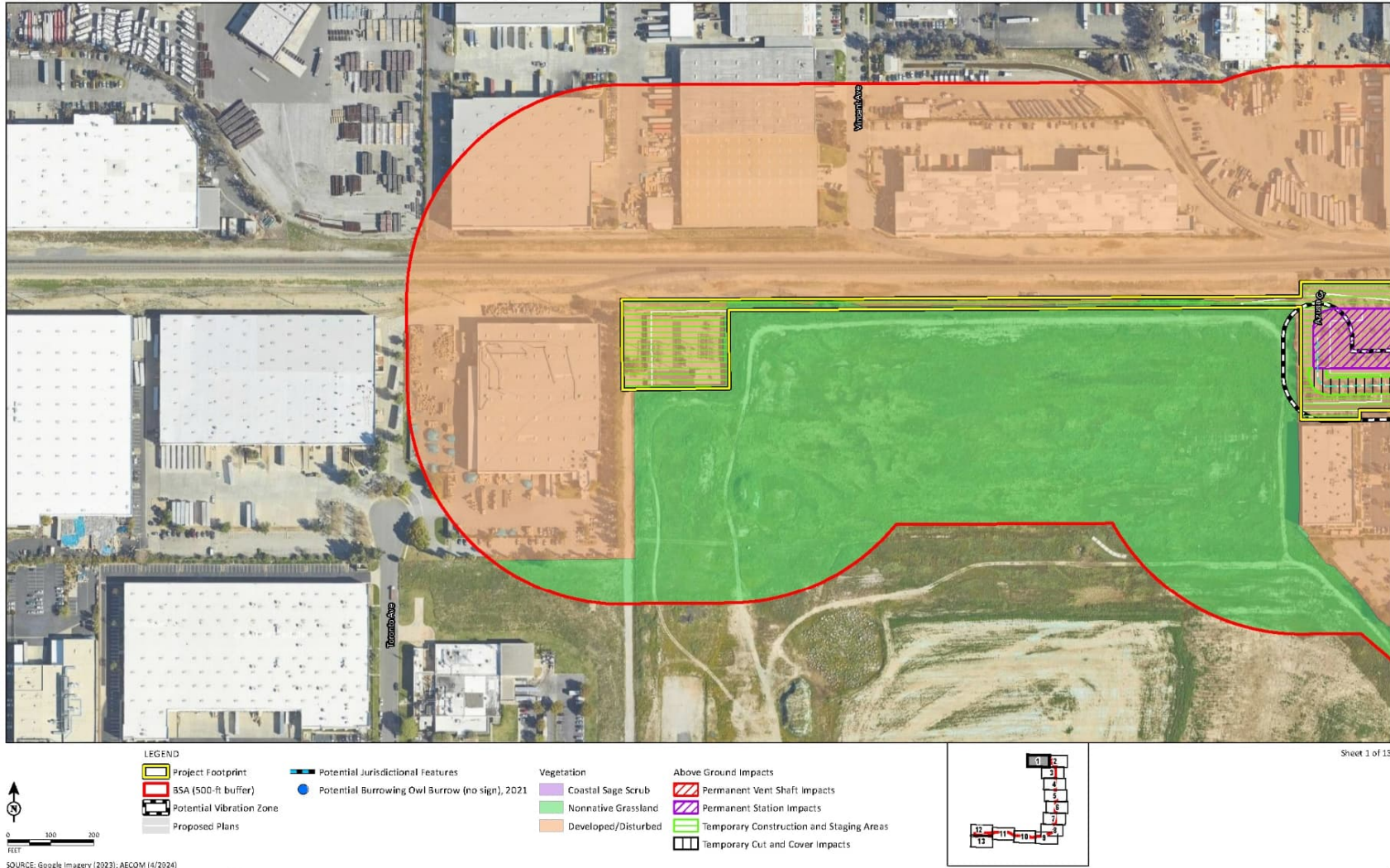




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 2 of 13)

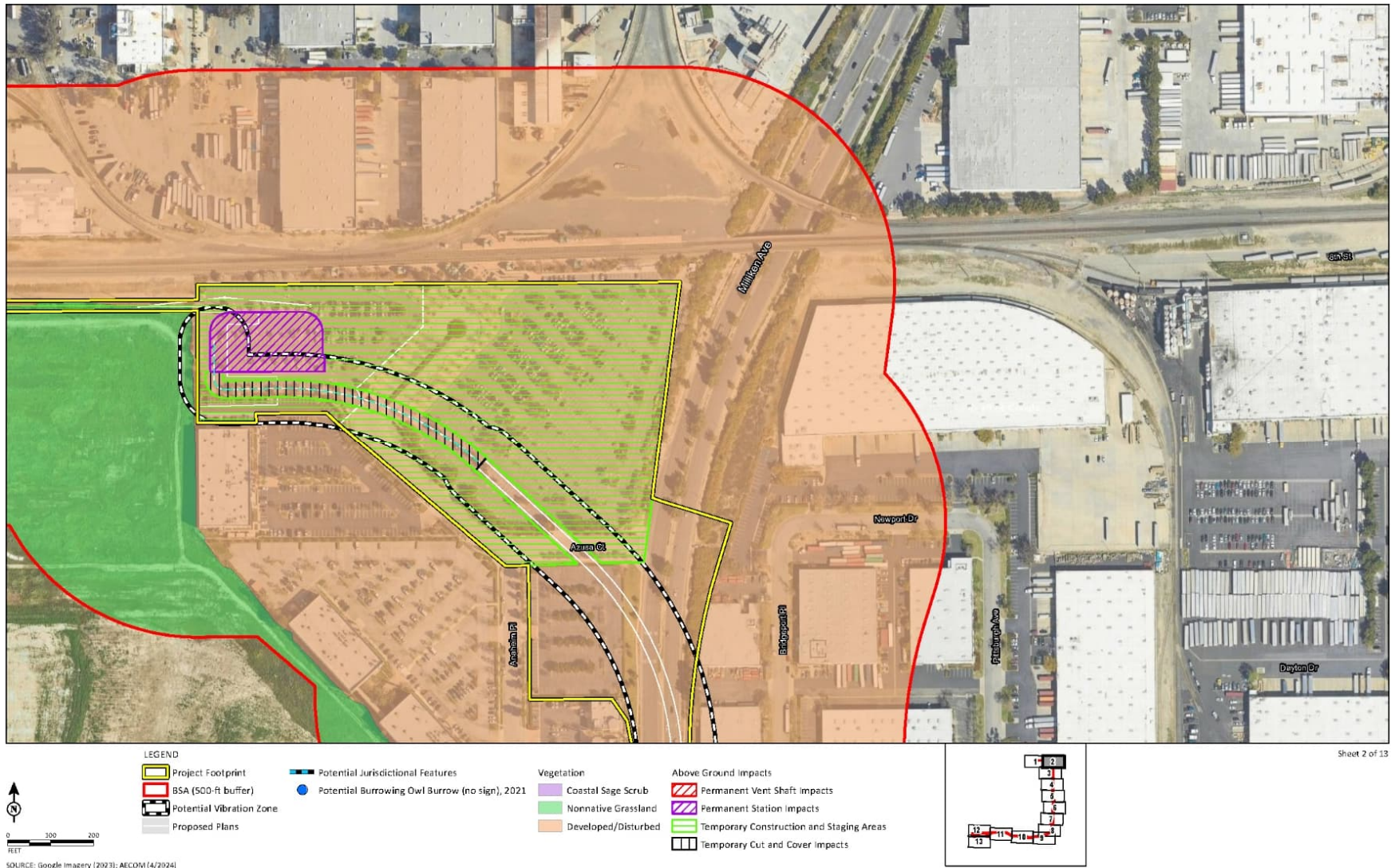




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 3 of 13)

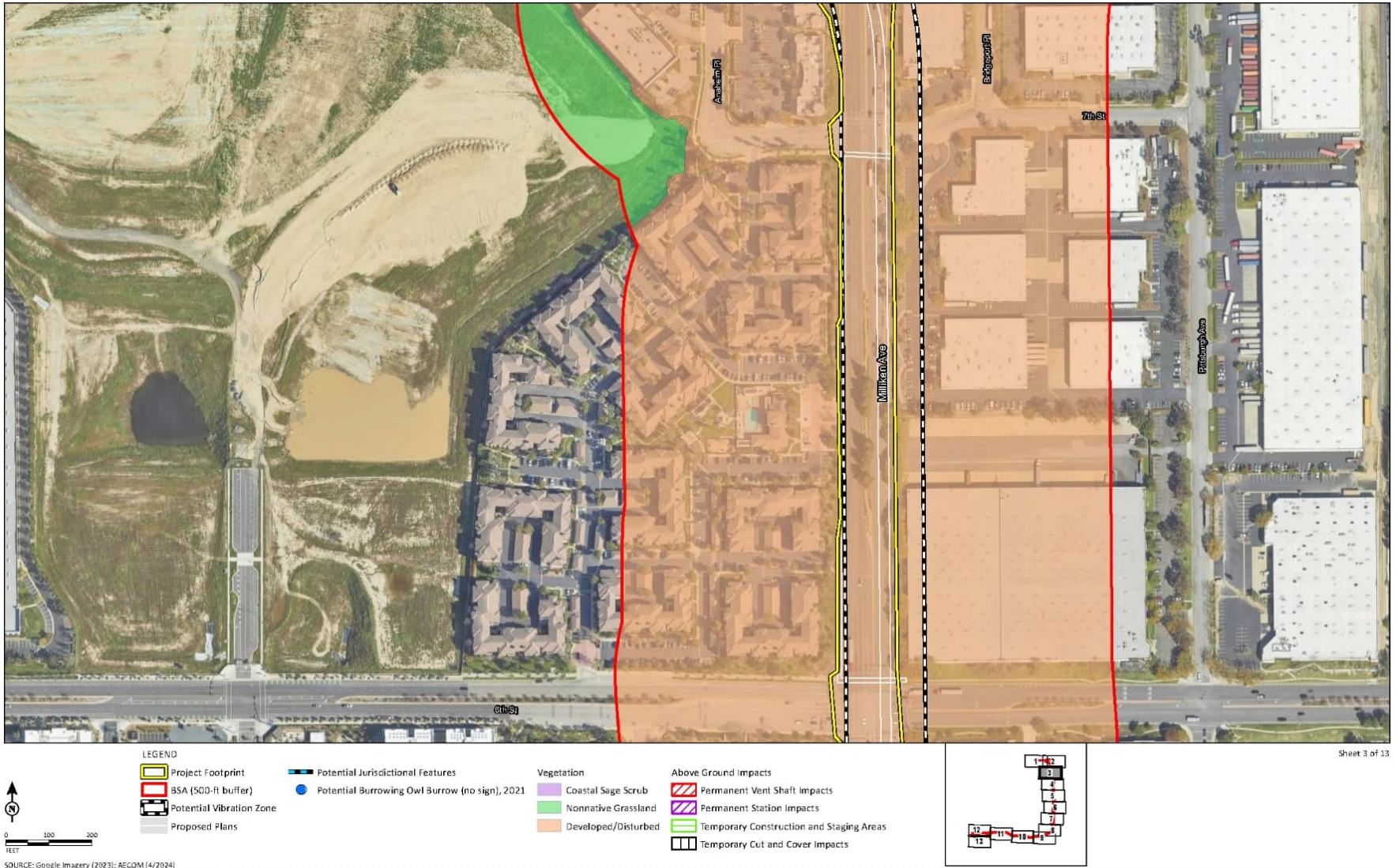




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 4 of 13)

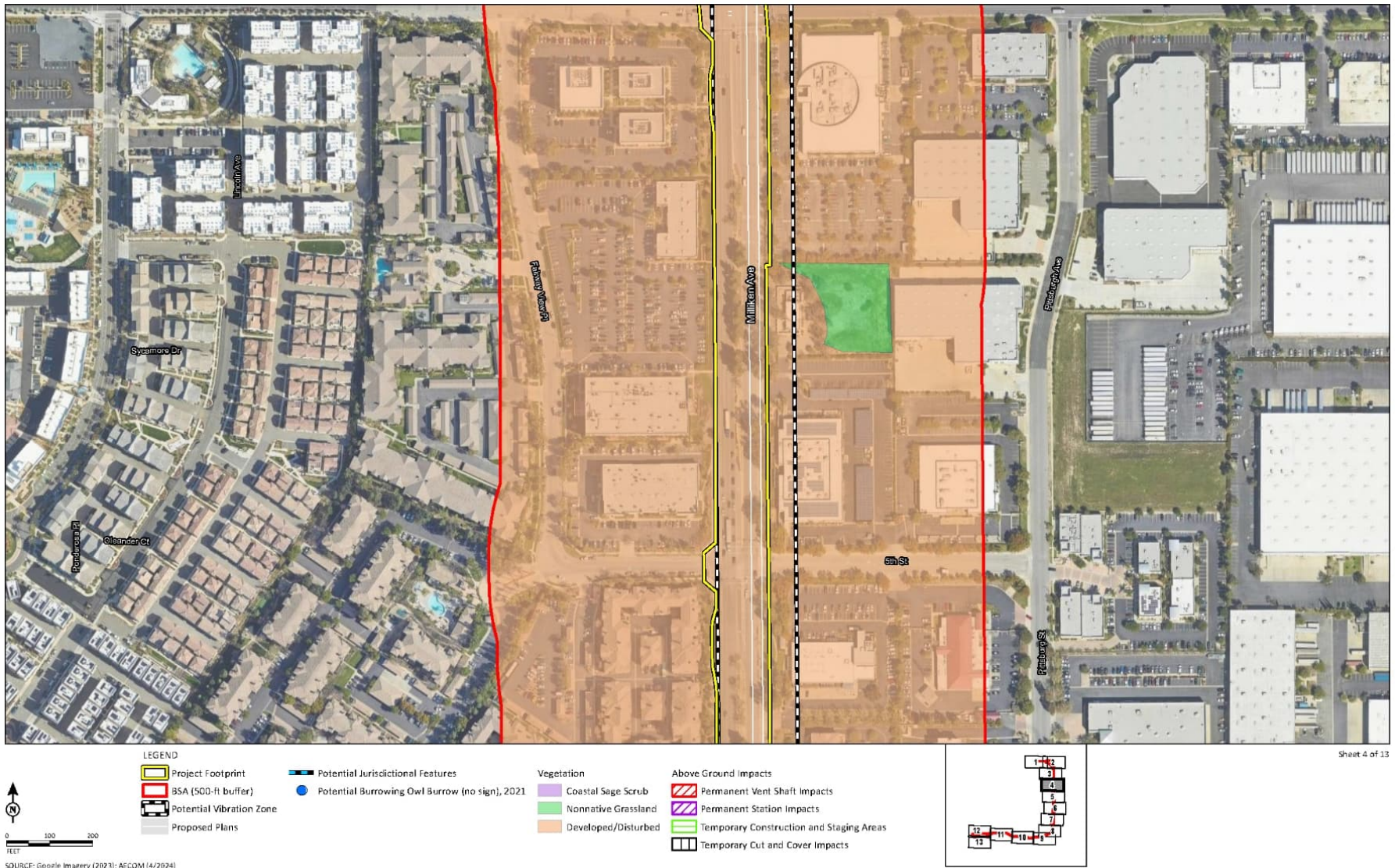




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 5 of 13)

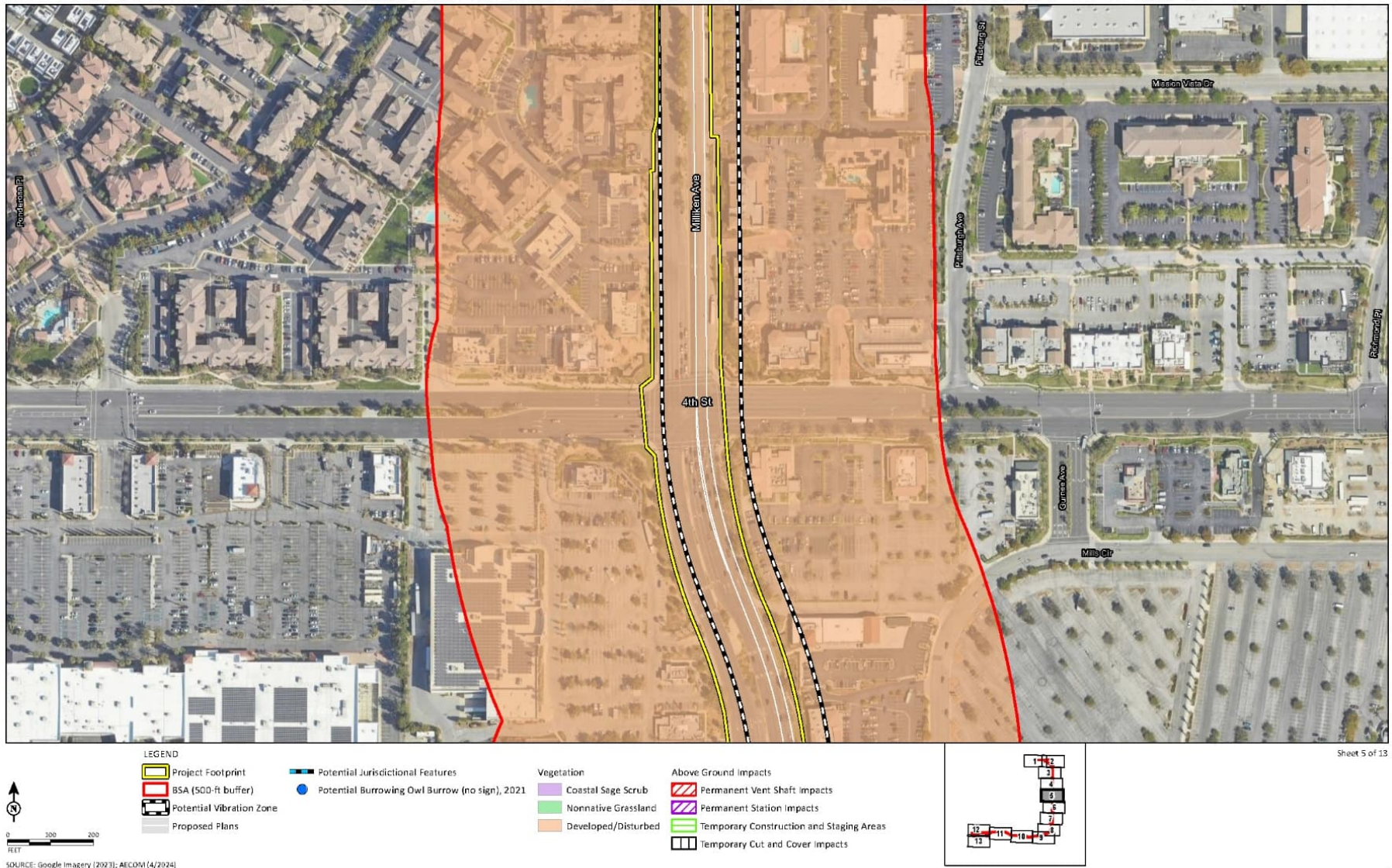




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 6 of 13)

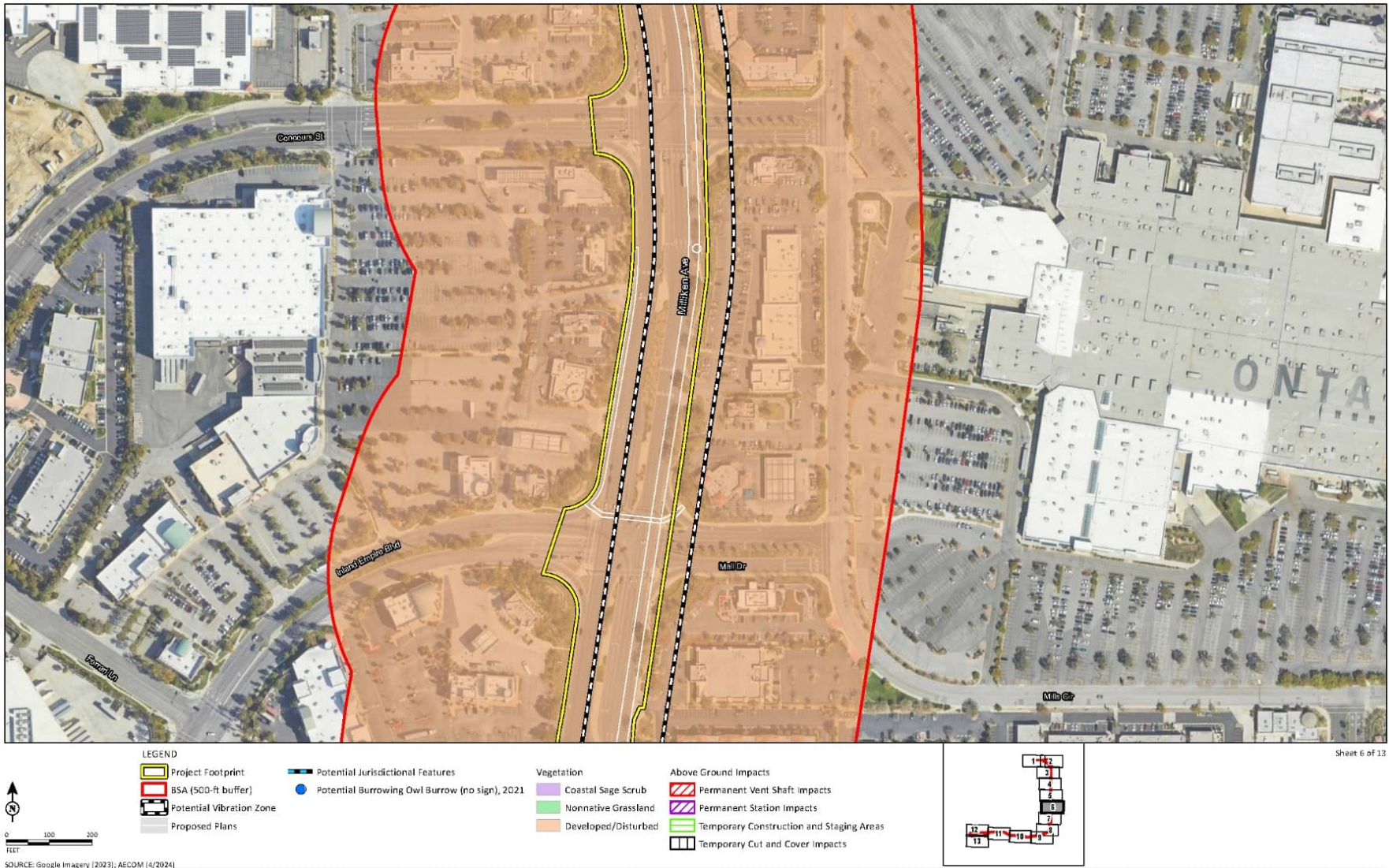




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 7 of 13)

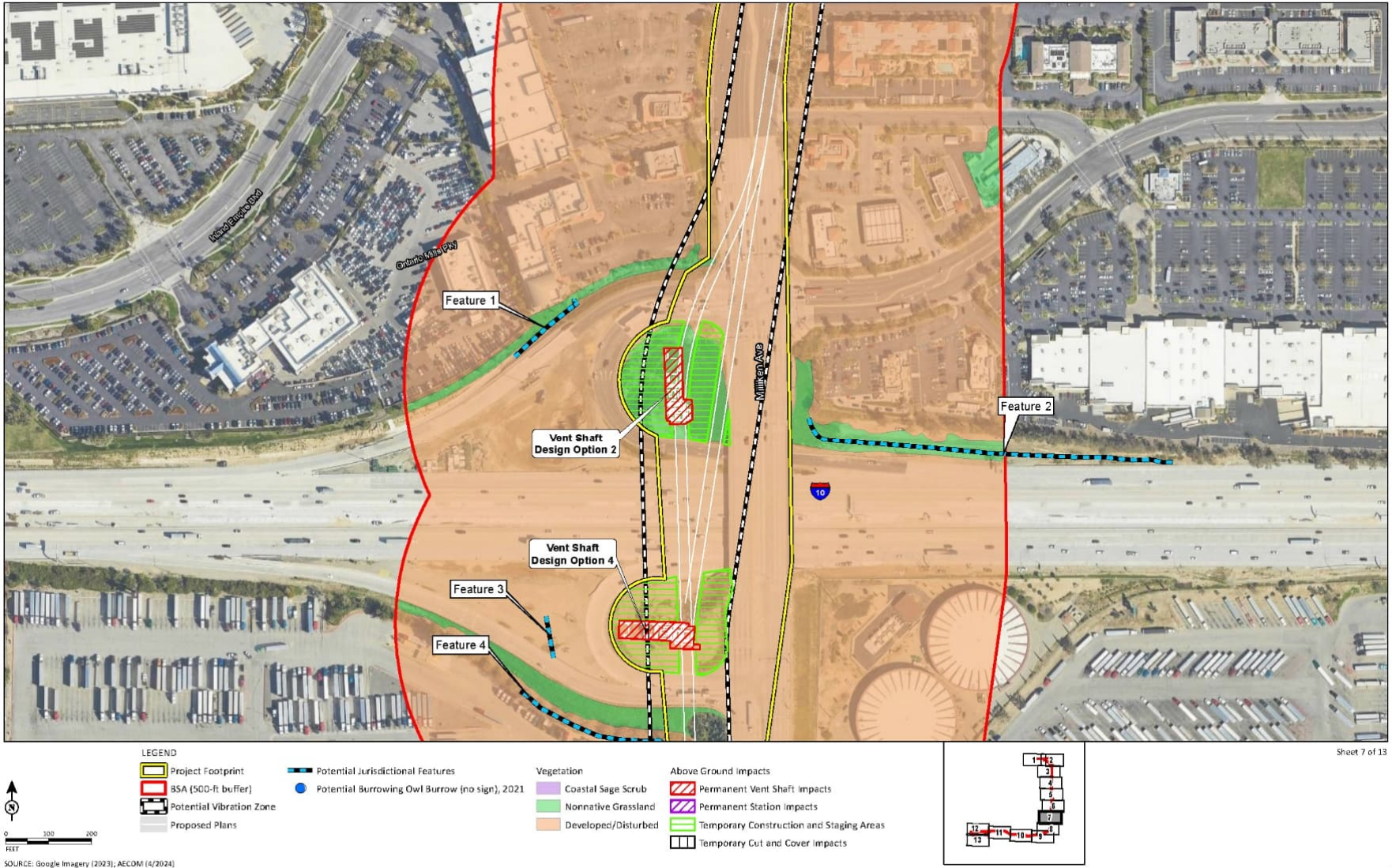




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 8 of 13)

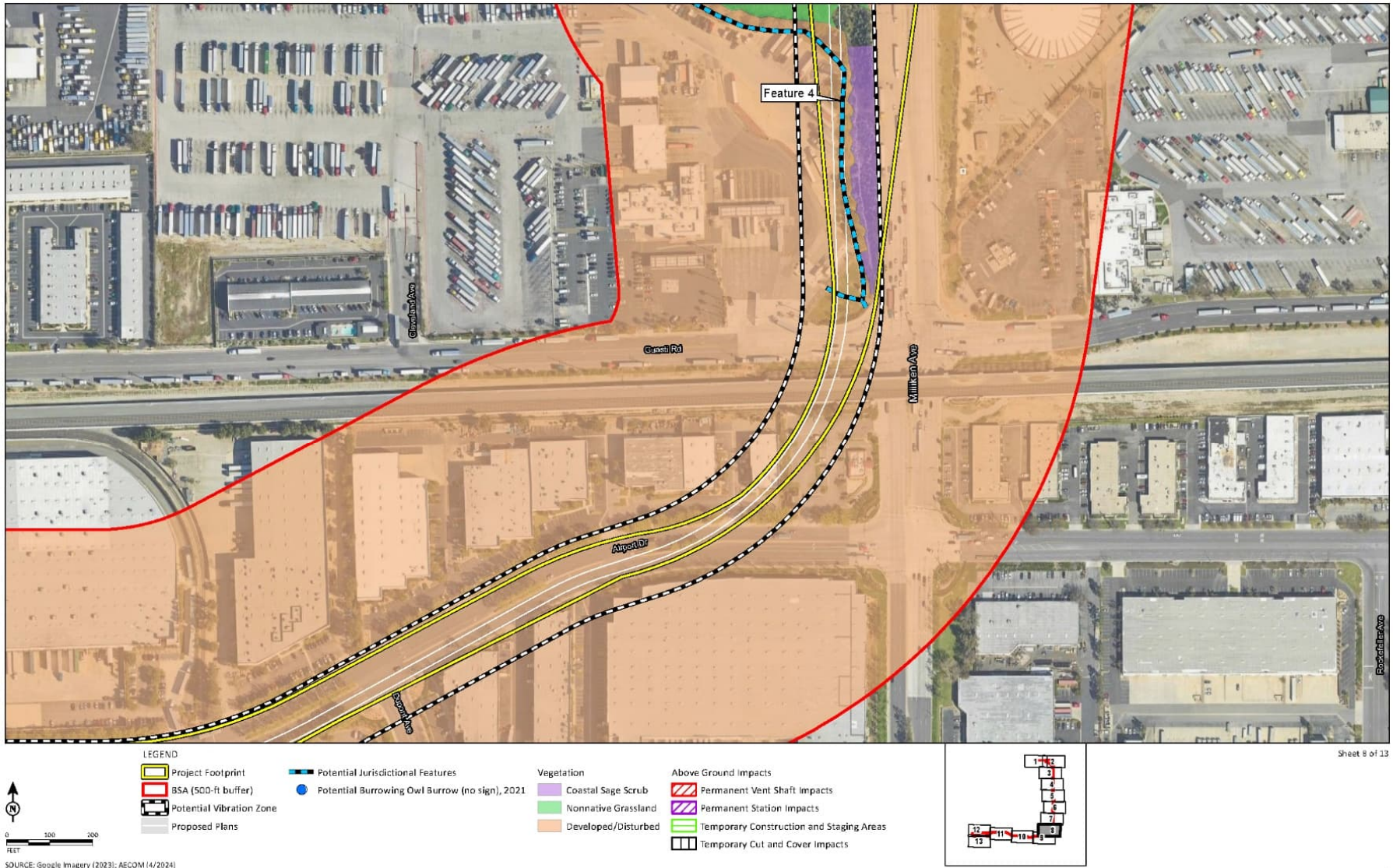




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 9 of 13)

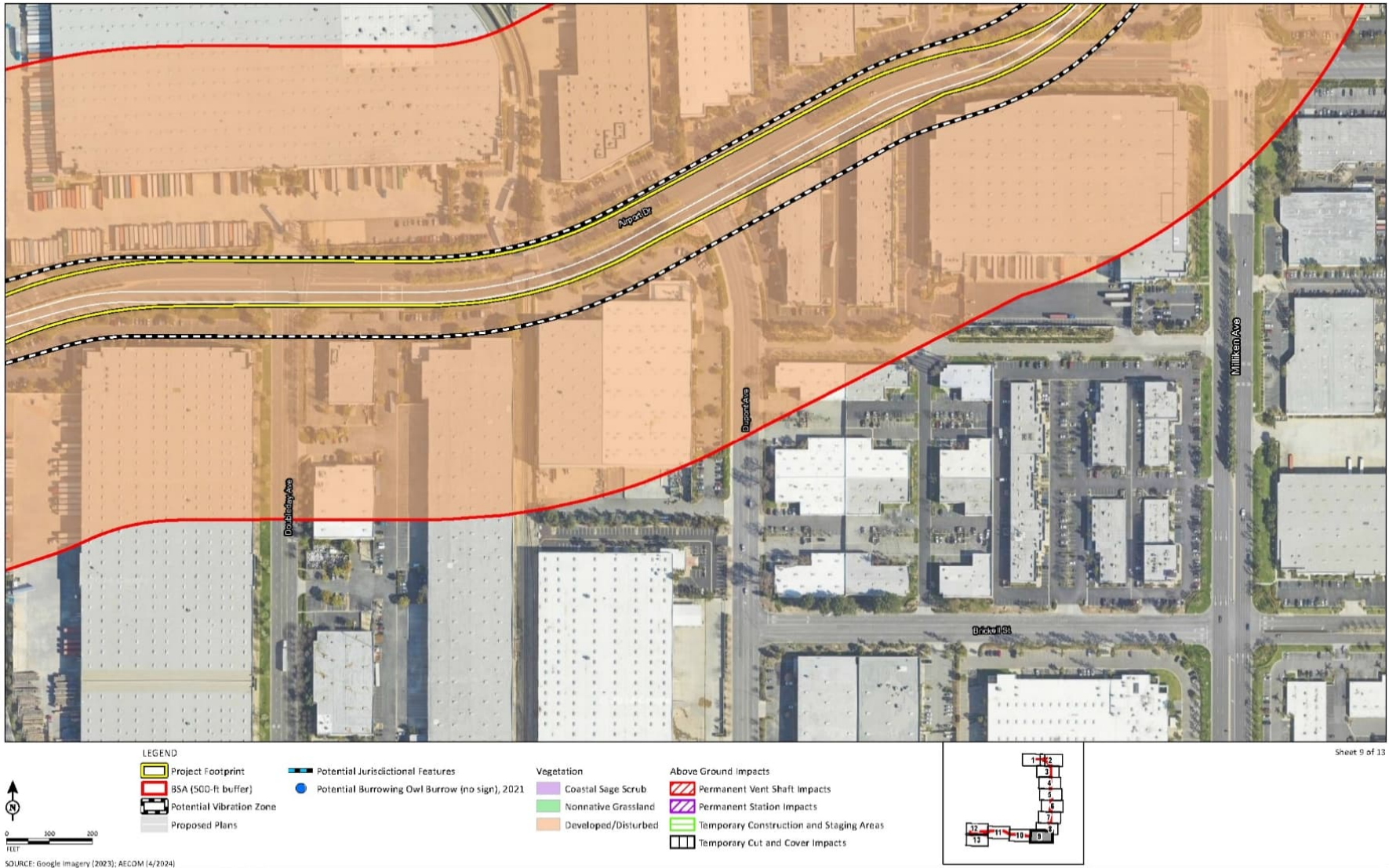




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 10 of 13)

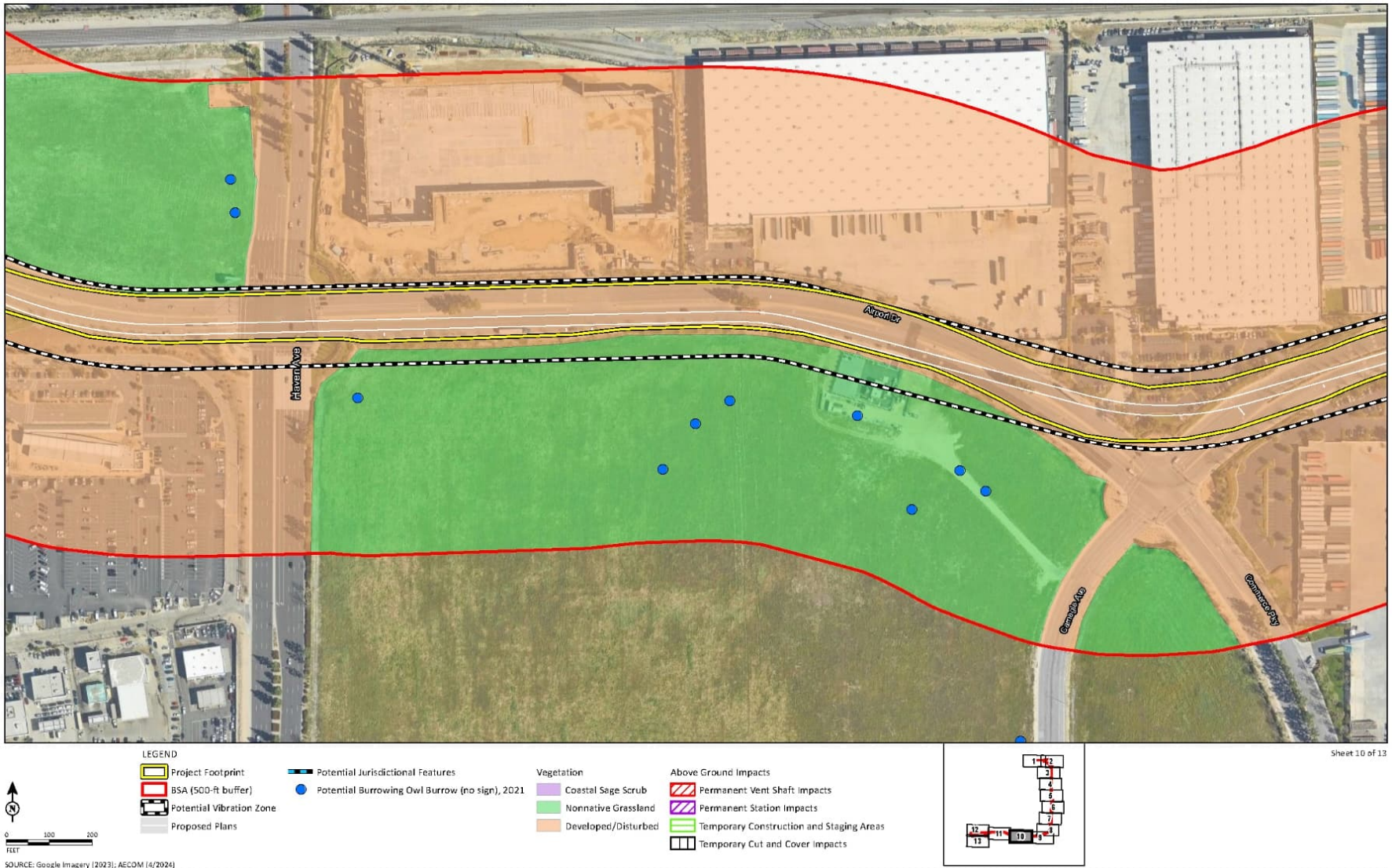




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 11 of 13)

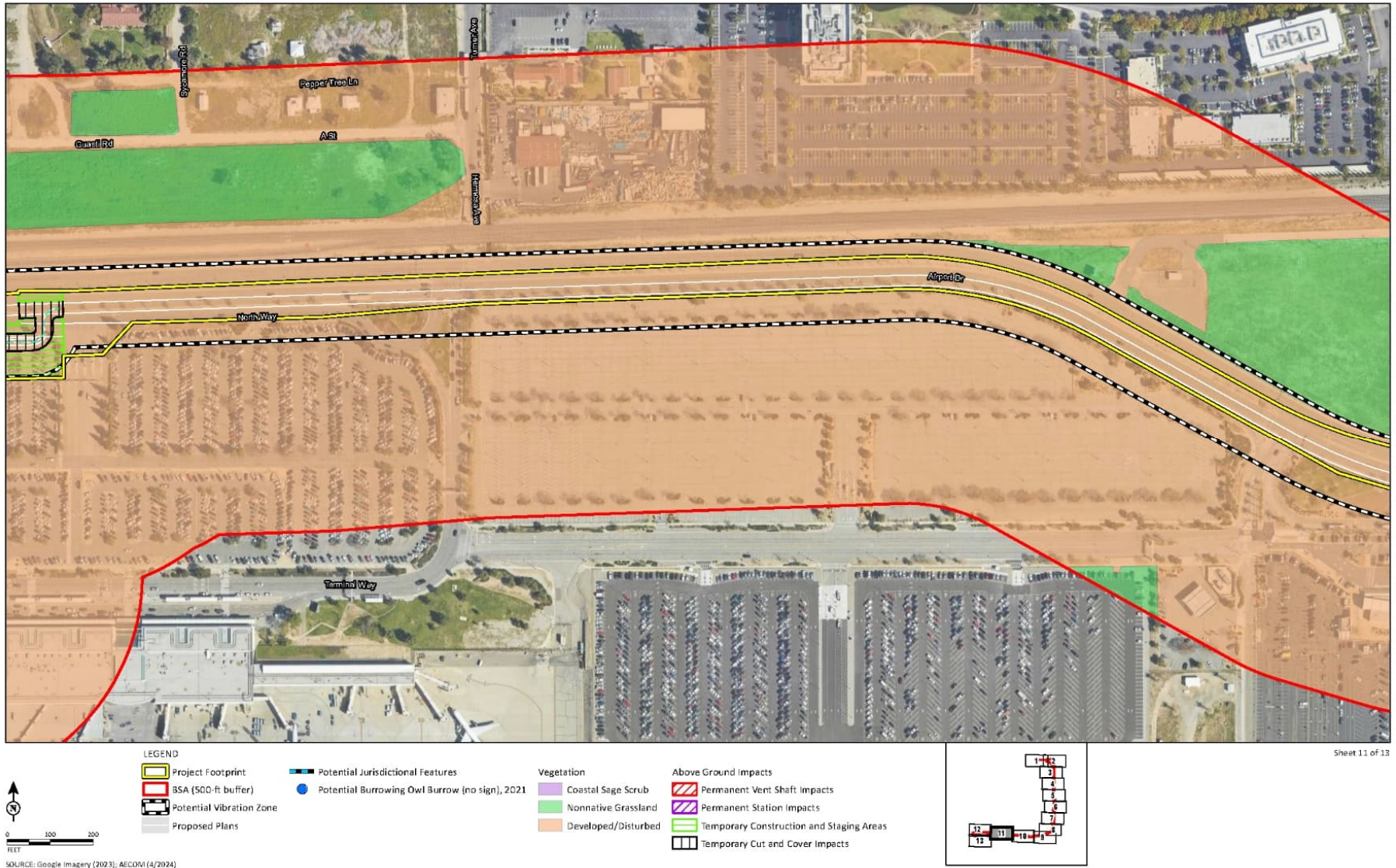




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 12 of 13)

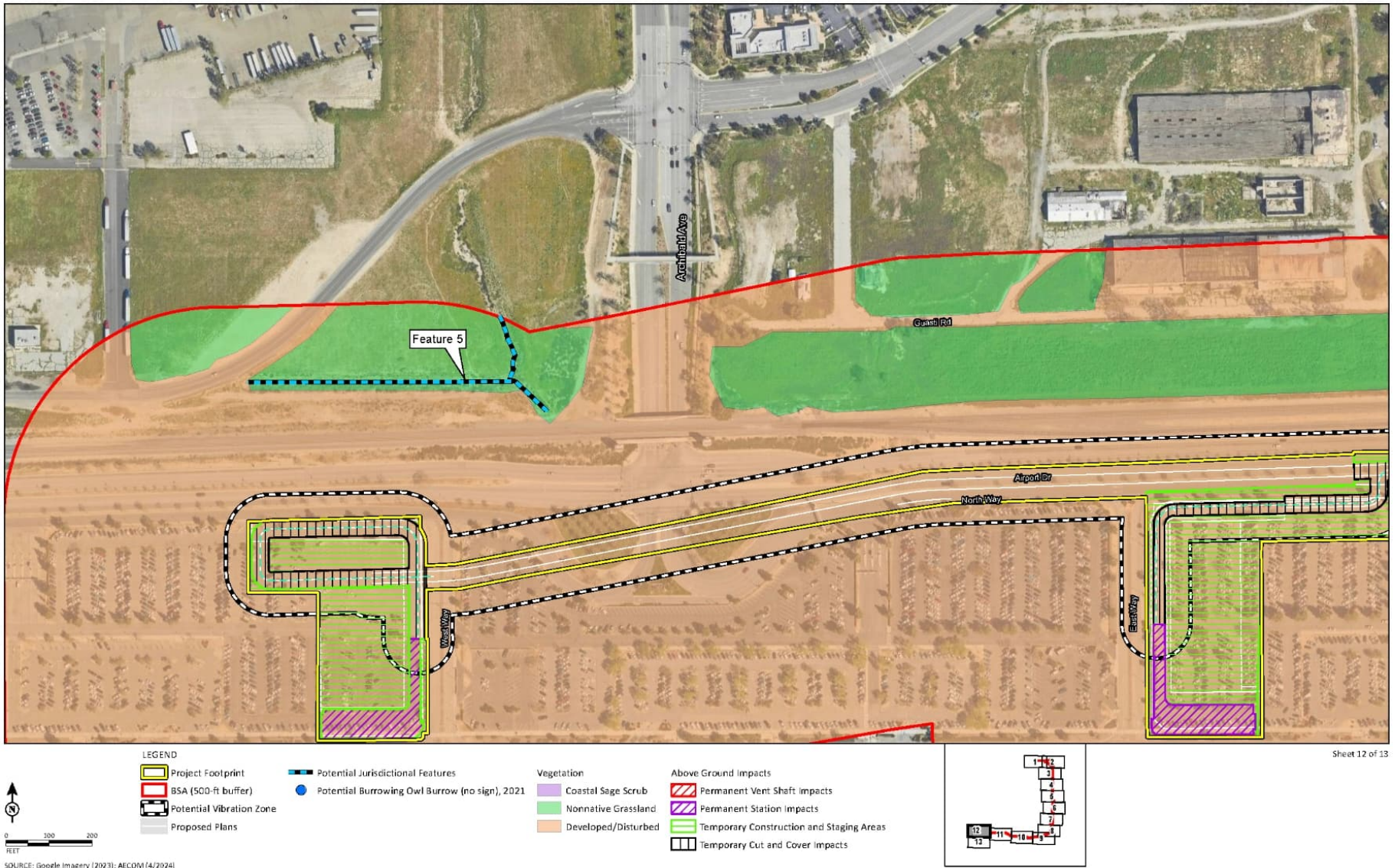
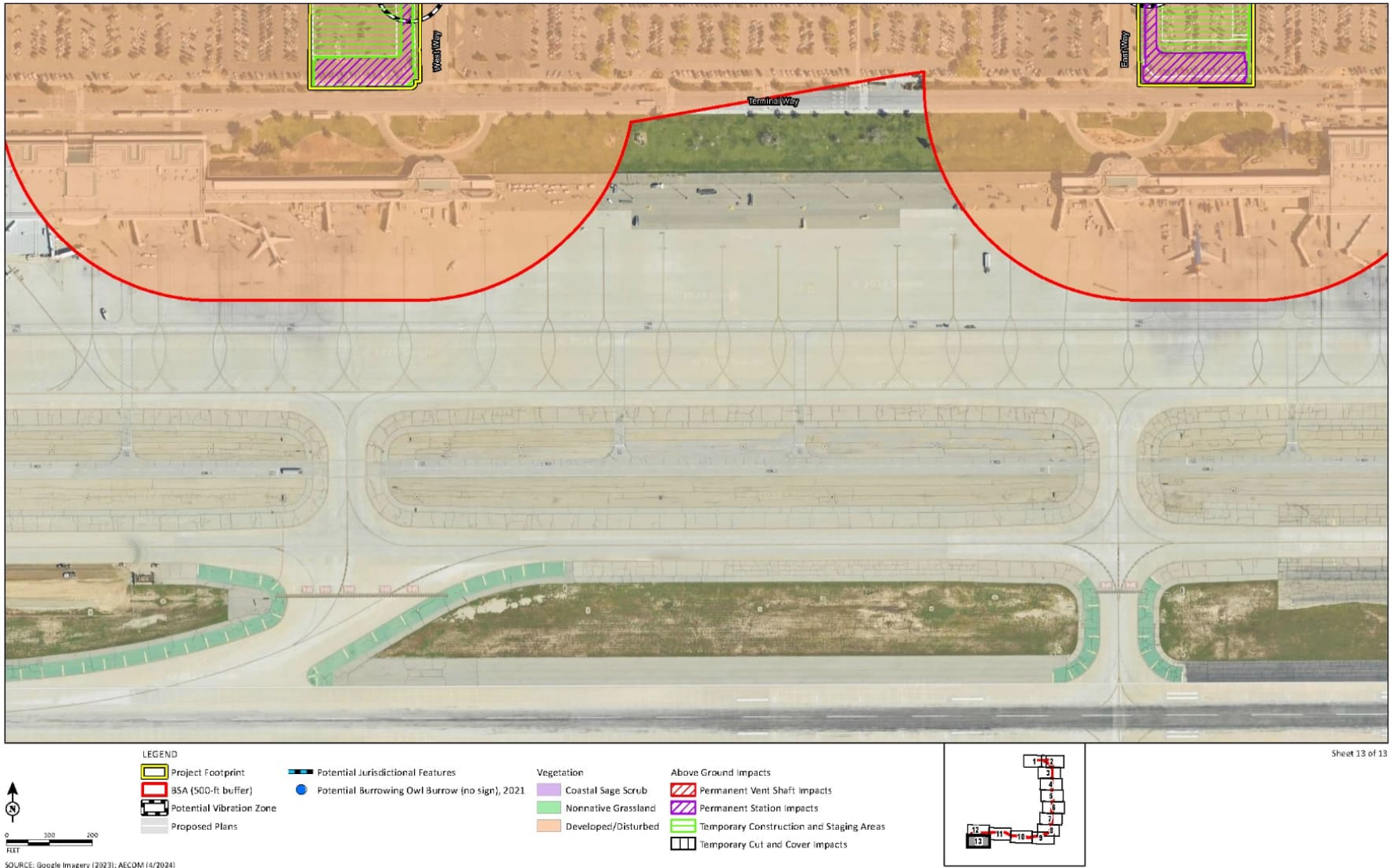




Figure 6-1: Vegetation and Potential Jurisdictional Features Impacts (Page 13 of 13)



### 6.1.1.2 No Project Alternative

#### 6.1.1.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to CSS; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

#### 6.1.1.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to CSS; however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

### 6.1.1.3 Proposed Project

#### 6.1.1.3.1 Construction Impacts

No permanent or temporary effects to CSS are proposed as part of the project, and the area would be completely avoided during construction of the proposed tunnel, vent shaft design options 2 or 4, the stations, and the MSF. No vegetation removal, grubbing, and/or grading of CSS would occur during construction. The proposed Project would result in temporary indirect effects to 0.17 acre of CSS during construction activities associated with the tunnel and vent shaft design option 4. Indirect effects may include an increase in noise and vibration. These effects would not be new to the area since CSS is already affected by the operation of the existing freeway off-ramp and Milliken Avenue. No special-status species were observed in the area of CSS during field surveys.

#### 6.1.1.3.2 Operational Impacts

No permanent effects to CSS would occur during operation of the vent shaft design options 2 or 4 since the area of CSS within the BSA is not adjacent to the proposed location of the Vent Shaft Design Options. However, temporary indirect effects during operation of the vent shaft design options 2 or 4 may include an increase in noise and vibration. However, these effects would not be new to the area since CSS is already affected by the operation of the existing freeway off-ramp and Milliken Avenue.

No permanent effects to CSS would occur as a result of the tunnel, station, or MSF operations since the operation of the tunnel would be subsurface near the area of CSS within the BSA and the vent shaft design options 2 or and the MSF are outside the area of CSS within the BSA. No special-status species were observed in the area of CSS during field surveys; therefore, there would be no permanent effects as a result of operation.

### 6.1.2 Discussion of Jurisdictional Waters

Section 404 of the CWA and Section 1602 of the California Fish and Game Code regulate activities affecting resources under the jurisdiction of the USACE and the CDFW, respectively. “Waters of the United States” under the jurisdiction of the USACE include navigable coastal and inland waters, lakes, rivers, and streams and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce.

#### 6.1.2.1 Survey Results

Delineated aquatic resources within the BSA include two concrete-lined drainage channels, one cobble ditch, and two earthen channels that are potentially jurisdictional features within the BSA (refer to Figure 4-2 Vegetation and Potential Jurisdictional Features and Appendix C Representative Site Photos). Each feature is described in further detail below:

Feature 1 is a small, 4 ft wide concrete v-ditch conveying stormwater flows from neighboring commercial areas that originates from a 2 ft diameter concrete pipe. This drainage feature lacked any standing or flowing water at the time of the fieldwork and appears to convey only ephemeral stormwater runoff. This feature is unvegetated and carries ephemeral flows in a western direction outside of the BSA. The USACE generally does not regulate isolated concrete v-ditches that lack apparent connection to other waters and riparian/wetland habitat. Therefore, Feature 1 is not considered jurisdictional waters of the United States.

Feature 2 is primarily a concrete-lined drainage but also incorporates a small portion that contains an earthen section. In the past, the entire feature was concrete lined, but a section looks to have been washed out, thus creating the earthen section. The drainage is 3 ft high and measures 10 ft from top-of-bank to top-of-bank. This feature conveys stormwater from a 4 ft diameter culvert located underneath Milliken Avenue and flows to the east outside the BSA. Although the concrete-lined sections are unvegetated, the earthen section supports a variety of weedy vegetation, such as barnyard grass (*Echinochloa crus-galli*). This feature may drain into Day Creek Channel through a series of underground drainages. Day Creek Channel flows into the Santa Ana River, which then eventually flows in the Pacific Ocean, a traditionally navigable water. Therefore, it is assumed that Feature 2 would have a significant nexus with a downstream traditional navigable water and would potentially be considered a nonwetland water of the United States

Feature 3 is an approximately 6 ft wide earthen drainage that conveys stormwater runoff from the Milliken Avenue off-ramp. The feature follows the slope of the off-ramp and terminates at the lowest point in the topography into a stormwater drain. The feature was unvegetated at the time of the survey, but surrounding vegetation corresponds to upland grass species listed in Section 3.1.3.1. This is a nonjurisdictional stormwater control feature that was constructed/excavated in uplands and conveys ephemeral flows (roadside runoff) in direct response to precipitation. It has no apparent connection to other waters or riparian/wetland habitat. Therefore, Feature 3 is not considered jurisdictional waters of the United States.

Feature 4 is a cobble-bottom ditch that ranges from 3 to 7 ft in width. This feature carries adjacent urban and roadside runoff in a southern direction into a 3 ft diameter concrete pipe that flows underneath Milliken Avenue. This feature is located within a landscaped lawn area with ornamental vegetation. This is a nonjurisdictional stormwater control feature (e.g., cobble ditch) that was constructed/excavated to convey ephemeral flows (roadside runoff and landscaping) in direct response to precipitation. Therefore, Feature 4 is not considered jurisdictional waters of the United States.

Feature 5 is an earthen drainage that varies from approximately 15 to 40 ft from top-of-bank to top-of-bank and carries ephemeral stormwater and urban runoff in an eastern and southern direction. This feature may drain into Cucamonga Creek Channel through a series of underground drainages. Cucamonga Creek Channel flows into the Santa Ana River, which then eventually flows in the Pacific Ocean, a traditionally navigable water. Therefore, it is assumed that Feature 5 would have a significant nexus with a downstream traditional navigable water and would potentially be considered a nonwetland water of the United States.

Features 2 and 5 could be considered nonwetland waters of the United States and potentially jurisdictional streambeds subject to potential CDFW regulation under Section 1602 of the California Fish and Game Code and the RWQCB under Section 401 of the Clean Water Act. Features 1, 3, and 4 were determined to be excavated wholly in and draining only uplands and do not carry a relatively permanent flow of water. Furthermore, those features do not support riparian vegetation and only flow in direct response to precipitation. Therefore, Features 1, 3, and 4 are considered to be USACE nonjurisdictional features. However, due to the presence of bed and bank these features may be subject to the regulatory authority of the CDFW and the RWQCB pursuant to the Porter-Cologne Act.

#### 6.1.2.2 No Project Alternative

##### 6.1.2.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to



jurisdictional features; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

#### **6.1.2.2.2 Operational Impacts**

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to jurisdictional features; however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

#### **6.1.2.3 Proposed Project**

##### **6.1.2.3.1 Construction Impacts**

The project, including the tunnel, vent shaft design options 2 or 4, stations, and MSF, would not result in any discharge of fill or waste material within any delineated jurisdictional aquatic resources. As a whole, the project is not expected to require jurisdictional authorizations or permits from the USACE, RWQCB, or CDFW.

##### **6.1.2.3.2 Operational Impacts**

The majority of the project is located underground in a tunnel and would avoid all potential jurisdictional and non-jurisdictional features. In addition, the above-ground features of the proposed Project (vent shaft design options 2 or 4, stations, and MSF) would avoid all potential jurisdictional and non-jurisdictional features. Therefore, no permanent effects related to the operation of the Project would occur.

#### **6.1.3 Special-Status Plant Species**

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.

Certain plant species are recognized by federal and State resource agencies as well as private conservation organizations (i.e., the CNPS) as special-status plant species. An individual taxon (i.e., species, subspecies, or variety) is given such recognition due to the documented or perceived decline and/or limitations of its population size, geographic range, and distribution, which typically are a result of habitat loss. For the purposes of this report, listed special-status species are considered to be those listed under FESA and/or CESA. Nonlisted special-status plant species are those plant species that are not listed under FESA and/or

CESA but have a CNPS ranking of 1, 2, or 3. Table 4-2, provided earlier in Section 4, shows all special-status plant species considered for their potential to occur in the BSA. Refer to Section 5.1, Habitats and Natural Communities of Special Concern, for more information regarding specific “special-status species” definitions.

A total of 50 special-status plant species were considered for their potential to occur in the BSA (refer to Table 4-2). Most of these species have specialized habitat requirements that do not occur within the BSA, and none are expected to occur within any of the proposed work areas.

#### 6.1.3.1 Survey Results

No special-status plant species were observed in the BSA during field surveys, and none are expected to occur within the project limits given the absence of suitable habitat, ongoing disturbances within the proposed above groundwork areas, and lack of occurrence records in the vicinity of proposed aboveground work areas.

#### 6.1.3.2 No Project Alternative

##### 6.1.3.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to special-status plant species; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

##### 6.1.3.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to special-status plant species; however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

### 6.1.3.3 Proposed Project

#### 6.1.3.3.1 Construction Impacts

As shown in Table 4-2 and stated in Section 6.1.3.1, no special-status plant species were observed in the BSA during field surveys, and none are expected to occur within the Project limits. Therefore, construction of the Project is not expected to affect any special-status plant species.

#### 6.1.3.3.2 Operational Impacts

As shown in Table 4-2 and stated in Section 6.1.3.1, no special-status plant species were observed in the BSA during field surveys, and none are expected to occur within the Project limits. Therefore, operation of the Project is not expected to affect any special-status plant species.

## 6.2 SPECIAL-STATUS ANIMAL SPECIES OCCURRENCES

Certain wildlife species are recognized by federal and State resource agencies as special-status species. Species are given such recognition due to the documented or perceived decline and/or limitations of its population size, geographic range, and distribution, which typically are a result of habitat loss. For the purposes of this discussion, special-status wildlife species are considered to be those listed under FESA and/or CESA, and species considered of special concern by the CDFW. No listed special-status wildlife species were observed in the BSA in 2022. Table 4-2 shows special-status wildlife species considered for their potential to occur in the BSA. Listed special-status wildlife species with suitable habitat present in the BSA, and non-listed special-status wildlife species observed or with a moderate to high potential to occur in the BSA, include DSF, Crotch's bumble bee, burrowing owl, and bats. The species are discussed in detail below.

### 6.2.1 Discussion of Delhi Sands Flower-Loving Fly

DSF is federally listed as endangered and is a CDFW Special Animal. This species lives in Delhi-series soils, which are fine sandy soils, often wholly or partly sand dunes stabilized by the sparse native vegetation. The larval stage may last 2 years or longer, depending on availability of food, temperature, rainfall, and other environmental conditions. The adults are active in the late summer and in the early stages can be found throughout the year. Except for the adults, the animal spends its entire lifecycle underground within the surface soil layers. The adults emerge and become active in the late summer, and females lay eggs in Delhi-series soils. The flight season of the DSF extends from August through September.

#### 6.2.1.1 Survey Results

The habitat assessment focused on undeveloped areas mapped with Delhi soils within the BSA. Although mapped Delhi soils occur throughout the majority of the BSA, they are almost entirely developed. No suitable habitat occurs within the project footprint, which is entirely developed with existing roadways,

utility easements, and other infrastructure. Suitable habitat areas identified in the 500-ft buffer occur in areas identified as nonnative grasslands along Airport Drive. The CSS along Milliken Avenue is not considered suitable because it is a manufactured slope composed of imported soils. The nonnative/ruderal grasslands in the northerly portion of the BSA are associated with an area that was used as a golf course from around 2002 through 2017 based on Google Earth Pro aerial photograph review. This area is also part of an adopted specific plan, the Rancho Cucamonga Industrial Area Specific Plan Sub-Area 18 Specific Plan Amendment (City of Rancho Cucamonga 1994). This habitat is considered unlikely to support DSF based on its years of use as a golf course, the lack of known occurrences of the DSF in the Project area, and the other Delhi soils in the vicinity being primarily developed.

Focused surveys for DSF were conducted in 2021 in suitable habitat areas in Survey Areas A, B, C, and D as shown on Figure 6-2. DSF was not detected within the survey area during the 2021 survey season (refer to Appendix D, Delhi Sands Flower-Loving Fly Report). Habitat conditions within the survey area are considered marginal due to current and adjacent land use practices, which have resulted in degraded soils (e.g., increased compaction and organic matter) and a dominance of nonnative vegetation.

#### 6.2.1.2 No Project Alternative

##### 6.2.1.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to DSF; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

##### 6.2.1.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to DSF however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.



Figure 6-2: Delhi Sands Flower-Loving Fly and Crotch's Bumble Bee Survey Areas



### 6.2.1.3 Proposed Project

#### 6.2.1.3.1 Construction Impacts

As stated in Section 6.2.1.1, no suitable habitat for the DSF occurs within the Project footprint, which is entirely developed with existing roadways, utility easements, and other infrastructure. The nonnative/ruderal grasslands in the northerly portion of the BSA are considered unlikely to support DSF based on its years of use as a golf course, the lack of known occurrences of the DSF in the Project area, and the other Delhi soils in the vicinity being primarily developed. Additionally, DSF was not detected within the survey area during the 2021 survey season. Habitat conditions within the survey area are considered marginal due to current and adjacent land use practices, which have resulted in degraded soils (e.g., increased compaction and organic matter) and a dominance of nonnative vegetation. Therefore, direct temporary effects to DSF are not expected to occur as a result of construction of the tunnel, vent shaft design options 2 or 4, stations, or MSF. Indirect temporary effects to the marginally suitable DSF habitat may include increased noise, dust, vibration, and lighting during construction. However, these effects would not be new to the area since the marginally suitable DSF habitat within the BSA is already affected by the operation of the existing freeway.

#### 6.2.1.3.2 Operational Impacts

Direct permanent effects to DSF are not expected to occur as a result of operation of the tunnel, vent shaft design options 2 or 4, stations, or MSF because no suitable habitat would be affected by the project. Indirect permanent effects to suitable DSF habitat may include increased noise, dust, vibration, and lighting during construction.

### 6.2.2 Discussion of Crotch's Bumble Bee

Crotch's bumble bee is State listed as State Candidate Endangered and a CDFW Special Animal. Crotch's bumble bee occurs primarily in California, including the Mediterranean region, the Pacific Coast, the Western Desert, and adjacent foothills throughout most of the State's southwestern region. This species inhabits grasslands and shrublands and requires a hotter and drier environment than other bumblebee species. Typical food sources include milkweed, lupines, medical, sages, phacelias, clarkias, poppies, and wild buckwheat. Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. Only mated queens overwinter and conduct all the foraging and care for the colony in early spring until the first workers emerge and assist with these duties.

#### 6.2.2.1 Survey Results

The habitat assessment focused on undeveloped areas within the BSA with potential to support adequate food resources for the Crotch's bumble bee. A visual survey for Crotch's bumble bee was conducted in

2021 in suitable habitat areas in Survey Areas A, B, C, and D, as shown on Figure 6-2. No Crotch's bumble bee was observed within the BSA during the 2021 visual survey.

#### 6.2.2.2 No Project Alternative

##### 6.2.2.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to Crotch's bumble bee; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

##### 6.2.2.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to Crotch's bumble bee however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

#### 6.2.2.3 Proposed Project

##### 6.2.2.3.1 Construction Impacts

Approximately 0.5 acre of nonnative annual grassland would be temporarily affected by utility relocations. In addition, vent shaft design option 2 would temporarily impact approximately 0.81 acre of nonnative annual grassland. However, these areas do not contain food sources or habitat conditions conducive for Crotch's bumble bee. Indirect temporary effects to suitable Crotch's bumble bee habitat may include increased noise, vibration, dust, and lighting during construction activities associated with the project. No nonnative annual grassland would be affected by construction of the tunnel since it would be underground. In addition, no nonnative annual grassland would be affected by construction of vent shaft design option 4, the stations, or the MSF.

##### 6.2.2.3.2 Operational Impacts

vent shaft design option 2 would permanently affect approximately 0.19 acre of nonnative annual grassland; however, that area does not contain food sources or habitat conditions conducive for Crotch's bumble bee. No nonnative annual grassland would be affected by operation of the tunnel since it would



be underground. In addition, no nonnative annual grassland would be permanently affected by vent shaft design option 4, the stations, or the MSF.

### 6.2.3 Discussion of Burrowing Owl

Burrowing owl is a CDFW Species of Special Concern. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats often associated with burrowing animals. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. They nest in abandoned burrows of ground squirrels or other animals, in pipes, under piles of rock or debris, and in other similar features.

#### 6.2.3.1 Survey Results

Suitable habitat was determined to be present in the BSA for the burrowing owl (Figure 6-1). Suitable habitat consists of areas vegetated by nonnative annual grassland. A habitat assessment for burrowing owl was conducted in 2021 within the nonnative annual grassland areas located in the southern portion of the BSA.

No burrowing owl or sign was detected within the BSA during the 2021 survey. Nine burrows suitable for burrowing owl occupation were observed within the southern portion of the BSA, but they showed no sign of burrowing owl use. Although no burrowing owls were observed within the BSA at the time of the 2021 survey, burrowing owl is a highly mobile species, and there is some potential for this species to occur in the BSA in the future. Therefore, a pre-construction focused survey would be required to verify the species' absence from the proposed Project site prior to ground disturbance.

#### 6.2.3.2 No Build/No Project Alternative

##### 6.2.3.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to burrowing owl; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

##### 6.2.3.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to burrowing owl however, these



planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3, Regulatory Setting.

### 6.2.3.3 Proposed Project

#### 6.2.3.3.1 Construction Impacts

The focused surveys determined that burrowing owl was absent from the BSA at the time of the surveys; however, the species has potential to occur in the BSA at the time of construction. As shown in Figure 6-1, potential burrowing owl burrows occur in the area near Haven Avenue and Airport Drive where the construction of the tunnel would be underground. However, if present at the time of construction, Project-related effects to the burrowing owl could be direct (e.g., loss of occupied burrows with nests, eggs, or young) or indirect (e.g., construction noise). To address these potential effects, MM-BIO-2 would be implemented and requires a burrowing owl pre-construction survey. The vent shaft design options 2 and 4, stations, or the MSF are not located near the area where burrowing owls occur; therefore, temporary direct and/or indirect effects to burrowing owl are not anticipated during construction of these Project components.

#### 6.2.3.3.2 Operational Impacts

As stated above, potential burrowing owl burrows occur in the area near Haven Avenue and Airport Drive. However, the tunnel would be operating underground through this location and therefore, permanent effects to burrowing owl from operation of the tunnel would not occur. In addition, the vent shaft design options 2 or 4, stations, and MSF are not located near the potential burrowing owl habitat. Therefore, impacts to burrowing owl at these Project feature locations would not occur.

### 6.2.4 Discussion of Bats

The loss of roosting and foraging habitat is among the biggest threats to bat populations, particularly in heavily urbanized Southern California. As natural roost sites become scarcer due to urban development and changes in land use, the use of human-made structures (e.g., bridges, culverts, and buildings) for roost sites by some bat species has increased as bats seek alternative roosting options. The importance and ecological value of anthropogenic structures as roosts has consequently increased to the point that many of these “artificial” roost sites are becoming essential to the survival of local bat populations. However, these human-made roosting sites are also highly vulnerable because bats may be driven out or killed once they are discovered occupying these structures. Therefore, as urban and suburban development occurs across the landscape, many of these areas may act as habitat “sinks,” where bats may at first appear to be relatively common and may even be attracted to human-made structures, but then decrease in abundance over time as development of that area continues. The protection of bat roosting habitat,

particularly habitat identified as maternity or nursery sites, is vitally important to prevent adverse effects to, and further loss of, remaining bat populations.

Various regulations afford protections to bats, which are classified as indigenous non-game mammal species regardless of their status under both CESA and FESA. These regulations include Title 14, Section 251.1 of the CCR, which prohibits harassment (defined in that section as an intentional act that disrupts an animal's normal behavior patterns, including breeding, feeding, or sheltering) of nongame mammals (e.g., bats), and California Fish and Game Code Section 4150, which prohibits "take" or possession of all nongame mammals or parts thereof. Any activities resulting in bat mortality (e.g., the destruction of an occupied bat roost that results in the death of bats), disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), or various modes of nonlethal pursuit or capture may be considered "take" as defined in Section 86 of the California Fish and Game Code by the CDFW.

Refer to Appendix E, Focused Bat Roosting Habitat Assessment for the SBCTA ONT Connector Project, for further information regarding bats and the specific surveys conducted for this project.

#### 6.2.4.1 Survey Results

A daytime bat habitat assessment survey was conducted on September 21, 2022, at all the bridge and culvert structures with the potential to house roosting bats within the BSA and a 500-ft buffer.

Foraging habitat for bats is present along two unnamed drainage channels within the study area. Although these drainages are concrete-lined and contain little vegetation, they provide a perennial water source generated by urban runoff and attract insect prey. Yuma myotis (*Myotis yumanensis*) bats in particular are known to primarily consume aquatic emergent insects, are dependent upon water sources, and are frequently found in urban environments in these types of drainages. Foraging habitat for bats is also present in the ornamental landscaping throughout the study area, particularly where these trees create vegetated corridors that can attract insect prey. Some of the mature ornamental trees within the study area may also be used as day roosts by foliage-roosting species such as the hoary bat (*Lasiurus cinereus*). Western yellow bats (*Lasiurus xanthinus*), western red bats (*Lasiurus blossevillii*), and hoary bats may also roost within any of the nonnative palm trees (e.g., *Washingtonia* spp.) present throughout the BSA. Use of palm trees as roost sites has also been documented in some crevice-roosting bat species, including big brown bat (*Eptesicus fuscus*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*), Mexican free-tailed bat (*Tadarida brasiliensis*), and canyon bat (*Parastrellus hesperus*).

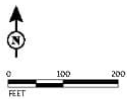
Suitable roosting habitat was found within all the structures surveyed; however, the day-roosting habitat was marginal in quality at all of the structures except the UPRR bridges over Milliken Avenue, Haven Avenue, and Archibald Avenue. The locations of all structures surveyed for this assessment, as well as the specific locations of suitable roosting habitat, are shown on Figure 6-3.

Figure 6-3: Locations Where Potential Bat Roosting Habitat Was Observed (Sheet 1 of 5)



- LEGEND
- Project Footprint
  - 500-ft Buffer
  - Potential Vibration Zone
  - Suitable Day-Roosting Habitat for Bat
  - Suitable Night-Roosting Habitat for Bats
  - Marginally Suitable Day and Night-Roosting Habitat for Bats

Sheet 1 of 5



SOURCE: Google (2023), AECOM (2022)  
 I:\AEM2201\GIS\MXD\Bio\BatRoosting\Habitat.mxd (4/17/2024)

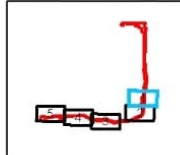




Figure 6-3: Locations Where Potential Bat Roosting Habitat Was Observed (Sheet 2 of 5)

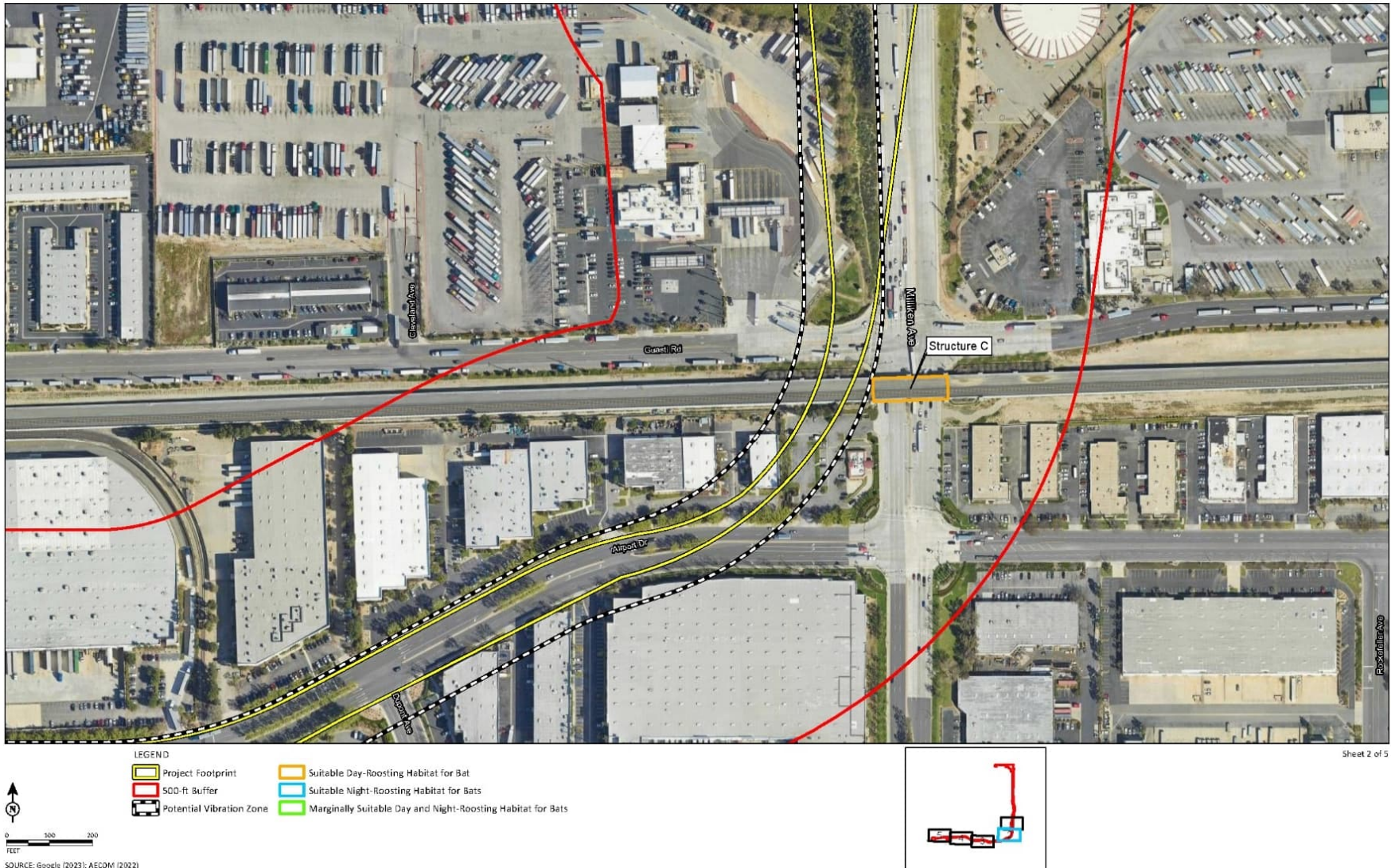
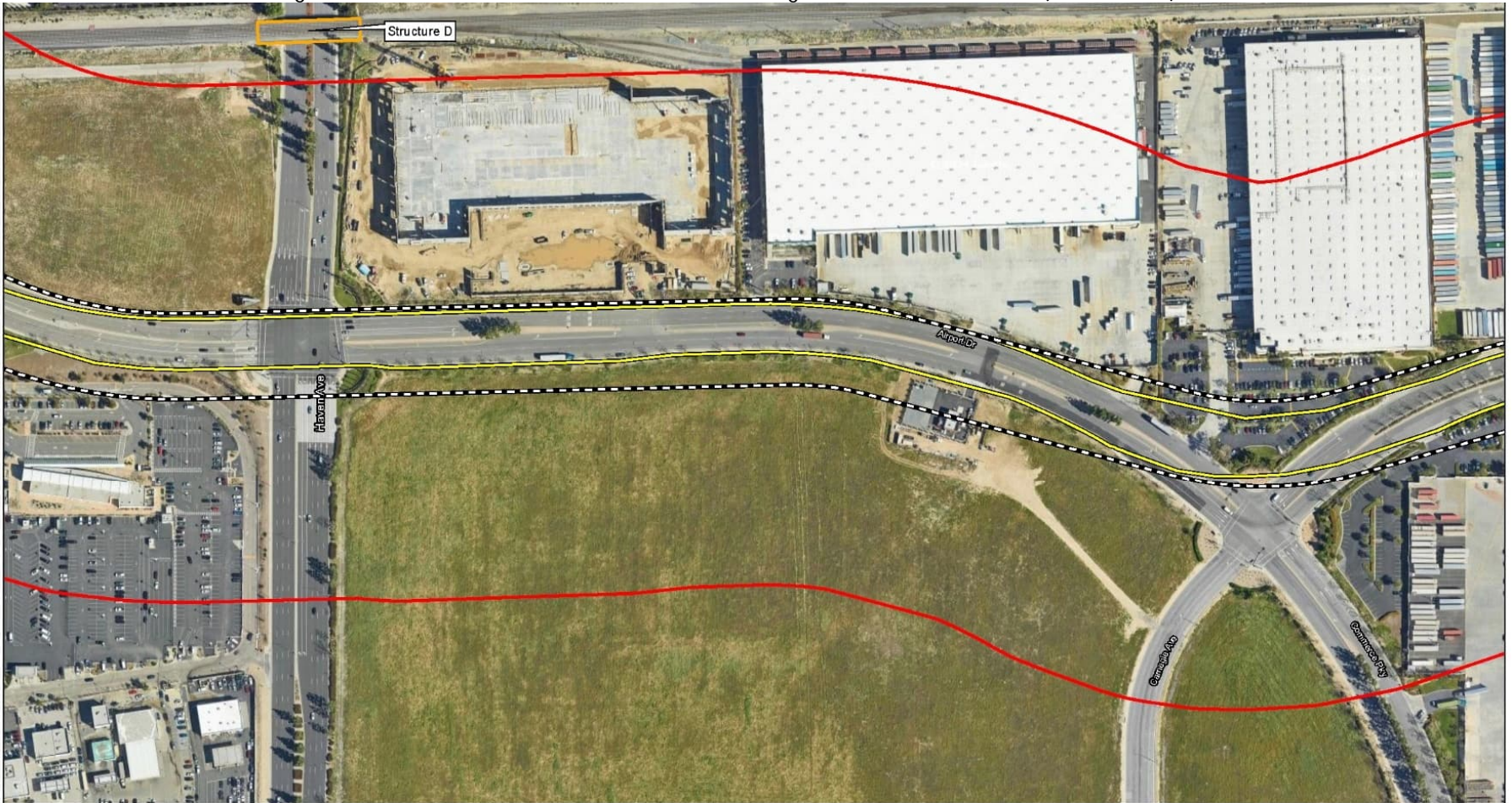




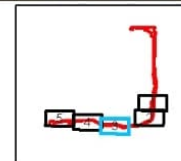
Figure 6-3: Locations Where Potential Bat Roosting Habitat Was Observed (Sheet 3 of 5)



- LEGEND
- Project Footprint
  - 500-ft Buffer
  - Potential Vibration Zone
  - Suitable Day-Roosting Habitat for Bat
  - Suitable Night-Roosting Habitat for Bats
  - Marginally Suitable Day and Night-Roosting Habitat for Bats



SOURCE: Google (2023); AEGDM (2022)  
 I:\AEM2201\GIS\WXD\Bio\BatRoosting\HabitLocs.mxd (4/17/2024)



Sheet 3 of 5



Figure 6-3: Locations Where Potential Bat Roosting Habitat Was Observed (Sheet 4 of 5)

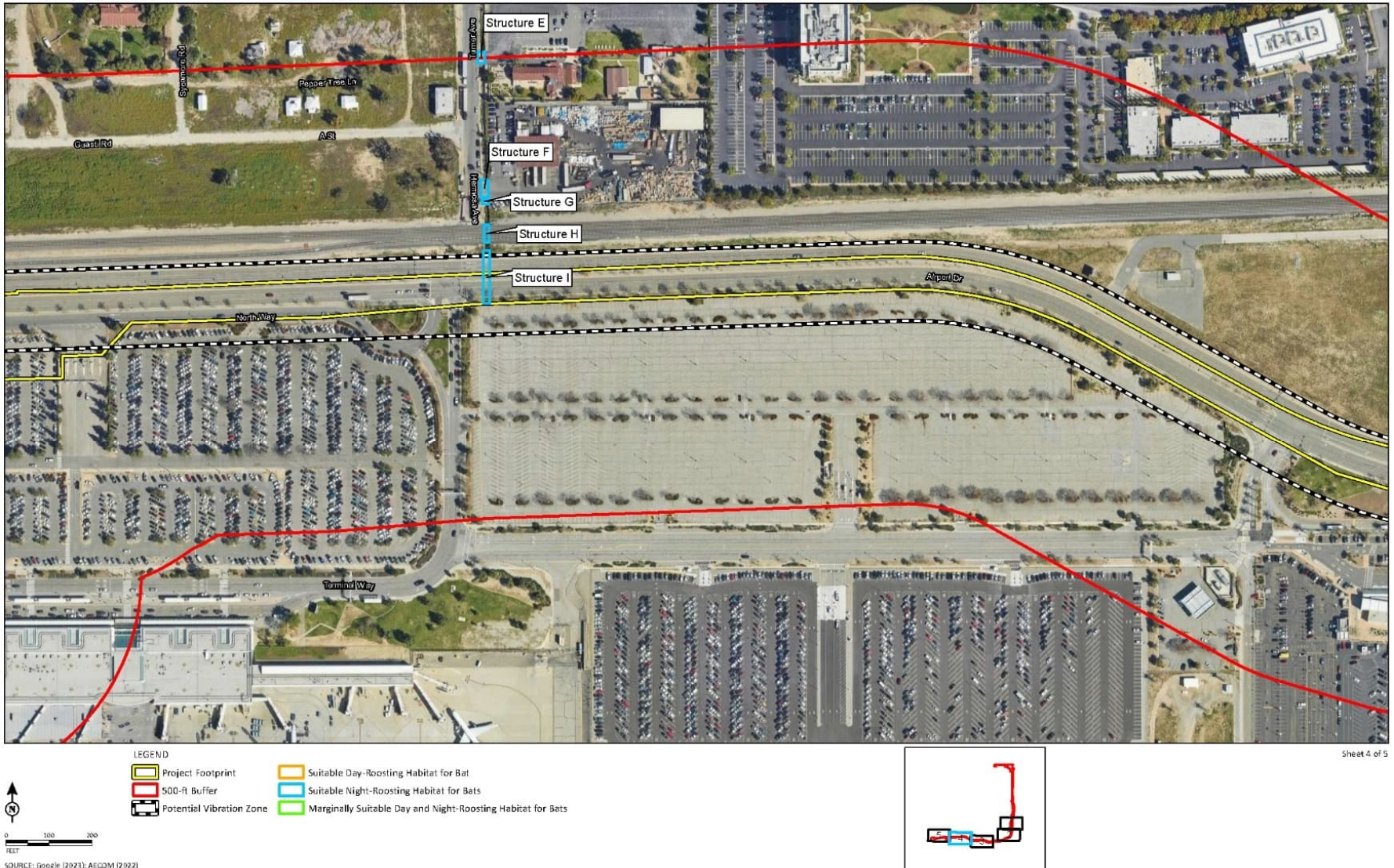
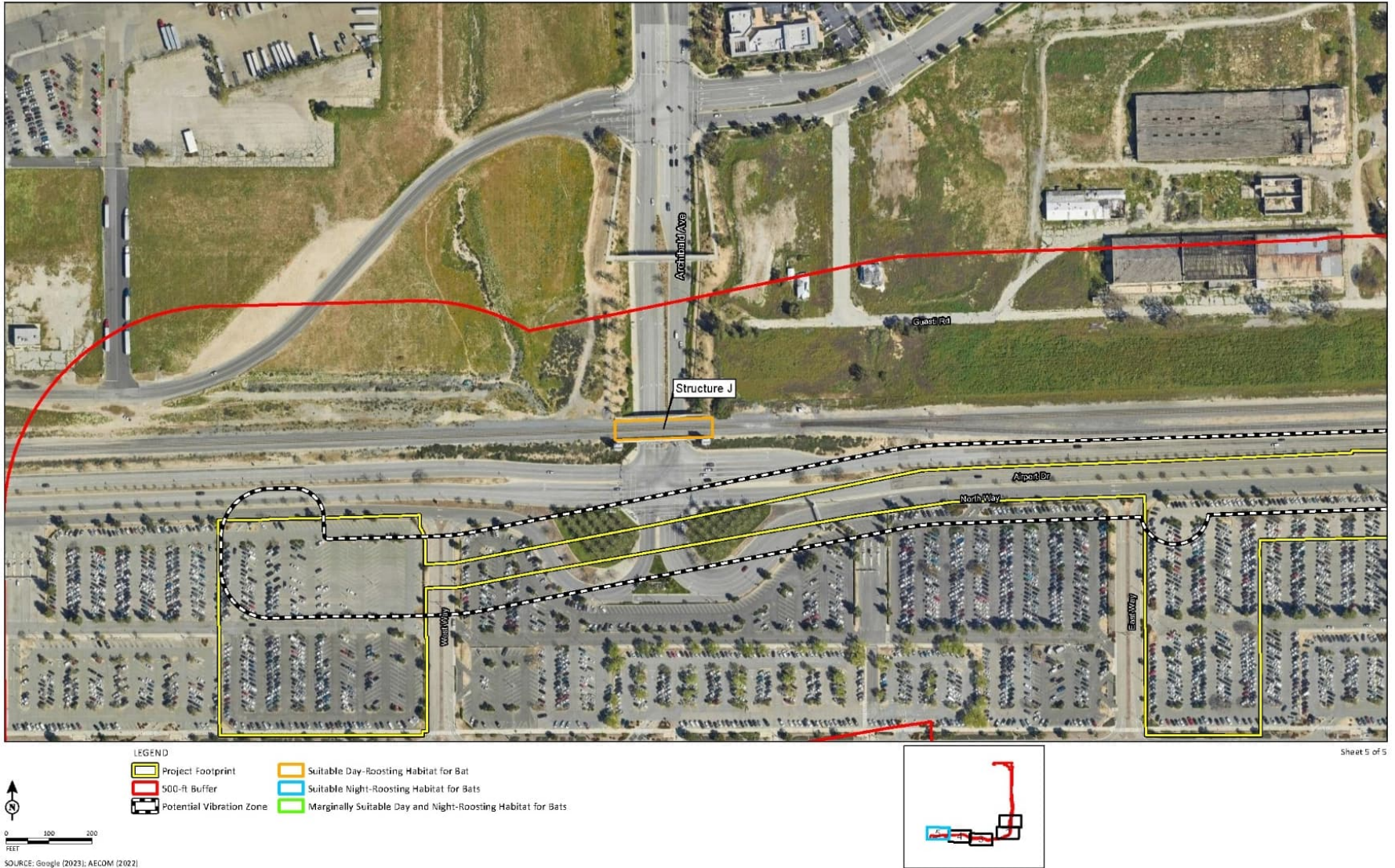




Figure 6-3: Locations Where Potential Bat Roosting Habitat Was Observed (Sheet 5 of 5)



No bats were observed during the habitat assessment, including during the spotlight examination of the bridge crevices at the UPRR bridges over Milliken Avenue, Haven Avenue, and Archibald Avenue. However, because remnant filler material inside some of these crevices can obscure the presence of bats during a spotlight inspection, individuals or small numbers of bats may have been present that were not observed. No guano or staining was observed that would indicate a large number of bats or the presence of a maternity colony; however, it should be noted that because this assessment was performed outside of the bat maternity season (April 1–August 31), it is not possible to confirm the presence or absence of a maternity colony at this time.

#### 6.2.4.2 No Project Alternative

##### 6.2.4.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to bats; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3.

##### 6.2.4.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to bats however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3.

#### 6.2.4.3 Proposed Project

##### 6.2.4.3.1 Construction Impacts

As stated in Section 6.2.4.1, suitable roosting habitat was found within all the structures surveyed; however, the day-roosting habitat was marginal in quality at all of the structures except the UPRR bridges over Milliken Avenue (Structure C), Haven Avenue (Structure D), and Archibald Avenue (Structure J). Bat roosting habitat features (Figure 6-3) will not be subject to direct effects from construction; however, bats roosting in structures A, B, C, and I within the zone of vibration during the tunnel boring may be subject to vibration-related effects. As shown on Figure 6-3, only Structure A is immediately adjacent to vent shaft design options 2 and 4. Although Structure A would not be subject to direct effects from construction, bats roosting in Structure A (I-10/Milliken Avenue) would be within the zone of vibration during construction and may be subject to vibration-related effects. Although Structure A, is very unlikely to



support bat roosting habitat and as a result is not likely to affect bat roosting, it is within the potential vibration impact limits. Therefore, to address potential effects to bats, MM-BIO-3 would be implemented and would require a nighttime and acoustic survey to determine whether a maternity colony is present at the UPRR bridge over Milliken Avenue.

Since there are no identified bat roosting habitat features near the proposed station sites or MSF, bats will not be subject to direct effects from construction of these Project components. Although discussions of construction-related effects to bats often mention substrate vibration and noise concurrently, effects to bats from vibration generated by construction activities have not been well studied and are poorly understood relative to noise-related impacts (H.T. Harvey & Associates 2019). Following a study in which vibrations generated by construction activities were recorded to determine if these vibrations were disturbing hibernating bats, the authors noted that knowledge of bat resonant frequency, which was not available at the time of that study, is needed to better assess potential disturbances to bats (Adams et al. 2018). Part of this assertion was based on research performed by Norton et al. (2011) demonstrating that mice were more vulnerable than humans to vibration disturbance from jackhammering due to differences in the resonant frequency between mice and humans. Because these data are lacking for bats, potential effects are assumed.

Ongoing night lighting can be very disruptive to foraging and roosting behaviors. Various studies (e.g., Boldogh et al. 2007; Rydell et al. 2017; Voigt et al. 2018) have concluded that because bright artificial lighting at roost structures has significant negative effects on bats, including the potential for reduced survivorship in a maternity colony, the addition of lighting near an established roost should be considered during the environmental impact review process. Because no aboveground construction is proposed near any of the structures containing potential bat roosting habitat, effects from nighttime lighting or additional light fixtures are not anticipated from the proposed Project.

Foliage-roosting bat species (such as western yellow bats and hoary bats) may roost in trees, including nonnative palm trees, throughout the study. If mature ornamental trees (particularly palm trees) are removed or trimmed for project construction, potential “take” of bats could occur. However, tree removal will be limited to the parking lots where construction of the stations will occur.

#### **6.2.4.3.2 Operational Impacts**

Since much of the Proposed Project will be underground, bat roosting habitat features will not be subject to direct effects from operation. For vent shaft design options 2 or 4 that would be located in the vicinity of suitable bat roosting habitat, potential noise during operations would not exceed that of existing conditions. Since there are no identified bat roosting habitat features near the proposed station sites and MSF, bats will not be subject to direct effects from construction.

## 6.2.5 Discussion of Other Nonlisted Special-Status Animal Species

While not observed during field surveys, there is at least some potential of occurrence for the following nonlisted special-status species within portions of the BSA associated with CSS, nonnative annual grassland, and ornamental vegetation (refer to Table 4-2 for discussions of suitable habitat for each species):

- California glossy snake (*Arizona elegans occidentalis*)
- Orange-throated whiptail (*Aspidoscelis hyperythra*)
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*)
- Red-diamond rattlesnake (*Crotalus ruber*)
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)
- Grasshopper sparrow (*Ammodramus savannarum*)
- Bell's sage sparrow (*Amphispiza belli belli*)
- Lawrence's goldfinch (*Spinus lawrencei*)
- White-tailed kite (*Elanus leucurus*)
- Cooper's hawk (*Accipiter cooperii*)
- Golden eagle (*Aquila chrysaetos*)
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)
- San Diego desert woodrat (*Neotoma lepida intermedia*)
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)

With the exception of white-tailed kite and golden eagle, these species are designated as California Species of Special Concern or California Special Animals (refer to Table 4-2). White-tailed kite and golden eagle are California Fully Protected Species, which means they may not be taken or possessed at any time, and no licenses or permits may be issued for take except for certain limited circumstances.

No permanent habitat loss for any of these species would occur with project implementation, and there is very low potential for these special-status animal species to be directly affected by the project given the limited aboveground work and access proposed within or near suitable habitat areas.

### 6.2.5.1 Survey Results

Marginal suitable habitat for California glossy snake, orange-throated whiptail, coastal whiptail, red-diamond rattlesnake, northwestern San Diego pocket mouse, San Diego desert woodrat, and Los Angeles pocket mouse is present within select portions of the BSA that support CSS and nonnative annual grassland habitat (refer to Figure 4-2). White-tailed kite and Cooper's hawk may also forage over nonnative annual grasslands and have the potential of foraging or nesting within ornamental trees in proximity to urban development. Golden eagle is not expected to nest within the BSA, as suitable nesting habitat is not present, but potential foraging habitat is present within the nonnative annual grassland areas.

Southern California rufous-crowned sparrow, grasshopper sparrow, and Lawrence's goldfinch were not observed during the 2021 or 2022 surveys. There is marginal CSS habitat that could provide foraging habitat for these species, but this habitat does not contain characteristics suitable for nesting (dense stands of cactus or chamise, etc.).

#### 6.2.5.2 No Project Alternative

##### 6.2.5.2.1 Construction Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction of these projects may result in temporary effects to other non-listed special-status animal species; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3.

##### 6.2.5.2.2 Operational Impacts

While the project would not be constructed under the No Project Alternative, the No Project Alternative includes operation of planned expansion and improvement projects for the existing roadway system and transit facilities. Operation of these projects may result in effects to non-listed special-status animal species however, these planned projects would be subject to separate environmental review and, in an effort to reduce operation-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3.

#### 6.2.5.3 Proposed Project

##### 6.2.5.3.1 Construction Impacts

No adverse modifications to suitable habitats for the species listed in Section 6.2.5 are proposed. No special-status species were observed in the area of CSS during field surveys, and CSS habitat would be avoided during construction. Although 0.50 acre of nonnative annual grassland would be temporarily affected by utility relocations and 0.81 acre affected by vent shaft design option 2, these areas do not contain suitable habitat conducive for the special-status animal species. No nonnative annual grassland would be temporarily affected by construction of vent shaft design option 4, the stations, or the MSF.

vent shaft design option 4 would result in temporary indirect effects to 0.17 acre of CSS during activities related to construction. These indirect temporary effects to suitable habitats may include increased noise, vibration, dust, and lighting during construction activities but would not be new to the area since CSS is already affected by the operation of the existing freeway off-ramp and Milliken Avenue. Potential temporary indirect effects would be addressed by implementation of MM-BIO-1.



### 6.2.5.3.2 Operational Impacts

No CSS would be permanently affected by operation of any of the Project components. Approximately 0.19 acre of nonnative annual grassland would be permanently affected by vent shaft design option 2; however, the area does not contain suitable habitat conducive for the special-status animal species listed in Section 6.2.5. Permanent indirect effects to suitable habitats from operation of the vent shaft design options may include increased noise; however, noise from the proposed vent shaft design options would not exceed existing conditions. No nonnative annual grassland would be permanently affected by vent shaft design option 4, the stations, or the MSF. Therefore, there would be no permanent effects on special-status animal species related to operation of the Project components.

## 7 MITIGATION MEASURES AND IMPACTS AFTER MITIGATION

### 7.1 MITIGATION MEASURES FOR BIOLOGICAL RESOURCES

#### 7.1.1 No Project Alternative

The mitigation strategies for the No Project Alternative would be dependent on the individual projects planned in the cities of Ontario and Rancho Cucamonga.

#### 7.1.2 Proposed Project

##### 7.1.2.1 Construction Impacts – Special-Status Bird Species and Other Nesting Birds

There is the potential for indirect effects to special-status bird species and other nesting birds and MM BIO-1 would be required for the Project (including construction of the tunnel, stations, MSF, and vent shaft design options 2 or 4).

MM BIO-1 Nesting Habitat for Protected or Sensitive Avian Species:

1. Vegetation removal and construction shall occur between September 1 and January 31 whenever feasible.
2. Prior to any construction or vegetation removal between February 15 and August 31, a nesting survey shall be conducted by a qualified biologist of all habitats within 500 feet of the construction area. Surveys shall be conducted no less than 3 days and no more than 7 days prior to commencement of construction activities and surveys will be conducted in accordance with California Department of Fish and Wildlife protocol as applicable. If no active nests are identified on or within 500 feet of the construction site, no further mitigation is necessary. A copy of the pre-construction survey shall be submitted to the lead agency San Bernardino County Transportation Authority, as well as the California Department of Fish and Wildlife and the United States Fish and Wildlife Service. If an active nest of a Migratory Bird Treaty Act protected species is identified onsite (per established thresholds) the qualified biologist will establish the appropriate exclusionary buffer based on the species and the no-work buffer shall be maintained between the nest and construction activity. This buffer can be reduced in consultation with California Department of Fish and Wildlife and/or United States Fish and Wildlife Service, if applicable.
3. Completion of the nesting cycle shall be determined by qualified ornithologist or biologist.

### 7.1.2.2 Construction Impacts – Burrowing Owl

Suitable burrowing owl habitat is located within the BSA and burrowing owl has the potential to occupy the biological study area; therefore, MM-BIO-2 a burrowing owl pre-construction survey would for the project (including construction of the tunnel, stations, MSF, and vent shaft design options 2 or 4).

#### MM BIO-2 Burrowing Owl Nesting Habitat:

1. Prior to construction activity, a focused protocol survey (four field visits) and pre-construction surveys shall be conducted for burrowing owls where suitable habitat is present within the construction areas. Surveys shall be conducted no less than 14 days prior to commencement of construction activities and surveys shall be conducted in accordance with California Department of Fish and Wildlife burrowing owl survey protocol.
2. If no occupied burrows are found in the survey area, a letter report documenting survey methods and findings shall be submitted to the lead agency San Bernardino Transportation Authority, as well as the California Department of Fish and Wildlife for review and approval, and no further mitigation is necessary.
3. If occupied burrows are found, impacts on the burrows shall be avoided by providing a buffer of 165 feet during the non-breeding season (September 1 through February 14) or 250 feet during the breeding season (February 15 through August 15). The size of the buffer area may be adjusted if a qualified biologist and California Department of Fish and Wildlife determine it would not be likely to have adverse effects on the owls. No Project Alternative activity shall commence within the buffer area until a qualified biologist confirms that the burrow is no longer occupied. If the burrow is occupied by a nesting pair, a minimum of 7.5 acres of foraging habitat contiguous to the burrow shall be maintained until the breeding season is over.
4. If disturbance of occupied burrows is unavoidable, on-site passive relocation techniques approved by California Department of Fish and Wildlife shall be used to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist verifies through non-invasive methods that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Mitigation for foraging habitat for relocated pairs shall follow guidelines provided in the California Burrowing Owl Consortium's Burrowing Owl Survey Protocol and Mitigation Guidelines, which ranges from 7.5 to 19.5 acres per pair.



### 7.1.2.3 Construction Impacts – Bats

There is the potential for indirect effects to bats; therefore, MM BIO-3, would be required for the project (including construction of the tunnel, stations, MSF, and vent shaft design options 2 or 4).

#### MM BIO-3 Bat Nesting Habitat:

1. Prior to construction, during the bat maternity season (April 1–August 31), a qualified biologist shall perform a nighttime acoustic and emergence survey at the Union Pacific Railroad bridge over Milliken Avenue to conclusively determine whether a maternity colony is present and identify any bat species present. This survey shall be performed at least one full calendar year before the start of construction to allow adequate time for mitigation planning if a maternity colony is found. If a maternity colony is found at the Union Pacific Railroad bridge over Milliken Avenue, a California Department of Fish and Wildlife-approved bat biologist will coordinate with the project team and California Department of Fish and Wildlife to determine appropriate species-specific minimization measures because different species respond differently to various construction activities. Upon approval by California Department of Fish and Wildlife, the species-specific minimization measures shall be implemented and developed in consultation with California Department of Fish and Wildlife.
2. To the greatest extent feasible, tree trimming/removal activities shall be performed outside the bat maternity season (April 1–August 31) to avoid direct impacts to nonvolant (flightless) young that may roost in trees within the study area. This period also coincides with the bird nesting season of March 15–September 15.
3. If night work (i.e., between dusk and dawn) is anticipated within 100 feet of structures where bat roosting is confirmed, night lighting shall be used only in areas of active work and focused on the direct area(s) of work and away from any roost features to the greatest extent practicable.

### 7.1.3 Operation

No significant impacts under California Environmental Quality Act or adverse effects under National Environmental Policy Act are expected from operation of the stations, tunnel, vent shaft design option 2, vent shaft design option 4, and MSF and therefore, no mitigation would be necessary.

## 7.2 CEQA SIGNIFICANCE CONCLUSIONS

- 7.2.1 Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans,

policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

#### 7.2.1.1 No Project Alternative

While the Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may result in impacts to species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3. Therefore, under the No Project Alternative construction and operation of these projects may result in impacts to species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations. A less than significant impact would occur.

#### 7.2.1.2 Proposed Project

No permanent or temporary impacts to CSS habitat, jurisdictional waters, special-status plant species, DSF, and Crotch's bumble bee would occur as a result of the Proposed Project. However, temporary impacts to burrowing owl, bats, and special-status bird species/other nesting birds may occur during construction of the Proposed Project and impacts to these species would be potentially significant. However, with implementation of MM-BIO-1 through MM-BIO-3 impacts to these species would be reduced to less than significant with mitigation and would not result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

There would be no permanent impacts to burrowing owl, bats, and special-status bird species/other nesting birds from operation of the proposed Project.

7.2.2 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

#### 7.2.2.1 No Project Alternative

The No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. The No Project Alternative area includes very limited vegetation and is currently developed. Riparian or other sensitive natural community are not anticipated to occur. In addition, the No Project Alternative would be subject to project and site-specific evaluation of biological resources and mitigation would be required to reduce any potential impacts.

Therefore, with adherence to existing regulations the No Project Alternative would have a less than significant impact.

#### 7.2.2.2 Proposed Project

The BSA is located in the South Coast subregion of the Southwestern California region of the California Floristic Province. Much of the subregion is extensively developed with urban, suburban, and agricultural uses. The natural vegetation of the subregion consists primarily of chaparral, CSS, non-native annual grassland, and some riparian scrub and woodland. Much of the natural vegetation occurs in scattered, often fragmented patches on hills or in other areas not easily developed and/or protected under regional or local land use plans. During field surveys, no riparian or sensitive natural communities were identified. The proposed Project area includes very limited vegetation and is currently developed. Riparian or other sensitive natural community are not anticipated to occur in the BSA. The proposed Project area is not anticipated to contain any riparian habitat, or other sensitive natural community. Therefore, with adherence to existing regulations, the proposed Project would result in a less than significant impact to riparian habitat or other sensitive natural community.

7.2.3 Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

#### 7.2.3.1 No Project Alternative

While the Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may result a substantial adverse effect on state or federally protected wetlands; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3. Therefore, under the No Project Alternative construction and operation of these projects may result in a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. A less than significant impact would occur.

#### 7.2.3.2 Proposed Project

The Proposed Project would not result in any discharge of fill or waste material within any delineated jurisdictional aquatic resources. Therefore, impacts to state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means would be less than significant.

#### 7.2.4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

##### 7.2.4.1 No Project Alternative

While the Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may interfere with the movement of wildlife species or corridors or impede the use of native wildlife nursery sites; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3. Therefore, under the No Project Alternative construction and operation of these projects may interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. A less than significant impact would occur.

##### 7.2.4.2 Proposed Project

Implementation of the proposed Project is not expected to permanently affect wildlife movement or decrease the functionality of any wildlife crossings because a majority of project improvements will occur underground. The proposed aboveground features are adjacent to existing transportation corridors and/or ONT and already experience high levels of noise and disturbance. Although active construction/maintenance activities may temporarily deter wildlife movement due to increased noise and human activity, wildlife is expected to continue to use corridors when construction work is not occurring, particularly at dawn and dusk. No permanent barriers would be placed within any known wildlife movement corridors because improvements will occur at the existing Cucamonga Metrolink Station, at ONT, and underground. As such, implementation of the proposed Project would not permanently affect wildlife movement or decrease the functionality of any wildlife crossings and the impact would be less than significant. Therefore, No Project Alternative-specific mitigation would be required.

#### 7.2.5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

##### 7.2.5.1 No Project Alternative

While the Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may conflict with policies protecting biological resources; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3.



Therefore, under the No Project Alternative construction and operation of these projects may conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. A less than significant impact would occur.

#### 7.2.5.2 Proposed Project

Construction and operation of the proposed Project would not result in any potential conflicts with local policies that protect biological resources. The proposed Project site does not contain trees that fall under the definition of a heritage tree, as noted in the City of Rancho Cucamonga Municipal Code Section 17.16.080, Tree Removal Permit or the City of Ontario Municipal Code, Tree Preservation Policy and Protection Measures. In addition, there are no protected trees within the proposed Project site. However, there could be removal of existing trees within the proposed Project site during construction. The City of Ontario requires prior authorization from the Public Works Agency through a permit process for the removal or relocation of any parkway trees. Compliance with existing local policies that protect biological resources such as trees would ensure that the impact for the proposed Project remains less than significant.

#### 7.2.6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

##### 7.2.6.1 No Project Alternative

While the Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may conflict with provisions of adopted conservation plans; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations related to biological resources, similar to those listed in Section 3. Therefore, under the No Project Alternative construction and operation of these projects may conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. A less than significant impact would occur.

##### 7.2.6.2 Proposed Project

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans relevant to the BSA. Therefore, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

## 8 REFERENCES

- Adams, R.F., W.S. Morrow, and C.M. Koebel. 2018. *Vibration monitoring results near a bat hibernaculum at Mammoth Cave National Park, Kentucky, March 2016*: United States. Geological Survey Scientific Investigations Report 2018–5129, 16 p. Available at: <https://doi.org/10.3133/sir20185129>.
- Boldogh, S.D., D. Dobrosi, and P. Samu. 2007. The Effects of the Illumination of Buildings on House-Dwelling Bats and Its Conservation Consequences. *Acta Chiropterologica* 9:527–534. doi:10.3161/1733-5329 (2007)9[527:TEOTIO]2.0.C;2.
- California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDB), RareFind 5 Version 5.3.0. Records of occurrence for the USGS: *Riverside West, Prado Dam, Guasti, Ontario, Fontana, Mt. Baldy, Devore, Cucamonga Peak, and Corona North* 7.5-minute quadrangle maps. Sacramento, CA: CDFW, Natural Heritage Division. Accessed May 2024.
- \_\_\_\_\_.2012. Staff Report on Burrowing Owl Mitigation. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline=true>.
- California Native Plant Society (CNPS), Rare Plant Program. 2022. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society, Sacramento, CA. Available at: <http://www.rareplants.cnps.org>. Accessed online in June 2022.
- City of Rancho Cucamonga. 1994. Rancho Cucamonga Industrial Area Specific Plan (IASP) Sub-Area 18 Specific Plan Amendment. Available at: <https://www.govinfo.gov/content/pkg/WCPD-2001-01-15/pdf/WCPD-2001-01-15-Pg77.pdf>.
- \_\_\_\_\_. 2021. City of Rancho Cucamonga General Plan. Available at <https://www.cityofrc.us/GeneralPlanprocess>.
- City of Ontario. 2022. City of Ontario General Plan (Ontario Plan). Available at: <https://www.ontarioca.gov/about-ontario-ontario-plan-policy-plan/environmental-resources>. Accessed December 12, 2022.
- Google Earth. 2022. Aerial images surrounding the project described herein. Available at: September 2022 at: <https://www.google.com/earth/>. Accessed September 2022
- H.T. Harvey & Associates. 2019. *Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions*. Prepared for the California Department of Transportation, Sacramento.
- National Oceanic and Atmospheric Administration (NOAA). Available at: [https://archive.fisheries.noaa.gov/wcr/maps\\_data/california\\_species\\_list\\_tools.html](https://archive.fisheries.noaa.gov/wcr/maps_data/california_species_list_tools.html). Accessed on June 2022.

- Natural Resources Conservation Service (NRCS), United States Department of Agriculture. Web Soil Survey. Available at: September 2022 at: <http://websoilsurvey.nrcs.usda.gov/>. Accessed September 2022.
- Norton, J.N., W.L. Kinard, and R.P. Reynolds. 2011. Comparative vibration levels perceived among species in a laboratory animal facility. *Journal of the American Association for Laboratory Animal Science* 50(5): 653–659.
- Rydell, J., J. Eklöf, and S. Sánchez-Navarro. 2017. Age of Enlightenment: Long-Term Effects of Outdoor Aesthetic Lights on Bats in Churches. *Royal Society Open Science* 4(8):161077. Available at: <http://dx.doi.org/10.1098/rsos.161077>.
- San Bernardino Associated Governments (SANBAG). 2014. *Ontario Airport Rail Access Study*.
- San Bernardino County. 2020. San Bernardino County General Plan. Available at <https://lus.sbcounty.gov/planning-home/general-plan/>.
- San Bernardino County Transportation Authority (SBCTA). 2024a. *SBCTA Ontario International Airport Connector Project. Cumulative Impacts Technical Report*.
- \_\_\_\_\_.2024b. *SBCTA Ontario International Airport Connector Project. Construction Methods Technical Report*.
- Spencer et. al. 2010. *California Essential Habitat Connectivity Project Report*. Available at: <https://wildlife.ca.gov/Conservation/Planning/Connectivity/CEHC>.
- United States Fish and Wildlife Service (USFWS). 2015. USFWS Critical Habitat Mapper. Available at: <http://ecos.fws.gov/crithab/>. Accessed August 2022.
- \_\_\_\_\_.1996. Interim General Survey Guidelines for the Delhi Sands Flower-Loving Fly (DSF). Available at: <https://www.fws.gov/sites/default/files/documents/survey-guidelines-for-delhi-sands-flower-loving-fly-survey-guidelines-1996-12-30.pdf>.
- \_\_\_\_\_.2022b. USFWS Critical Habitat Polygons. Available at: <http://ecos.fws.gov/crithab>. Accessed August 2022.
- \_\_\_\_\_.2022c. USFWS National Wetlands Inventory (NWI), Online Mapper Tool. Available at: <https://www.fws.gov/wetlands/data/mapper.html>. Accessed August 2022.
- \_\_\_\_\_.2024. Environmental Conservation Online System (ECOS). Information for Planning and Conservation (IPaC) Trust Resources Report. April 2024. Available at: <http://ecos.fws.gov/ecp/>. Accessed April 2024.
- Voigt, C.C., et al. 2018. *Guidelines for Consideration of Bats in Lighting Projects*. EUROBATs Publication Series No. 8. Bonn, Germany: UNEP/EUROBATs Secretariat. 62 pp.

THIS PAGE INTENTIONALLY LEFT BLANK



# Ontario International Airport Connector Project



## APPENDIX D: BIOLOGICAL RESOURCES TECHNICAL REPORT (APPENDICES)

October 2024



Prepared for:

San Bernardino County Transportation Authority  
1170 West Third Street, Second Floor  
San Bernardino, California 92410-1715

THIS PAGE INTENTIONALLY BLANK

## APPENDIX A

### FEDERAL AND STATE LISTS OF SENSITIVE SPECIES

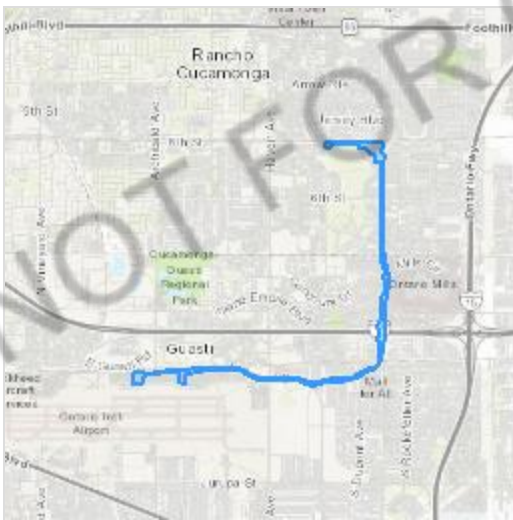
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

San Bernardino County, California



## Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250



Carlsbad, CA 92008-7385

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [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.

The following species are potentially affected by activities in this location:

## Mammals

NAME	STATUS
<p>San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i>            Wherever found            There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.  <a href="https://ecos.fws.gov/ecp/species/2060">https://ecos.fws.gov/ecp/species/2060</a></p>	Endangered

## Birds

NAME	STATUS
<p>Coastal California Gnatcatcher <i>Polioptila californica californica</i>            Wherever found            There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.  <a href="https://ecos.fws.gov/ecp/species/8178">https://ecos.fws.gov/ecp/species/8178</a></p>	Threatened
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>            Wherever found            There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.  <a href="https://ecos.fws.gov/ecp/species/6749">https://ecos.fws.gov/ecp/species/6749</a></p>	Endangered

## Reptiles

NAME	STATUS
<p>Southwestern Pond Turtle <i>Actinemys pallida</i>            Wherever found            No critical habitat has been designated for this species.  <a href="https://ecos.fws.gov/ecp/species/4768">https://ecos.fws.gov/ecp/species/4768</a></p>	Proposed Threatened

## Amphibians

NAME	STATUS
------	--------

Western Spadefoot <i>Spea hammondi</i>	Proposed Threatened
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5425">https://ecos.fws.gov/ecp/species/5425</a>	

## Insects

NAME	STATUS
Delhi Sands Flower-loving Fly <i>Rhaphiomidas terminatus abdominalis</i>	Endangered
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1540">https://ecos.fws.gov/ecp/species/1540</a>	
Monarch Butterfly <i>Danaus plexippus</i>	Candidate
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	

## Flowering Plants

NAME	STATUS
San Diego Ambrosia <i>Ambrosia pumila</i>	Endangered
Wherever found	
There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/8287">https://ecos.fws.gov/ecp/species/8287</a>	
Slender-horned Spineflower <i>Dodecahema leptoceras</i>	Endangered
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4007">https://ecos.fws.gov/ecp/species/4007</a>	

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.



You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

**Bald Eagle** *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

## Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

## Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

## Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

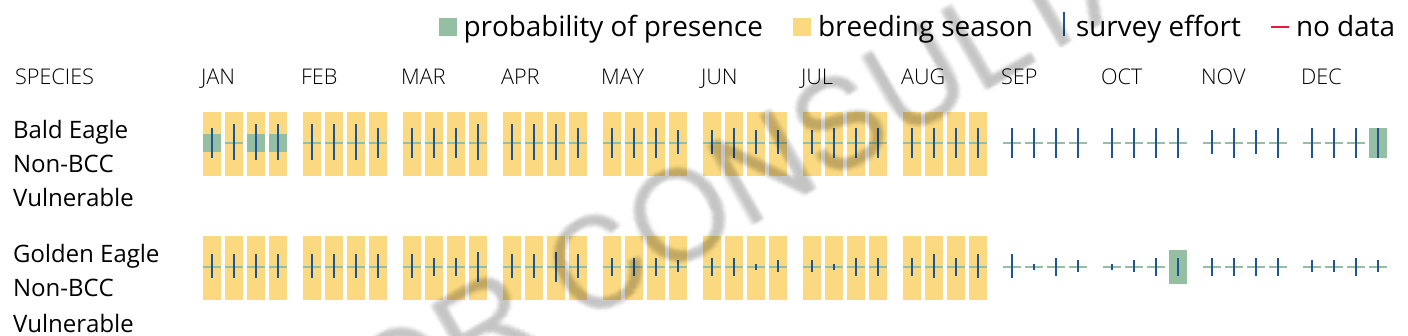
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid

cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around



your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<p><b>Allen's Hummingbird</b> <i>Selasphorus sasin</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a></p>	Breeds Feb 1 to Jul 15
<p><b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>            This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.  <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></p>	Breeds Jan 1 to Aug 31
<p><b>Belding's Savannah Sparrow</b> <i>Passerculus sandwichensis beldingi</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8">https://ecos.fws.gov/ecp/species/8</a></p>	Breeds Apr 1 to Aug 15
<p><b>Black-chinned Sparrow</b> <i>Spizella atrogularis</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9447">https://ecos.fws.gov/ecp/species/9447</a></p>	Breeds Apr 15 to Jul 31
<p><b>Bullock's Oriole</b> <i>Icterus bullockii</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Mar 21 to Jul 25
<p><b>California Gull</b> <i>Larus californicus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 1 to Jul 31

<b>California Thrasher</b> <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
<b>Clark's Grebe</b> <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
<b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a>	Breeds May 20 to Jul 31
<b>Golden Eagle</b> <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
<b>Marbled Godwit</b> <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds elsewhere
<b>Northern Harrier</b> <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8350">https://ecos.fws.gov/ecp/species/8350</a>	Breeds Apr 1 to Sep 15
<b>Oak Titmouse</b> <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a>	Breeds Mar 15 to Jul 15
<b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a>	Breeds May 20 to Aug 31

**Tricolored Blackbird** *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

**Western Grebe** *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

**Wrentit** *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season (■)**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

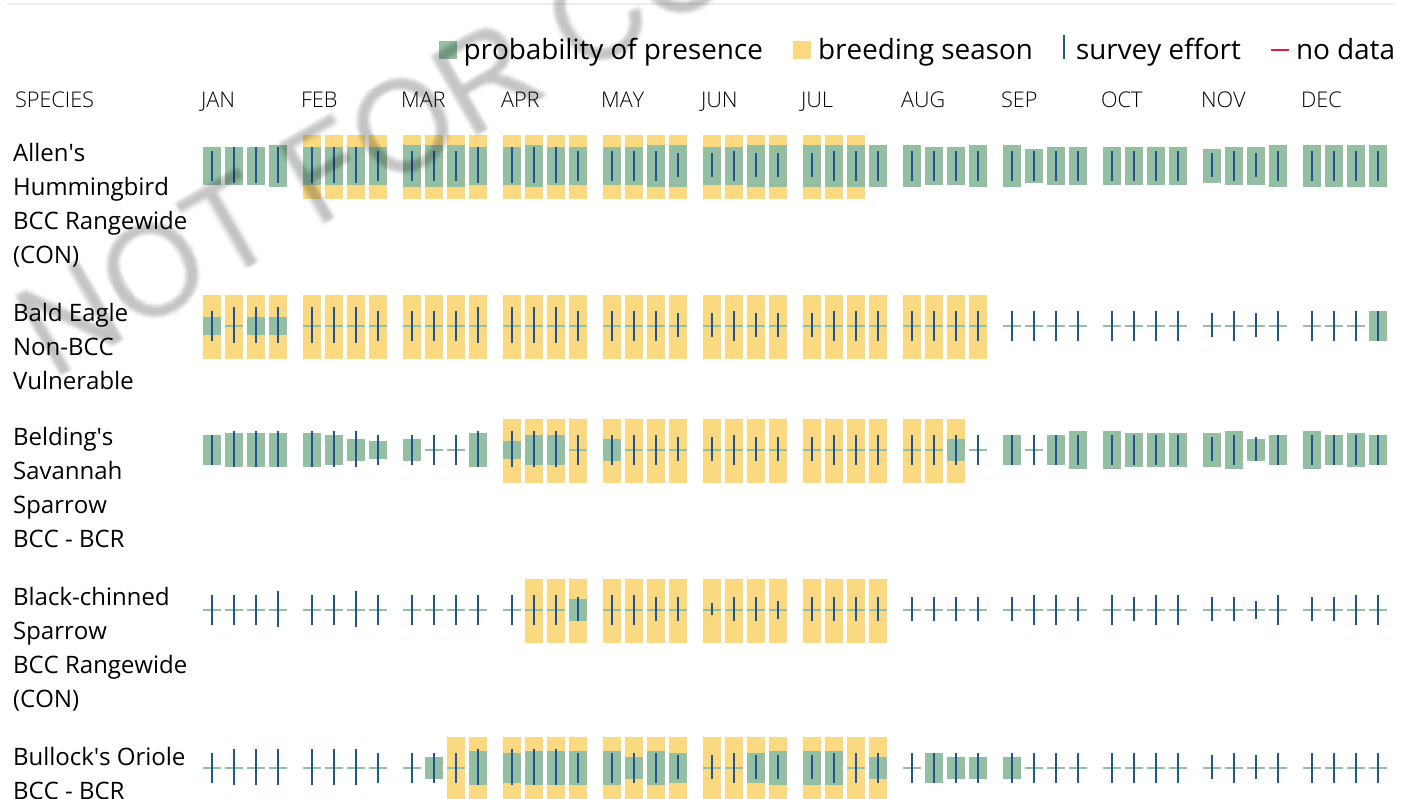
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data (-)**

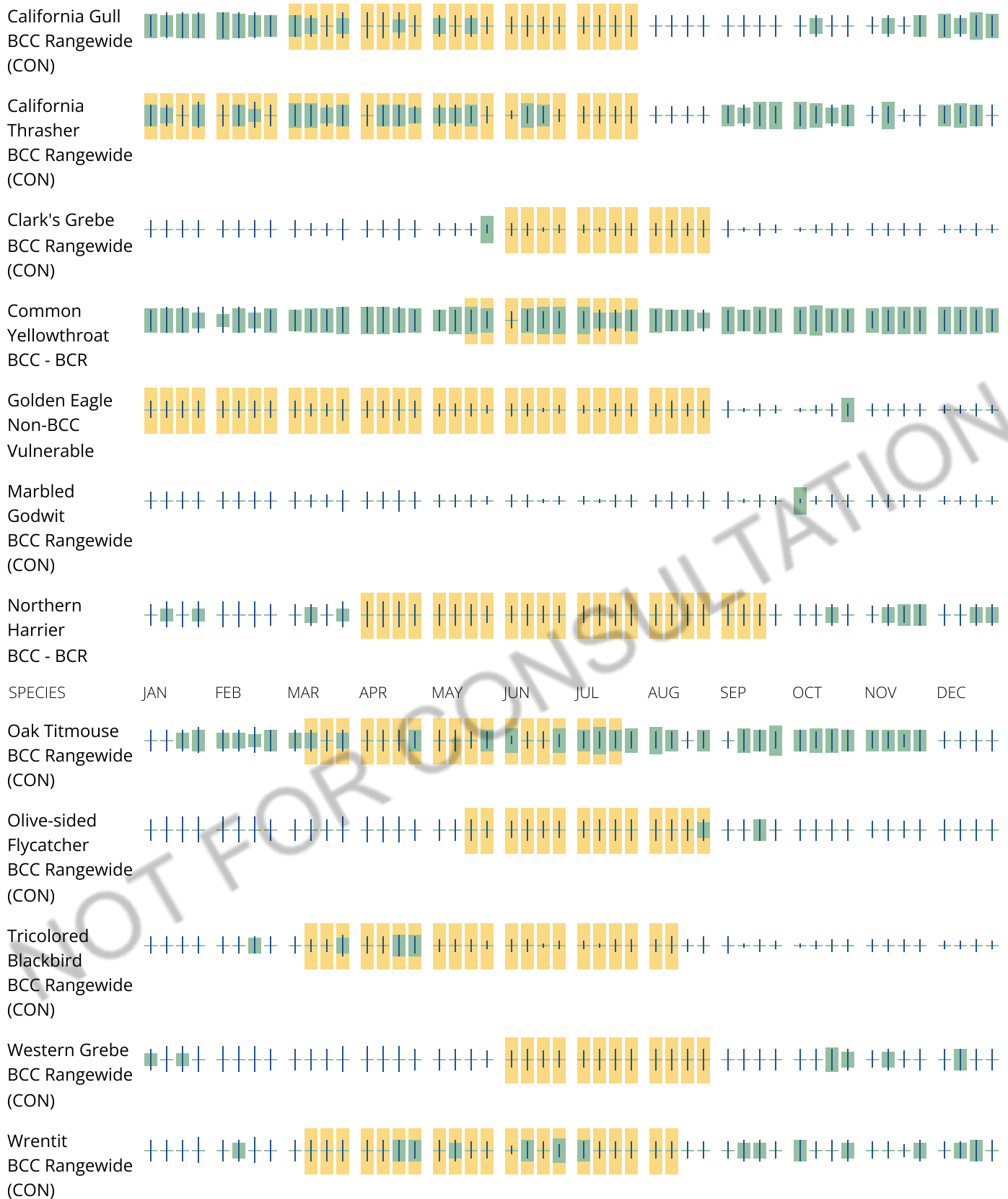
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the

locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

## Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.



The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



# Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad<span style='color:Red'> IS </span>(Mt. Baldy (3411726)<span style='color:Red'> OR </span>Cucamonga Peak (3411725)<span style='color:Red'> OR </span>Devore (3411724)<span style='color:Red'> OR </span>Fontana (3411714)<span style='color:Red'> OR </span>Prado Dam (3311786)<span style='color:Red'> OR </span>Ontario (3411716)<span style='color:Red'> OR </span>Corona North (3311785)<span style='color:Red'> OR </span>Riverside West (3311784)<span style='color:Red'> OR </span>Guasti (3411715))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abronia villosa var. aurita</i> chaparral sand-verbena	PDNYC010P1	None	None	G5T2?	S2	1B.1
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S4	WL
<i>Ambrosia monogyra</i> singlewhorl burrobrush	PDAST50010	None	None	G5	S2	2B.2
<i>Ambrosia pumila</i> San Diego ambrosia	PDAST0C0M0	Endangered	None	G1	S1	1B.1
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Anaxyrus californicus</i> arroyo toad	AAABB01230	Endangered	None	G2G3	S2	SSC
<i>Anniella stebbinsi</i> Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Aphyllon validum ssp. validum</i> Rock Creek broomrape	PDORO040G2	None	None	G4T2	S2	1B.2
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Arctostaphylos glandulosa ssp. gabrielensis</i> San Gabriel manzanita	PDERI042P0	None	None	G5T3	S3	1B.2
<i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<i>Arizona elegans occidentalis</i> California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
<i>Artemisiospiza belli belli</i> Bell's sparrow	ABPBX97021	None	None	G5T2T3	S3	WL
<i>Asio otus</i> long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Astragalus brauntonii</i></b> Braunton's milk-vetch	PDFAB0F1G0	Endangered	None	G2	S2	1B.1
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S2	SSC
<b><i>Atriplex coulteri</i></b> Coulter's saltbush	PDCHE040E0	None	None	G3	S2	1B.2
<b><i>Batrachoseps gabrieli</i></b> San Gabriel slender salamander	AAAAD02110	None	None	G2G3	S2S3	
<b><i>Berberis nevini</i></b> Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
<b><i>Bombus crotchii</i></b> Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
<b><i>Bombus pensylvanicus</i></b> American bumble bee	IIHYM24260	None	None	G3G4	S2	
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
<b><i>California Walnut Woodland</i></b> California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
<b><i>Callophrys mossii hidakupa</i></b> San Gabriel Mountains elfin butterfly	IILEPE2206	None	None	G4T1T2	S1S2	
<b><i>Calochortus clavatus var. gracilis</i></b> slender mariposa-lily	PMLIL0D096	None	None	G4T2T3	S2S3	1B.2
<b><i>Calochortus plummerae</i></b> Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
<b><i>Calochortus weedii var. intermedius</i></b> intermediate mariposa-lily	PMLIL0D1J1	None	None	G3G4T3	S3	1B.2
<b><i>Calystegia felix</i></b> lucky morning-glory	PDCON040P0	None	None	G1Q	S1	1B.1
<b><i>Campylorhynchus brunneicapillus sandiegensis</i></b> coastal cactus wren	ABPBG02095	None	None	G5T3Q	S2	SSC
<b><i>Canyon Live Oak Ravine Forest</i></b> Canyon Live Oak Ravine Forest	CTT61350CA	None	None	G3	S3.3	
<b><i>Catostomus santaanae</i></b> Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	SSC
<b><i>Centromadia pungens ssp. laevis</i></b> smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
<b><i>Ceratochrysis longimala</i></b> Desert cuckoo wasp	IIHYM71040	None	None	G1	S1	
<b><i>Chaetodipus fallax fallax</i></b> northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	
<b><i>Chaetodipus fallax pallidus</i></b> pallid San Diego pocket mouse	AMAFD05032	None	None	G5T3T4	S3S4	



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Chloropyron maritimum ssp. maritimum</i></b> salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
<b><i>Chorizanthe parryi var. parryi</i></b> Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
<b><i>Chorizanthe xanti var. leucotheca</i></b> white-bracted spineflower	PDPGN040Z1	None	None	G4T3	S3	1B.2
<b><i>Cicindela tranquebarica viridissima</i></b> greenest tiger beetle	IICOL02201	None	None	G5T1	S1	
<b><i>Cladium californicum</i></b> California saw-grass	PMCYP04010	None	None	G4	S2	2B.2
<b><i>Claytonia peirsonii ssp. peirsonii</i></b> Peirson's spring beauty	PDPOR03121	None	None	G2G3T2	S2	1B.2
<b><i>Coastal and Valley Freshwater Marsh</i></b> Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
<b><i>Coccyzus americanus occidentalis</i></b> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b><i>Coleonyx variegatus abbotti</i></b> San Diego banded gecko	ARACD01031	None	None	G5T5	S1S2	SSC
<b><i>Coturnicops noveboracensis</i></b> yellow rail	ABNME01010	None	None	G4	S2	SSC
<b><i>Crotalus ruber</i></b> red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
<b><i>Cypseloides niger</i></b> black swift	ABNUA01010	None	None	G4	S3	SSC
<b><i>Diplectrona californica</i></b> California diplectronon caddisfly	IITRI23010	None	None	G1G2	S1	
<b><i>Dipodomys merriami parvus</i></b> San Bernardino kangaroo rat	AMAFD03143	Endangered	Endangered	G5T1	S1	SSC
<b><i>Dipodomys stephensi</i></b> Stephens' kangaroo rat	AMAFD03100	Threatened	Threatened	G2	S3	
<b><i>Dodecahema leptoceras</i></b> slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
<b><i>Dudleya multicaulis</i></b> many-stemmed dudleya	PDCRA040H0	None	None	G2	S2	1B.2
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Empidonax traillii extimus</i></b> southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S3	
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
<b><i>Eriastrum densifolium ssp. sanctorum</i></b> Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1





**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Eriogonum microthecum var. johnstonii</i> Johnston's buckwheat	PDPGN083W5	None	None	G5T2	S2	1B.3
<i>Eugnosta busckana</i> Busck's gallmoth	IILEM2X090	None	None	G1G3	S2S3	
<i>Eumops perotis californicus</i> western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
<i>Euphydryas editha quino</i> quino checkerspot butterfly	IILEPK405L	Endangered	None	G4G5T1T2	S1S2	
<i>Gila orcuttii</i> arroyo chub	AFCJB13120	None	None	G2	S2	SSC
<i>Gonidea angulata</i> western ridged mussel	IMBIV19010	None	None	G3	S2	
<i>Horkelia cuneata var. puberula</i> mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
<i>Icteria virens</i> yellow-breasted chat	ABPBX24010	None	None	G5	S4	SSC
<i>Lasiurus cinereus</i> hoary bat	AMACC05032	None	None	G3G4	S4	
<i>Lasiurus xanthinus</i> western yellow bat	AMACC05070	None	None	G4G5	S3	SSC
<i>Lasthenia glabrata ssp. coulteri</i> Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
<i>Lepidium virginicum var. robinsonii</i> Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	
<i>Lilium parryi</i> lemon lily	PMLIL1A0J0	None	None	G3	S3	1B.2
<i>Linanthus concinnus</i> San Gabriel linanthus	PDPLM090D0	None	None	G2	S2	1B.2
<i>Lycium parishii</i> Parish's desert-thorn	PDSOL0G0D0	None	None	G4	S1	2B.3
<i>Malacothamnus parishii</i> Parish's bush-mallow	PDMAL0Q0C0	None	None	GXQ	SX	1A
<i>Monardella australis ssp. jokerstii</i> Jokerst's monardella	PDLAM18112	None	None	G4T1?	S1?	1B.1
<i>Monardella breweri ssp. glandulifera</i> Brown's Flat monardella	PDLAM180B1	None	None	G5T1	S1	1B.2
<i>Monardella macrantha ssp. hallii</i> Hall's monardella	PDLAM180E1	None	None	G5T3	S3	1B.3



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Monardella pringlei</i></b> Pringle's monardella	PDLAM180J0	None	None	GX	SX	1A
<b><i>Muhlenbergia californica</i></b> California muhly	PMPOA480A0	None	None	G4	S4	4.3
<b><i>Muhlenbergia utilis</i></b> aparejo grass	PMPOA481X0	None	None	G4	S2S3	2B.2
<b><i>Navarretia prostrata</i></b> prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
<b><i>Neolarra alba</i></b> white cuckoo bee	IIHYM81010	None	None	GH	SH	
<b><i>Neotoma lepida intermedia</i></b> San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
<b><i>Nyctinomops femorosaccus</i></b> pocketed free-tailed bat	AMACD04010	None	None	G5	S3	SSC
<b><i>Nyctinomops macrotis</i></b> big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
<b><i>Oncorhynchus mykiss irideus pop. 10</i></b> steelhead - southern California DPS	AFCHA0209J	Endangered	Candidate Endangered	G5T1Q	S1	
<b><i>Opuntia basilaris var. brachyclada</i></b> short-joint beavertail	PDCAC0D053	None	None	G5T3	S3	1B.2
<b><i>Oreonana vestita</i></b> woolly mountain-parsley	PDAPI1G030	None	None	G3	S3	1B.3
<b><i>Ovis canadensis nelsoni</i></b> desert bighorn sheep	AMALE04013	None	None	G4T4	S3	FP
<b><i>Perognathus longimembris brevinasus</i></b> Los Angeles pocket mouse	AMAFD01041	None	None	G5T2	S1S2	SSC
<b><i>Phacelia stellaris</i></b> Brand's star phacelia	PDHYD0C510	None	None	G1	S1	1B.1
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G4	S4	SSC
<b><i>Polioptila californica californica</i></b> coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
<b><i>Pseudognaphalium leucocephalum</i></b> white rabbit-tobacco	PDAST440C0	None	None	G4	S2	2B.2
<b><i>Rana boylei pop. 6</i></b> foothill yellow-legged frog - south coast DPS	AAABH01056	Endangered	Endangered	G3T1	S1	
<b><i>Rana muscosa</i></b> southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	G1	S2	WL
<b><i>Rhaphiomidas terminatus abdominalis</i></b> Delhi Sands flower-loving fly	IIDIP05021	Endangered	None	G1T1	S1	
<b><i>Rhinichthys osculus ssp. 8</i></b> Santa Ana speckled dace	AFCJB3705K	None	None	G5T1	S1	SSC



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Riversidian Alluvial Fan Sage Scrub</b> Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
<b>Sagittaria sanfordii</b> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<b>Senecio aphanactis</b> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<b>Setophaga petechia</b> yellow warbler	ABPBX03010	None	None	G5	S3	SSC
<b>Sidalcea neomexicana</b> salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
<b>Southern California Arroyo Chub/Santa Ana Sucker Stream</b> Southern California Arroyo Chub/Santa Ana Sucker Stream	CARE2330CA	None	None	GNR	SNR	
<b>Southern Coast Live Oak Riparian Forest</b> Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
<b>Southern Cottonwood Willow Riparian Forest</b> Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
<b>Southern Riparian Forest</b> Southern Riparian Forest	CTT61300CA	None	None	G4	S4	
<b>Southern Sycamore Alder Riparian Woodland</b> Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
<b>Southern Willow Scrub</b> Southern Willow Scrub	CTT63320CA	None	None	G3	S2.1	
<b>Spea hammondi</b> western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
<b>Sphenopholis obtusata</b> prairie wedge grass	PMPOA5T030	None	None	G5	S2	2B.2
<b>Spinus lawrencei</b> Lawrence's goldfinch	ABPBY06100	None	None	G3G4	S4	
<b>Streptanthus bernardinus</b> Laguna Mountains jewelflower	PDBRA2G060	None	None	G3G4	S3S4	4.3
<b>Symphotrichum defoliatum</b> San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
<b>Symphotrichum greatae</b> Greata's aster	PDASTE80U0	None	None	G2	S2	1B.3
<b>Taricha torosa</b> Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
<b>Thamnophis hammondi</b> two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
<b>Thysanocarpus rigidus</b> rigid fringedpod	PDBRA2Q070	None	None	G2	S2	1B.2
<b>Viola pinetorum ssp. grisea</b> grey-leaved violet	PDVIO04431	None	None	G4G5T3	S3	1B.2



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



<b>Species</b>	<b>Element Code</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Rare Plant Rank/CDFW SSC or FP</b>
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S3	

**Record Count: 125**



APPENDIX B

PLANT AND ANIMAL SPECIES OBSERVED

## APPENDIX B VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed in the Biological Study Area (BSA) by LSA biologists.

\* Introduced species not native to California

### EUDICOT FLOWERING PLANTS

#### Amaranthaceae

*Amaranthus albus\**

#### Anacardiaceae

*Rhus aromatica*

*Schinus terebinthifolius\**

#### Asteraceae

*Ambrosia acanthicarpa*

*Artemisia californica*

*Baccharis salicifolia*

*Centaurea melitensis\**

*Cirsium vulgare\**

*Ericameria nauseosa*

*Erigeron canadensis*

*Helianthus annuus*

*Heterotheca grandiflora*

*Lactuca serriola\**

*Malacothrix saxatilis* var. *tenuifolia*

*Oncosiphon pilulifer\**

*Pseudognaphalium luteoalbum\**

*Verbesina encelioides\**

#### Boraginaceae

*Amsinckia menziesii*

*Cryptantha intermedia*

#### Brassicaceae

*Hirschfeldia incana\**

*Lepidium* sp.

#### Chenopodiaceae

*Atriplex suberecta\**

*Chenopodium murale\**

*Salsola tragus\**

#### Convolvulaceae

*Convolvulus arvensis\**

#### Amaranth family

Tumble pigweed

#### Sumac family

Skunk bush

Brazilian peppertree

#### Sunflower family

Flatspine bur ragweed

California sagebrush

Mule fat

Maltese star-thistle

Bull thistle

Rubber rabbitbrush

Canadian horseweed

Common sunflower

Telegraph weed

Prickly lettuce

Cliff malacothrix

Stinknet

Jersey cudweed

Golden crownbeard

#### Borage family

Menzies' fiddleneck

Common cryptantha

#### Mustard family

Shortpod mustard

Peppergrass

#### Saltbush family

Peregrine saltbush

Nettleleaf goosefoot

Russian thistle

#### Morning-glory family

Field bindweed

**Euphorbiaceae**

*Euphorbia maculata\**  
*Ricinus communis\**

**Fabaceae**

*Acacia sp.\**  
*Acmispon americanus*  
*Melilotus albus\**  
*Melilotus indicus\**

**Geraniaceae**

*Erodium botrys\**  
*Erodium cicutarium\**

**Lamiaceae**

*Marrubium vulgare\**

**Malvaceae**

*Malva parviflora\**

**Onagraceae**

*Epilobium ciliatum*  
*Oenothera laciniata*

**Plantaginaceae**

*Kickxia elatine\**

**Polygonaceae**

*Eriogonum fasciculatum*  
*Eriogonum gracile*  
*Polygonum aviculare\**

**Portulacaceae**

*Portulaca oleracea\**

**Solanaceae**

*Datura wrightii*  
*Nicotiana glauca\**  
*Solanum americanum*  
*Solanum elaeagnifolium\**

**Tamaricaceae**

*Tamarix ramosissima\**

**Zygophyllaceae**

*Tribulus terrestris\**

**MONOCOT FLOWERING PLANTS****Arecaceae**

*Washingtonia robusta\**

**Cyperaceae**

*Cyperus eragrostis*

**Poaceae**

*Avena fatua\**

**Spurge family**

Spotted spurge  
Castor bean

**Pea family**

Acacia  
Spanish clover  
White sweetclover  
Annual yellow sweetclover

**Geranium family**

Longbeak stork's bill  
Redstem stork's bill

**Mint family**

Horehound

**Mallow family**

Cheeseweed mallow

**Evening primrose family**

Green willow herb  
Cutleaf evening primrose

**Plantain family**

Fluellin

**Buckwheat family**

California buckwheat  
Slender buckwheat  
Common knotweed

**Purslane family**

Common purslane

**Nightshade family**

Sacred thorn-apple  
Tree tobacco  
American black nightshade  
White horse-nettle

**Tamarisk family**

Mediterranean tamarisk

**Caltrop family**

Puncture vine

**Palm family**

Mexican fan palm

**Sedge family**

Tall flatsedge

**Grass family**

Wild oat

<i>Bromus diandrus</i> *	Ripgut brome
<i>Bromus rubens</i> *	Red brome
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Digitaria sanguinalis</i> *	Crab grass
<i>Echinochloa colona</i> *	Jungle rice
<i>Echinochloa crus-galli</i> *	Barnyard grass
<i>Eleusine indica</i> *	Goose grass
<i>Eragrostis</i> sp.	Lovegrass
<i>Festuca myuros</i> *	Annual fescue
<i>Hordeum murinum</i> *	Mouse barley
<i>Schismus barbatus</i> *	Common Mediterranean grass
<b>Typhaceae</b>	<b>Cattail family</b>
<i>Typha</i> sp.	Cattail

Taxonomy and scientific nomenclature generally conform to B.G. Baldwin and D.H. Goldman et al., eds. (2012; *The Jepson Manual: Vascular Plants of California*, 2<sup>nd</sup> edition; University of California Press, Berkeley and Los Angeles, California).

Common names for each taxa generally conform to Roberts, F.M., Jr. (2008; *The Vascular Plants of Orange County, California: An Annotated Checklist*; F.M. Roberts Publications, San Luis Rey, California) except where Abrams, L. (1923, 1944, and 1951; *Illustrated Flora of the Pacific States: Washington, Oregon, and California*, vols. I–III; Stanford University Press, Stanford, California) and Abrams, L. and Ferris, R.S. (1960; *Illustrated Flora of the Pacific States: Washington, Oregon, and California*, vol. IV; Stanford University Press, Stanford, California) were used, particularly when species-specific common names were not identified in Roberts, F.M., Jr. (2008).



## ANIMAL SPECIES OBSERVED

This is a list of the conspicuous aerial insects (i.e., damselflies, dragonflies, and butterflies), bony fishes, amphibians, reptiles, birds, and mammals noted in the study area by LSA biologists. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs. Please note that most species are listed in phylogenetic order of relation.

\* Species not native to the BSA

### NEUROPTERA

#### Myrmeleontidae

*Scotoleon nigrilabris*  
*Scotoleon longipalpis*

### HYMENOPTERA

#### Sphecidae

*Chalybion californicum*  
*Sceliphron caementarium*  
*Ammophila aberti*  
*Ammophila azteca*

#### Crabronidae

*unidentified sp.*  
*Bembix americana*

#### Halictidae

*unidentified spp.*  
*Agapostemon texana*  
*Lasioglossum sp.*

#### Megachilidae

*Megachile sp.*

#### Apidae

*Xylocopa californica*  
*Apis mellifera*  
*Anthophora urbana*

#### Mutillidae

*Dasymutilla californica*

#### Vespidae

*Polistes apachus*

### LACEWINGS, ANTLIONS, DOBSONFLIES, AND SNAKEFLIES

#### Antlions

Antlion  
Antlion

### BEES, WASPS, ANTS

#### Sphecid Wasps

Blue mud wasp  
Mud dauber  
Thread-waisted wasp  
Thread-waisted wasp

#### Sand Wasps

Sphecid wasp  
Sand wasp

#### Halictid Bees

Halictid bee  
Sweat bee  
Halictid bee

#### Leafcutting Bees

Leafcutting bee

#### Carpenter, Cuckoo, Digger, Bumble, and Honey Bees

Carpenter bee  
Honey bee  
Urbane digger bee

#### Velvet Ants

Orange velvet ant

#### Paper Wasps

Paper wasp

*Polistes sp.*

**Formicidae**

*Messor pergandei*

*Pogonomyrmex californicus*

**LEPIDOPTERA**

**Papilionidae**

*Papilio rumiko*

*Papilio rutulus*

**Pieridae**

*Pieris rapae* (nonnative)

*Pontia protodice*

*Colias eurytheme*

**Lycaenidae**

*Strymon melinus*

*Brephidium exilis*

*Plebejus acmon*

**Nymphalidae**

*Agraulis vanillae*

*Junonia coenia*

*Vanessa cardui*

*Danaus plexippus*

**Hesperiidae**

*Hylephila phyleus*

**Erebidae**

*Estigmene acrea*

**DIPTERA**

**Apioceridae**

*Apiocera convergens*

**Asilidae**

*Efferia albibarbis*

*Mallophora faultrix*

*Stenopogon brevisculus*

**Bombyliidae**

*Thyridanthrax atrata*

*Villa lateralis*

*Villa molitor*

**Mydidae**

Paper wasp

**Ants**

Black harvester ant

California harvester ant

**BUTTERFLIES AND MOTHS**

**Swallowtails**

Western giant swallowtail

Western tiger swallowtail

**Whites and Sulphurs**

Cabbage white

Checkered white

Orange sulphur

**Gossamer-Wing Butterflies**

Gray hairstreak

Western pygmy-blue

Acmon blue

**Brushfooted Butterflies**

Gulf fritillary

Common buckeye

Painted lady

Monarch

**Skippers**

Fiery skipper

**Underwing, Tiger, Tussock, and Allied Moths**

Salt marsh moth

**FLIES**

**Flower-Loving Flies**

Convergent flower-loving fly

**Robber Flies**

Robber fly

Bumblebee robber fly

Robber fly

**Bee Flies**

Bee fly

Bee fly

Bee fly

**Mydas Flies**

*Nemomydas pantherinus*

**Muscidae**

*Musca domestica*

**Sarcophagidae**

*Sarcophaga sp.*

Midas fly

**Muscid Flies**

House fly

**Flesh Flies**

Flesh fly

**REPTILIA**

**Phrynosomatidae**

*Sceloporus occidentalis*

*Uta stansburiana*

**REPTILES**

**Phrynosomatid Lizards**

Western fence lizard

Common Side-Blotched lizard

**AVES**

**Columbidae**

\* *Streptopelia decaocto*

*Zenaida macroura*

**BIRDS**

**Pigeons and Doves**

Eurasian collared dove

Mourning dove

**Accipitridae**

*Buteo jamaicensis*

*Accipiter cooperii*

**Hawks, Kites, Eagles, and Allies**

Red-tailed hawk

Cooper's hawk

**Falconidae**

*Falco sparverius*

**Falcons**

American kestrel

**Mimidae**

*Mimus polyglottos*

**Mockingbirds and Thrashers**

Northern mockingbird

**Tyrannidae**

*Sayornis saya*

*Tyrannus verticalis*

*Tyrannus vociferans*

**Tyrant Flycatchers**

Say's phoebe

Western kingbird

Cassin's Kingbird

**Corvidae**

*Corvus brachyrhynchos*

**Crows and Jays**

American crow

**Hirundinidae**

*Hirundo rustica*

*Petrochelidon pyrrhonota*

**Swallows**

Barn swallow

Cliff swallow

**Fringillidae**

*Haemorhous mexicanus*

**Fringilline and Cardueline Finches and Allies**

House finch

**MAMMALIA**

**Leporidae**

*Sylvilagus audubonii*

*Thomomys bottae*

**MAMMALS**

**Hares and Rabbits**

Audubon's cottontail

Botta's pocket gopher

**Sciuridae**

*Otospermophilus beecheyi*

**Squirrels, Chipmunks, and Marmots**

California ground squirrel



## APPENDIX C

### REPRESENTATIVE SITE PHOTOS



**Photo 1:** View of the nonnative annual grassland.



**Photo 2:** View of an unvegetated area and ornamental plantings.



**Photo 3a:** View of an unvegetated area and ornamental plantings.



**Photo 3b:** View of an unvegetated area and ornamental plantings with signs of human disturbance.





**Photo 4:** View of Feature 2, a concrete lined channel that is potentially jurisdictional.



**Photo 5:** View of the nonnative annual grassland.



**Photo 6:** View of the ornamental planting and developed areas.



**Photo 7:** View of the coastal sage scrub along the slopes of Milliken Avenue.





**Photo 8:** View of the nonnative annual grassland adjacent to Milliken Avenue.



**Photo 9:** View of the nonnative annual grassland.



**Photo 10:** View of the ornamental planting and developed areas.



**Photo 11:** View of the nonnative annual grassland.





**Photo 12:** View of the nonnative annual grassland.



**Photo 13:** View of Feature 4, a potentially nonjurisdictional feature.



**Photo 14:** View of Feature 1, a potentially nonjurisdictional feature.



**Photo 15:** View of an unvegetated area.



**Photo 16:** View of an unvegetated area and nonnative annual grassland.



**Photo 17:** View of an unvegetated area and nonnative annual grassland.

## APPENDIX D

### DELHI SANDS FLOWER-LOVING FLY REPORT





CARLSBAD  
CLOVIS  
IRVINE  
LOS ANGELES  
PALM SPRINGS  
POINT RICHMOND  
RIVERSIDE  
ROSEVILLE  
SAN LUIS OBISPO

January 28, 2022

Stacey Love, Recovery Permit Coordinator  
Carlsbad Fish and Wildlife Office  
United States Fish and Wildlife Service  
2177 Salk Avenue, Suite 250  
Carlsbad, CA 92008

Justin Garcia, Environmental Scientist  
Nongame Wildlife Program  
California Department of Fish and Wildlife  
1812 9<sup>th</sup> Street  
Sacramento, CA 95811

Subject: First-Year Focused Survey for the Delhi Sands Flower-Loving Fly for the Emerging Technology Tunnel to Ontario Airport Project in Ontario and Rancho Cucamonga (LSA Project No. HNT2102)

Dear Ms. Love and Mr. Garcia:

This letter report documents the results of a first-year Delhi sands flower-loving fly (*Raphiomidas terminatus abdominalis*) (DSF) focused survey for the Emerging Technology Tunnel to Ontario Airport project (project) site. The survey was conducted on behalf of the San Bernardino County Transportation Authority. The project site is partially in Ontario and partially in Rancho Cucamonga, San Bernardino County, California, as shown on the United States Geological Survey 7.5-minute series *Guasti, California* quadrangle (see Figure 1; all figures provided in Attachment A).

Results of the first-year DSF surveys conducted between July 22, 2021, and September 20, 2021, indicate that no DSF were observed within the survey area.

## BACKGROUND

The United States Fish and Wildlife Service (USFWS) listed the DSF as an endangered species on September 23, 1993.<sup>1</sup> The DSF is restricted to the Colton Dunes (Delhi series soils) that once covered over approximately 40 square miles within northwestern Riverside County and southwestern San Bernardino County. More than 97 percent of the area containing Delhi series soil has been converted to agriculture, developed for urban or commercial uses, or otherwise adversely altered for the species. The DSF is currently known from approximately 12 locations within its range.<sup>2</sup>

Knowledge of the life cycle of the DSF is limited. The underground larval stage may last 2 years or longer, depending on availability of food, temperature, rainfall, and other environmental conditions. The adults are active in the late summer, generally July through September. Habitat requirements of the DSF generally include areas containing sandy substrates with sparse vegetative (less than 50

---

<sup>1</sup> United States Fish and Wildlife Service. 1993. Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for the Delhi Sands Flower-Loving Fly. *Federal Register* 58(183):49881–49887.

<sup>2</sup> United States Fish and Wildlife Service. 1997. Delhi Sands Flower-Loving Fly (*Raphiomidas terminatus abdominalis*) Recovery Plan.



percent cover), usually including California buckwheat (*Eriogonum fasciculatum*), telegraph weed (*Heterotheca grandiflora*), and California croton (*Croton californicus*).<sup>2</sup>

## STUDY AREA

The study area (Figure 2) consists of the anticipated project limits and 500-foot buffer. The study area, as well as surrounding areas, is primarily developed with industrial, commercial, and residential development and associated roadway infrastructure. Suitable habitat within the study area was determined to be undeveloped mapped Delhi soils,<sup>1</sup> which had not been adversely modified (e.g., graded and landscaped) in recent years. Suitable habitat occurred in the vicinity of the intersection of Haven Avenue and Airport Drive. Habitat areas surveyed are identified, for purposes of this report, as survey areas A (0.63 acre), B (10.4 acres), C (20.8 acres), and D (3.31 acres), which total 35.14 acres.

The survey areas are highly disturbed by weed abatement practices, and vegetation was recently mowed. Vegetation cover within the survey areas was approximately 50 percent. Vegetation within survey area A was dominated by Russian thistle (*Salsola tragus*), redstem stork's bill (*Erodium cicutarium*) and mouse barley (*Hordeum murinum*). Other species noted include telegraph weed (*Heterotheca grandiflora*) and Spanish clover (*Acemispion americanus*). Vegetation within survey area B was dominated by Russian thistle and shortpod mustard (*Hirschfeldia incana*). Other species noted include flatspine bur ragweed (*Ambrosia acanthicarpa*), Canadian horseweed (*Erigeron canadensis*), telegraph weed, California croton (*Croton californicus*), and Spanish clover. Vegetation within Areas C and D was dominated almost entirely by mouse barley and bordered by golden crownbeard (*Verbesina encelioides*). Golden crownbeard occurred on the northern portions of areas C and D that are adjacent to a strip of irrigated ornamental plantings along East Airport Drive/South Commerce Parkway.

## METHODS

LSA biologists Dr. Stan Spencer and Denise Woodard conducted the surveys in accordance with the terms of LSA's Federal 10(a)(1)(A) Permit TE-777965 and the *Interim General Survey Guidelines for the Delhi Sands Flower-Loving Fly* (United States Fish and Wildlife Service December 30, 1996). The survey protocol was modified<sup>2</sup> to accommodate a late start on the DSF survey season, which begins on July 1 and ends on September 20 (see the Record of Correspondence with United States Fish and Wildlife Service [USFWS] provided in Attachment B). To make up for approximately 2 weeks of missing DSF survey data, four extra surveys were completed during weeks four and five of the survey season. The survey consisted of 23 site visits from July 22 through September 20, 2021. Survey areas A, B, C, and D, totaling 35.14 acres, were surveyed during each visit. Dr. Spencer and Ms. Woodard conducted the surveys pursuant to LSA's Federal 10(a)(1)(A) Permit TE-777965-11 (May 3, 2018–May 2, 2023). Table A provides the survey dates, times, and the weather conditions for each site visit.

---

<sup>1</sup> Natural Resources Conservation Service, United States Department of Agriculture. n.d. Web Soil Survey ver. 3.4.0. Website: <https://websoilsurvey.sc.egov.usda.gov/> (accessed October 15, 2021).

<sup>2</sup> Swaller, Amanda. July 21, 2021. Personal communication. United States Fish and Wildlife Service.

**Table A: Survey Dates, Times, and Weather Conditions**

Date 2020	Biologist	Time (24-hour) Start/Finish	Weather Conditions*		
			Cloud Cover	Wind	Temperature
July 22	DW	1000/1400	25%	3–5	85-92°F
July 23	DW	1000/1400	30%	3-5	80-92°F
July 24	DW	1000/1400	65–90%	3-5 mph	74–88°F
July 25	DW	1000/1400	25-50%	1-3 mph	76-88°
July 26	SS	1005/1400	30–95%	1-3 mph	73-87°F
July 27	DW	1000/1400	0	1-3 mph	77-90°F
July 28	DW	1000/1400	0%	3-5 mph	82-97°F
July 30	DW	1000/1400	40%	3-5	85-96°F
August 2	DW	1000/1400	0%	1-5 mph	87-102°F
August 4	SS	1005/1400	0	1-5 mph	84-99°F
August 9	SS	1006/1400	2%	1-5 mph	77–95°F
August 13	SS	1017/1325	0%	1–8 mph	85-92°F
August 17	SS	1013/1333	0%	1-3 mph	78-88°F
August 19	SS	1015/1340	40-70%	1–5 mph	75-82°F
August 23	SS	1020/1345	0%	1–3 mph	71-82°F
August 27	SS	1010/1400	0%	1–5 mph	86-100°F
September 1	SS	1010/1400	85-100%	3-8 mph	69-76°F
September 3	SS	1025/1400	0%	3–8 mph	76–92°F
September 8	SS	1025/1400	0%	1–3 mph	82-72°F
September 10	DW	1000/1400	20%	3-8 mph	85-96°F
September 14	SS	1015/1400	0%	1–3 mph	78-92°F
September 17	DW	1000/1400	2%	1–3 mph	65-81°F
September 20	SS	1020/1400	0%	3-8 mph	75-89°F

Source: Compiled by LSA (2021).

°F = degrees Fahrenheit  
mph = miles per hour

DW = Denise Woodard  
SS = Dr. Stan Spencer

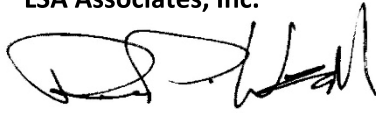
## RESULTS

Habitat conditions within the survey are considered marginal due to current and adjacent land use practices, which have resulted in degraded soils (e.g., increased compaction and organic matter) and a dominance of nonnative vegetation. Site photographs are provided in Figure 3 that show habitat conditions in the survey area. DSF was not detected within the survey area during the 2021 survey season. A complete list of insect species identified during the survey is provided in Attachment C.

If you have any questions regarding these results, please feel free to contact me at (951) 781-9310.

Sincerely,


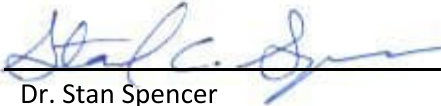
LSA Associates, Inc.



Denise Woodard  
Associate/Senior Biologist

- Attachments: A: Figures  
    Figure 1 – Project Location and Vicinity Map  
    Figure 2 – Delhi Sands Flower-Loving Fly Survey Locations  
    Figure 3 – Site Photographs  
B: Record of Correspondence with USFWS  
C: Insect Species Identified

**I CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENTS MY WORK:**

SURVEYOR:	PERMIT NUMBER	DATE:
 Denise Woodard	TE-777965	January 28, 2022
 Dr. Stan Spencer	TE-777965	January 28, 2022

---

## ATTACHMENT A

### FIGURES

Figure 1 – Project Location and Vicinity Map

Figure 2 – Delhi Sands Flower-Loving Fly Survey Locations

Figure 3 – Site Photographs



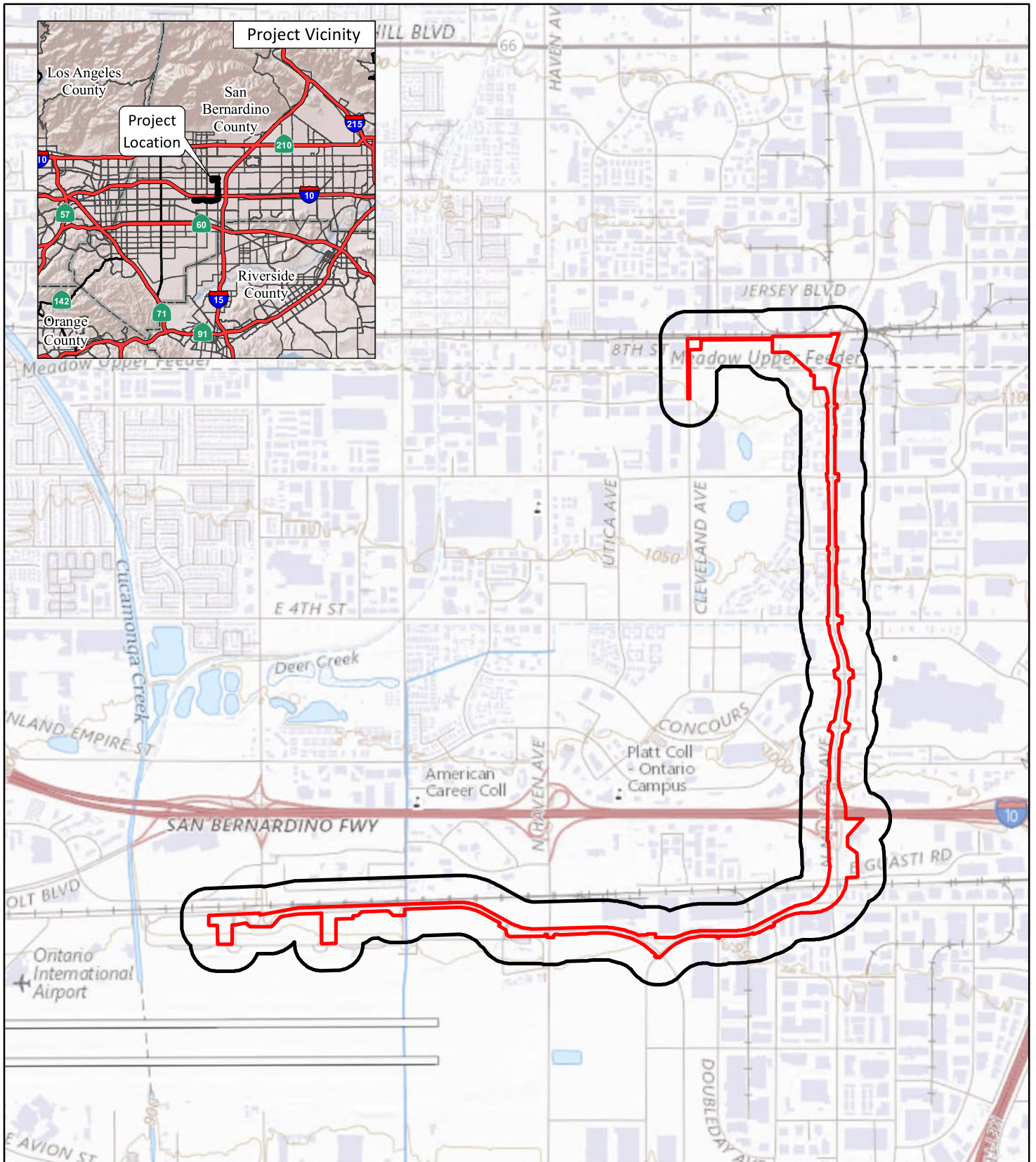


FIGURE 1

LSA

LEGEND

Biological Study Area (BSA)

Project Limits

500 ft Buffer



SOURCE: USGS The National Map (2018)

Tunnel to Ontario International Airport  
Project Location and Vicinity



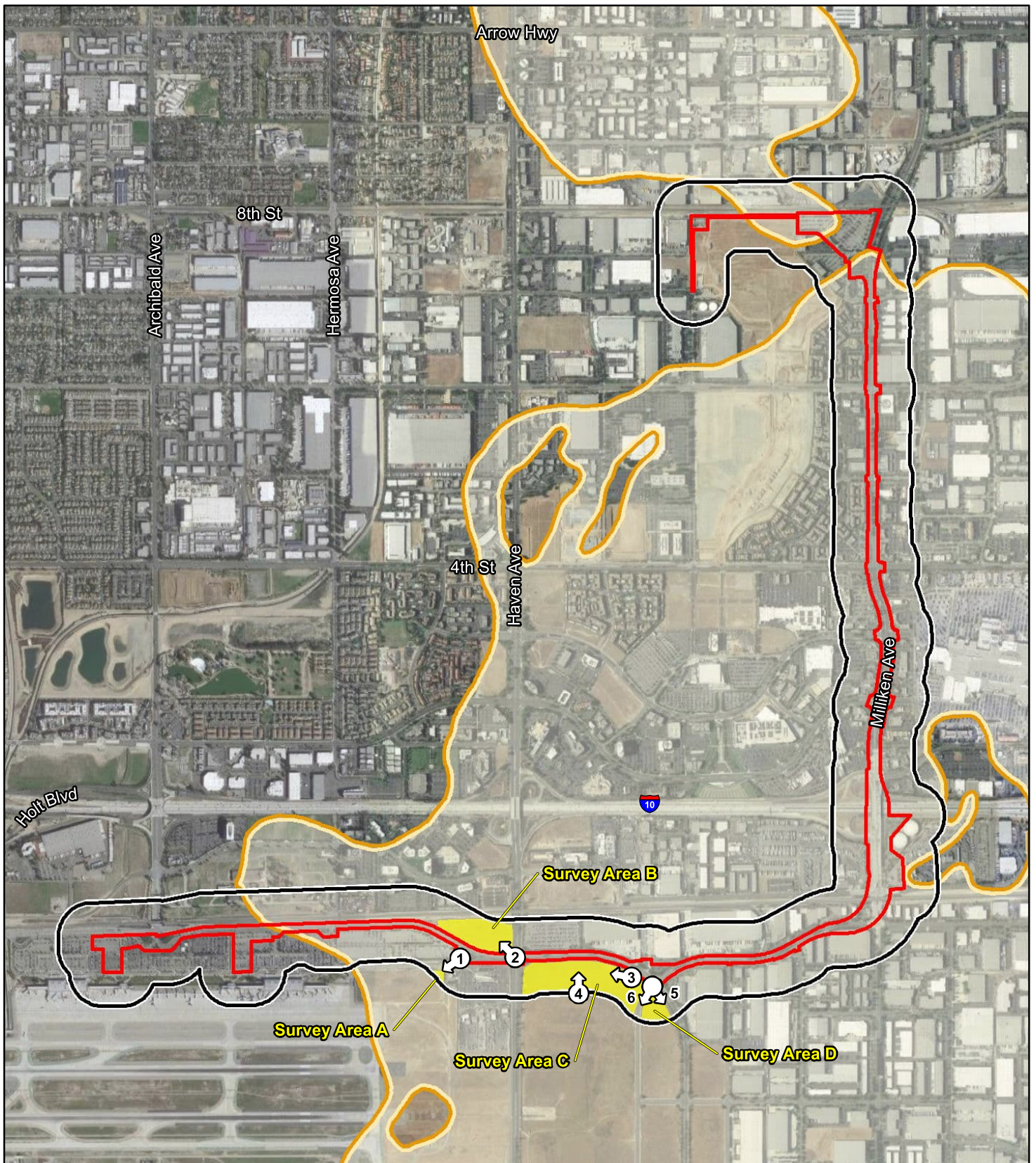
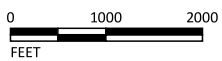


FIGURE 2

LSA

LEGEND

- Biological Study Area (BSA)  Survey Area
- Project Limits  Delhi Soils
- 500 ft Buffer ↻ Photograph Locations



SOURCE: Google Maps (2020); Esri SSURGO (2021)

Tunnel to Ontario International Airport  
Delhi Sands Flower-loving Fly  
Survey Areas and Photograph Locations





1. Survey Area A. View of general site conditions. Photograph taken on August 2, 2021.



2. Survey Area B. View of general site conditions. Photograph taken on August 2, 2021.



3. Survey Area C. View of general site conditions. Photograph taken on July 19, 2021.



4. Survey Area C. View of general site conditions. Photograph taken on August 2, 2021.



5. Survey Area D. View of general site conditions. Photograph taken on August 2, 2021.



6. Survey Area D. View of general site conditions. Photograph taken on August 2, 2021.



---

## ATTACHMENT B

### RECORD OF CORRESPONDENCE WITH USFWS

## Record of Correspondence with USFWS RE: DSF Surveys

---

---

**From:** Denise Woodard  
**Sent:** Wednesday, July 21, 2021 1:21 PM  
**To:** Densmore, Julie <JDensmore@partneresi.com>; Swaller, Amanda R <amanda\_swaller@fws.gov>  
**Cc:** Stan Spencer <Stanley.Spencer@lsa.net>  
**Subject:** RE: [EXTERNAL] SBCTA Tunnel to Ontario Airport - Notification to Conduct Survey for Delhi Sands Flower-Loving Fly

Hi Julie and Amanda~

We appreciate the opportunity to make up for the first two weeks of lost surveys. We will begin conducting surveys tomorrow and make up the 4 lost survey days during weeks 4 and 5.

Thank you,

~Denise

**Denise Woodard** | Associate/Senior Biologist

LSA | 1500 Iowa Avenue, Suite 200

Riverside, CA 92507

-----

951-781-9310 Tel

951-403-1701 Cell

[Website](#)

---

**From:** Densmore, Julie <[JDensmore@partneresi.com](mailto:JDensmore@partneresi.com)>  
**Sent:** Wednesday, July 21, 2021 12:14 PM  
**To:** Swaller, Amanda R <[amanda\\_swaller@fws.gov](mailto:amanda_swaller@fws.gov)>; Denise Woodard <[Denise.Woodard@lsa.net](mailto:Denise.Woodard@lsa.net)>  
**Cc:** Stan Spencer <[Stanley.Spencer@lsa.net](mailto:Stanley.Spencer@lsa.net)>  
**Subject:** RE: [EXTERNAL] SBCTA Tunnel to Ontario Airport - Notification to Conduct Survey for Delhi Sands Flower-Loving Fly

Thank you Amanda, I will let the biologist know. Have a great day!

---

**From:** Swaller, Amanda R <[amanda\\_swaller@fws.gov](mailto:amanda_swaller@fws.gov)>  
**Sent:** Wednesday, July 21, 2021 2:11 PM  
**To:** Denise Woodard <[Denise.Woodard@lsa.net](mailto:Denise.Woodard@lsa.net)>; Densmore, Julie <[JDensmore@partnersi.com](mailto:JDensmore@partnersi.com)>  
**Cc:** Stan Spencer <[Stanley.Spencer@lsa.net](mailto:Stanley.Spencer@lsa.net)>  
**Subject:** Re: [EXTERNAL] SBCTA Tunnel to Ontario Airport - Notification to Conduct Survey for Delhi Sands Flower-Loving Fly

Hello,

I wanted to get everyone on the same page. Julie sent me the following message this morning. "We have contacted someone from the list for this survey. Regarding the late start, the biologist would like to propose that he make up the lost first two weeks surveys by adding two additional surveys in each of the fourth and fifth weeks of the survey season or by adding four additional focused surveys during the fourth week. Please advise if this is acceptable."

Denise's email is below.

The method described in Julie's email is acceptable to the Service. Whichever solution the biologist sees fix in included the missed surveys will be acceptable.

As of today, there has not been any observations of DSF reported to the Service. This could change, the time of first observation is unpredictable. If this survey starts after the first observation, then the results will be inconclusive, therefore, I recommend starting as soon as possible. If there are observations this week, I will inform all parties on this email.

Please, let me know if you have any further questions.

Happy Pride Month,

Amanda Swaller (she/her) ([why is this important](#))  
Wildlife Biologist  
Palm Springs Fish & Wildlife Office  
777 East Tahquitz Canyon Way Suite 208  
Palm Springs, CA 92262  
760/322/2070 \*404  
760/322/4648 fax

**\*\*Note my extension has changed\*\***

---

**From:** Denise Woodard <[Denise.Woodard@lsa.net](mailto:Denise.Woodard@lsa.net)>  
**Sent:** Wednesday, July 21, 2021 11:14 AM  
**To:** Swaller, Amanda R <[amanda\\_swaller@fws.gov](mailto:amanda_swaller@fws.gov)>  
**Cc:** Stan Spencer <[Stanley.Spencer@lsa.net](mailto:Stanley.Spencer@lsa.net)>  
**Subject:** [EXTERNAL] SBCTA Tunnel to Ontario Airport - Notification to Conduct Survey for Delhi Sands Flower-Loving Fly

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hi Amanda~

We have received authorization to proceed with DSF surveys from our client (HNTB) on the subject site. HNTB forwarded your email response to the survey notification, and we would like to know if any DSF have been observed to date this season. What I understand from your email is that if DSF have already been observed this season, the results of surveys starting at this time would be considered inconclusive. Please let us know if it would be acceptable to start protocol surveys this week.

Also, we would like to know of any changes to the start and end dates of survey season and/or protocol. We understand the 2004 protocol is the most current.

Thank you,

~Denise

**Denise Woodard** | Associate/Senior Biologist

[LSA](#) | 1500 Iowa Avenue, Suite 200

Riverside, CA 92507

-----

951-781-9310 Tel

951-403-1701 Cell

[Website](#)



## ATTACHMENT C

### INSECT SPECIES IDENTIFIED

Scientific Name	Common Name
<b>ARACHNIDS</b>	<b>SPIDERS, DADDY LONGLEGS, SCORPIONS, MITES AND TICKS</b>
<b>Theridiidae</b>	<b>Comb-footed Spiders</b>
<i>Latrodectus hesperus</i>	Western black widow spider
<b>ODONATA</b>	<b>DRAGONFLIES AND DAMSELFLIES</b>
<b>Coenagrionidae</b>	<b>Pond Damsels</b>
<i>Argia vivida</i>	Vivid dancer
<b>Aeshnidae</b>	<b>Darners</b>
<i>Rhionaeschna multicolor</i>	Blue-eyed darner
<i>Anax junius</i>	Common green darner
<b>Libellulidae</b>	<b>Skimmers</b>
<i>Tramea onusta</i>	Red saddlebags
<i>Pantala flavescens</i>	Wandering glider
<b>ORTHOPTERA</b>	<b>GRASSHOPPERS, CRICKETS, AND KATYDIDS</b>
<b>Acrididae</b>	<b>Short-Horned Grasshoppers</b>
<i>unidentified sp.</i>	Short-horned grasshopper
<b>HEMIPTERA</b>	<b>TRUE BUGS, CICADAS, HOPPERS, APHIDS, SCALE INSECTS</b>
<b>Miridae</b>	<b>Plant Bugs</b>
<i>Lygus sp.</i>	Lygus bug
<b>Pentatomidae</b>	<b>Stink Bugs</b>
<i>Chlorochroa sayi</i>	Say's stink bug
<b>Cicadellidae</b>	<b>Leafhoppers</b>
<i>Homalodisca lacerta</i>	Smoke-tree sharpshooter
<b>COLEOPTERA</b>	<b>BETLES</b>
<b>Scarabaeidae</b>	<b>Scarab and June Beetles</b>
<i>Cotinus mutabilis</i>	Green fruit beetle
<b>Coccinellidae</b>	<b>Ladybird Beetles</b>
<i>Hippodamia convergens</i>	Convergent ladybird beetle
<i>unidentified sp.</i>	Ladybird beetle
<b>Tenebrionidae</b>	<b>Darkling Beetles</b>
<i>Eleodes gracilis</i>	Narrow darkling beetle
<b>Chrysomelidae</b>	<b>Leaf Beetles</b>
<i>Lema trilineata</i>	Three-lined potato beetle
<b>Curculionidae</b>	<b>Weevils</b>
<i>unidentified sp.</i>	Weevil

Scientific Name	Common Name
<b>NEUROPTERA</b>	<b>LACEWINGS, ANTLIONS, DOBSONFLIES, AND SNAKEFLIES</b>
<b>Myrmeleontidae</b>	<b>Antlions</b>
<i>Scotoleon nigrilabris</i>	Antlion
<i>Scotoleon longipalpis</i>	Antlion
<b>HYMENOPTERA</b>	<b>BEES, WASPS, ANTS</b>
<b>Sphecidae</b>	<b><i>Sphecid Wasps</i></b>
<i>Chalybion californicum</i>	Blue mud wasp
<i>Sceliphron caementarium</i>	Mud dauber
<i>Ammophila aberti</i>	Thread-waisted wasp
<i>Ammophila azteca</i>	Thread-waisted wasp
<b>Crabronidae</b>	<b>Sand Wasps</b>
<i>unidentified sp.</i>	Sphecid wasp
<i>Bembix americana</i>	Sand wasp
<b>Halictidae</b>	<b>Halictid Bees</b>
<i>unidentified spp.</i>	Halictid bee
<i>Agapostemon texana</i>	Sweat bee
<i>Lasioglossum sp.</i>	Halictid bee
<b>Megachilidae</b>	<b>Leafcutting Bees</b>
<i>Megachile sp.</i>	Leafcutting bee
<b>Apidae</b>	<b>Carpenter, Cuckoo, Digger, Bumble, and Honey Bees</b>
<i>Xylocopa californica</i>	Carpenter bee
<i>Apis mellifera</i>	Honey bee
<i>Anthophora urbana</i>	Urbane digger bee
<b>Mutillidae</b>	<b>Velvet Ants</b>
<i>Dasymutilla californica</i>	Orange velvet ant
<b>Vespidae</b>	<b>Paper Wasps</b>
<i>Polistes apachus</i>	Paper wasp
<i>Polistes sp.</i>	Paper wasp
<b>Formicidae</b>	<b>Ants</b>
<i>Messor pergandei</i>	Black harvester ant
<i>Pogonomyrmex californicus</i>	California harvester ant
<b>LEPIDOPTERA</b>	<b>BUTTERFLIES AND MOTHS</b>
<b>Papilionidae</b>	<b>Swallowtails</b>
<i>Papilio rumiko</i>	Western giant swallowtail
<i>Papilio rutulus</i>	Western tiger swallowtail
<b>Pieridae</b>	<b>Whites and Sulphurs</b>
<i>Pieris rapae</i> (nonnative)	Cabbage white
<i>Pontia protodice</i>	Checkered white
<i>Colias eurytheme</i>	Orange sulphur

Scientific Name	Common Name
<b>Lycaenidae</b>	<b>Gossamer-Wing Butterflies</b>
<i>Strymon melinus</i>	Gray hairstreak
<i>Brephidium exilis</i>	Western pygmy-blue
<i>Plebejus acmon</i>	Acmon blue
<b>Nymphalidae</b>	<b>Brushfooted Butterflies</b>
<i>Agraulis vanillae</i>	Gulf fritillary
<i>Junonia coenia</i>	Common buckeye
<i>Vanessa cardui</i>	Painted lady
<i>Danaus plexippus</i>	Monarch
<b>Hesperiidae</b>	<b>Skippers</b>
<i>Hylephila phyleus</i>	Fiery skipper
<b>Erebidae</b>	<b>Underwing, Tiger, Tussock, and Allied Moths</b>
<i>Estigmene acrea</i>	Salt marsh moth
<b>DIPTERA</b>	<b>FLIES</b>
<b>Apioceridae</b>	<b>Flower-Loving Flies</b>
<i>Apiocera convergens</i>	Convergent flower-loving fly
<b>Asilidae</b>	<b>Robber Flies</b>
<i>Efferia albibarbis</i>	Robber fly
<i>Mallophora faultrix</i>	Bumblebee robber fly
<i>Stenopogon brevisculus</i>	Robber fly
<b>Bombyliidae</b>	<b>Bee Flies</b>
<i>Thyridanthrax atrata</i>	Bee fly
<i>Villa lateralis</i>	Bee fly
<i>Villa molitor</i>	Bee fly
<b>Mydidae</b>	<b>Midas Flies</b>
<i>Nemomydas pantherinus</i>	Midas fly
<b>Muscidae</b>	<b>Muscid Flies</b>
<i>Musca domestica</i>	House fly
<b>Sarcophagidae</b>	<b>Flesh Flies</b>
<i>Sarcophaga sp.</i>	Flesh fly

## APPENDIX E

### FOCUSED BAT ROOSTING HABITAT ASSESSMENT FOR THE ONT CONNECTOR PROJECT





## MEMORANDUM

**DATE:** September 29, 2022

**To:** Denise Woodard, LSA Associate/Senior Biologist

**FROM:** Jill Carpenter, LSA Senior Biologist/Bat Specialist

**SUBJECT:** Focused Bat Roosting Habitat Assessment for the ONT Connector Project, San Bernardino County, California (LSA Project Number AEM2201)

This memorandum documents the results of a bat roosting habitat suitability assessment conducted at various structures and trees for the Emerging Technology Tunnel to Ontario International Airport Project (project) in the cities of Ontario and Rancho Cucamonga in San Bernardino County, California. The proposed project proposes to bore a tunnel below Milliken Avenue and East Airport Drive to connect the Cucamonga Metrolink Station and Ontario International Airport. The proposed project also proposes to construct passenger stations at areas currently used for parking at the Metrolink Station and the airport. Most of the proposed project activities are located in urbanized settings and would be restricted to subsurface work associated with construction of the tunnel; however, the boring of a large diameter underground tunnel will likely generate vibration that extends outside of the project footprint. This vibration could result in impacts to bats roosting at bridge or culvert structures within this potential vibration zone. Consequently, a bat roosting habitat assessment was performed throughout proposed project footprint and a 500 foot buffer to identify bat roosts and evaluate potential impacts to bats. In addition to providing the results of the focused bat surveys, this memorandum includes recommendations to minimize potential impacts to bats from activities associated with the proposed project.

### BAT NATURAL HISTORY

Bats that occur in Southern California are the primary predators of nocturnal flying insects and are largely adapted to a variety of habitats. Bat populations are generally declining throughout Southern California due to various factors, including loss of natural roosting and foraging habitats, exposure to pesticides and pathogens, and extermination (Johnston et al. 2004; Miner and Stokes 2005). Because bats have low reproductive turnover (most species have only one young per year and only a few species have twins or multiple births) and high juvenile mortality. It can take many years for a colony of bats to recover from any impacts that result in mortality or even a decrease in reproductive ability. As natural roost sites become scarcer due to urban development and changes in land use, the use of human made structures (e.g., bridges, culverts) for roost sites by some bat species has increased as

bats seek alternative roosting options (Keeley and Tuttle 1999; Erickson et al. 2003). The importance and ecological value of anthropogenic structures as roosts has consequently increased to the point that many of these “artificial” roost sites are becoming essential to the survival of local bat populations (Johnston et al. 2004; Smith and Stevenson 2013). However, these human made roosting sites are also highly vulnerable because bats may be driven out or killed once they are discovered occupying these structures. Therefore, as urban and suburban development occurs across the landscape, many of these areas may act as habitat “sinks”<sup>1</sup> where bats may at first appear to be relatively common and may even be attracted to human made structures, but then decrease in abundance over time as urbanization of that area continues (Miner and Stokes 2005; Remington 2000). The protection of bat roosting habitat, particularly habitat identified as maternity or nursery sites, is vitally important to prevent adverse effects to, and further loss of any remaining bat populations.

Day roosts protect bats from predators and the elements during the day while they are resting and/or rearing their young. Examples of day roosting sites found in transportation infrastructure projects include, but are not limited to, human made structures, trees, and cliff or rock crevices. In human made structures (e.g., bridges and culverts), day roosts are typically in expansion joints, hinges, or other crevices. Some types of day roosts where bats are particularly vulnerable to disturbance include: maternity colonies, where female bats congregate in the spring and summer months to give birth and raise young, and hibernacula, where bats enter a period of hibernation during the winter months. A night roost, on the other hand, refers to a structure or structural feature (natural or human made) in which bats roost during the evening between foraging bouts. Examples of night roosts include crevices, cavities, corners, and recessed open spaces that are sheltered from the wind. Night roosts are typically situated in or near a foraging area and play an important role in the energetics and social interaction of bats. When a night roost is eliminated, the energetics for bats to successfully use the surrounding foraging area may be negatively affected. Day roosts may also double as night roosts, particularly if they are situated in or near a foraging area.

Many bats use crevices or hollow cavities in bridges and culverts as day roosts and/or the open spaces between bridge beams or girders for night roosting. In Southern California, bat species that commonly use human made structures for day and/or night roosting include the Mexican free tailed bat (*Tadarida brasiliensis mexicana*), big brown bat (*Eptesicus fuscus*), pallid bat (*Antrozous pallidus*), and Yuma myotis (*Myotis yumanensis*). Other species that may use these types of roosts occasionally include western small footed myotis (*Myotis ciliolabrum*), California myotis (*Myotis californicus*), western mastiff bat (*Eumops perotis californicus*), canyon bat (*Parastrellus hesperus*), and Townsend’s big eared bat (*Corynorhinus townsendii*).

Because bats have separate roosting and foraging habitat requirements, it is expected that some bats may use one area for foraging and another for roosting. While more extensive and direct impacts to bats occur through removal, destruction, or disturbance of roosts, indirect impacts (e.g., decline of the prey base due to loss or modification of foraging habitat) can also be substantial. Therefore, when assessing an area with regard to proposed alterations to habitat, a landscape level approach is required to adequately determine potential impacts to bats.

---

<sup>1</sup> A habitat sink refers to an area where the productivity of a given species is insufficient to offset mortality.

## METHODS

During the daylight hours on September 21, 2022, LSA Senior Biologist and bat specialist Jill Carpenter and LSA Biologist Jessica Lieuw conducted a daytime bat habitat suitability assessment at all of the bridge and culvert structures within the proposed project footprint and a 500 foot buffer (Figure 1; all figures are contained in Attachment A). During the habitat assessment, potential roost sites were identified by examining the sides and underside of each structure with a high powered light emitting diode (LED) spotlight for any structural features such as crevices or recessed spaces that may be suitable for use as day or night roosting habitat. Structural features suitable for day roosting bats include crevices (e.g., hinges or expansion joints), weep holes, or cavities, while structural features used by night roosting bats include features suitable for day roosting, as well as recessed areas (e.g., concrete girders that can trap warm air, or the walls of concrete box culverts). Each structure was also inspected for the presence of bats or any bat sign (e.g., guano, urine staining, or vocalizations) indicating current or past use of an area by roosting bats. Features suitable for use as day roosting habitat were also assessed for potential use as maternity roost sites based on indications that the observed roost feature supports or may support a large congregation of bats. Potential foraging habitat was also assessed within and adjacent to the structures on the basis of vegetation composition, presence of water, and connectivity to other areas providing suitable foraging or roosting habitat. The presence of large trees and palm trees within the study area that are suitable for foliage roosting species were noted during the assessment, although roosting activity at these locations is difficult to confirm due to the nature of this roosting behavior (i.e., these species tend to roost singly, beneath leaves, and may roost in a different location each night).

## RESULTS AND DISCUSSION

Foraging habitat for bats is present along two unnamed drainage channels within the study area. Although these drainages are concrete lined and contain little vegetation, they provide a perennial water source generated by urban runoff and also attract insect prey. Yuma myotis bats in particular are known to primarily consume aquatic emergent insects, are dependent upon water sources, and are frequently found in urban environments in these types of drainages. Foraging habitat for bats is also present in the ornamental landscaping throughout the study area, particularly where these trees create vegetated corridors that can attract insect prey. Some of the mature ornamental trees within the study area may also be used as day roosts by foliage roosting species such as the hoary bat (*Lasiurus cinereus*). Western yellow bats (*Lasiurus xanthinus*), western red bats (*Lasiurus blossevillii*), and hoary bats may also roost within any of the nonnative palm trees (e.g., *Washingtonia* spp.) present throughout the BSA. Use of palm trees as roost sites has also been documented in some crevice roosting bat species, including big brown bat, pallid bat, western mastiff bat, Mexican free tailed bat, and canyon bat.

Suitable roosting habitat was found within all of the structures surveyed; however, the day roosting habitat was marginal in quality at all of the structures except at the Union Pacific Railroad bridges over Milliken Avenue, Haven Avenue, and Archibald Avenue. The locations of all structures surveyed for this assessment, as well as the specific locations of suitable roosting habitat, are shown on Figure 1, while representative photos are provided on Figures 2-4. Table A, below, summarizes the results of the focused bat surveys.

**Table A: Summary of Bat Habitat Assessment within the BSA**

Structure No. on Map Figure	Bridge/Culvert Name Bridge No.	Structure Description	Roosting Habitat Description/Observations	Bats/Bat Sign Present?	Avoidance/Minimization Strategies Recommended at this Structure?
1	Milliken Avenue over Interstate 10  Bridge 54 0539	Concrete girder carrying Milliken Avenue over I 10	<b>Marginal day- and night-roosting habitat.</b> Weep holes provide access to interior cavity spaces and crevices are present around some of the pipes at the abutments for day roosting, and girders are suitable for night roosting; however, very low probability of roosting, particularly given its location over an active roadway, lack of adjacent high quality foraging habitat, and lack of bat sign (e.g., guano or staining).	None observed.	<b>No.</b> No direct impacts are proposed at this structure. Although this structure is within potential vibration impact limits, the potential for bats to use this structure for roosting is very unlikely.
2	Unnamed Culvert at Northeast Side of Milliken Avenue over Interstate 10	Concrete single box culvert	<b>Marginal day- and night-roosting habitat.</b> Culvert is approximately 3 feet tall, and could be used by smaller species (e.g., <i>Myotis</i> spp.). However, no crevices were observed and the culvert has large numbers of cobwebs.	None observed.	<b>No.</b> No direct impacts are proposed at this structure. Although this structure is within potential vibration impact limits, the potential for bats to use this structure for roosting is very unlikely.
3	Union Pacific Railroad Bridge over Milliken Avenue	Concrete box beam carrying railroad tracks over Milliken Avenue	<b>Suitable day-roosting (including maternity-roosting) habitat.</b> Crevices suitable for day roosting are present in longitudinal joints formed by the concrete bridge beams and also in the decorative paneling along the bridge retaining walls.	None observed.	<b>Yes.</b> Although no direct impacts are proposed at this structure, this structure is within the potential vibration impact limits. Nighttime acoustic and emergence surveys are recommended to confirm the presence/absence of a maternity colony at this structure.
4	Union Pacific Railroad Bridge over Haven Avenue  Bridge 54C0602	Concrete box beam carrying railroad tracks over Haven Avenue	<b>Suitable day-roosting (including maternity-roosting) habitat.</b> Crevices suitable for day roosting are present in longitudinal joints formed by the concrete bridge beams.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.
5	Small Unnamed Bridge over Drainage along Turner Avenue	Small concrete slab bridge over the Turner Avenue drainage, and north of East Airport Drive	<b>Suitable night-roosting habitat.</b> No crevices or cavities for day roosting. Potential night roosting along the abutments. Foraging habitat present along the drainage channel.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.
6	Small Unnamed Bridge over Drainage along Turner Avenue	Small stone arch bridge over the Turner Avenue drainage, and north of East Airport Drive	<b>Suitable night-roosting habitat.</b> No crevices or cavities for day roosting. Potential night roosting beneath the bridge. Foraging habitat present along the drainage channel.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.



Structure No. on Map Figure	Bridge/Culvert Name Bridge No.	Structure Description	Roosting Habitat Description/Observations	Bats/Bat Sign Present?	Avoidance/Minimization Strategies Recommended at this Structure?
7	Small Unnamed Bridge over Drainage along Turner Avenue	Small concrete slab bridge over the Turner Avenue drainage, and north of East Airport Drive	<b>Suitable night-roosting habitat.</b> No crevices or cavities for day roosting. Potential night roosting along the abutments. Foraging habitat present along the drainage channel.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.
8	Small Unnamed Bridge over Drainage along Turner Avenue	Small timber bridge carrying railroad over the Turner Avenue drainage, and north of East Airport Drive	<b>Suitable night-roosting habitat.</b> No crevices or cavities for day roosting. Potential night roosting along the abutments. Foraging habitat present along the drainage channel.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.
9	Culvert at Unnamed Drainage along Turner Avenue	Concrete pipe culvert carrying the Turner Ave drainage beneath East Airport Drive	<b>Suitable night-roosting habitat.</b> No crevices observed but individual bats could roost along walls of culvert.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.
10	Union Pacific Railroad Bridge over Archibald Avenue  Bridge 54C0655	Concrete box beam carrying railroad tracks over Haven Avenue	<b>Suitable day-roosting (including maternity-roosting) habitat.</b> Crevices suitable for day roosting are present in longitudinal joints formed by the concrete bridge beams.	None observed.	<b>No.</b> No direct impacts are proposed at this structure, and this structure is located outside the potential vibration impact limits.

No bats were observed during the habitat assessment, including during the spotlight examination of the bridge crevices at the Union Pacific Railroad bridges over Milliken Avenue, Haven Avenue, and Archibald Avenue. However, because remnant filler material inside some of these crevices can obscure the presence of bats during a spotlight inspection, individuals or small numbers of bats may have been present that were not observed. No guano or staining was observed that would indicate a large number of bats or the presence of a maternity colony; however, it should be noted that because this assessment was performed outside of the bat maternity season (April 1–August 31), it is not possible to confirm the presence or absence of a maternity colony at this time.

## CONCLUSIONS AND RECOMMENDATIONS

Various regulations afford protections to bats, which are classified as indigenous nongame mammal species, regardless of their status under the California or Federal Endangered Species Acts. These regulations include Title 14, Section 251.1 of the California Code of Regulations, which prohibits harassment (defined in that section as an intentional act that disrupts an animal’s normal behavior patterns, including breeding, feeding, or sheltering) of nongame mammals (e.g., bats), and California Fish and Game Code Section 4150, which prohibits “take”<sup>1</sup> or possession of all nongame mammals or parts thereof. Any activities resulting in bat mortality (e.g., the destruction of an occupied bat

<sup>1</sup> Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

roost that results in the death of bats), disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), or various modes of nonlethal pursuit or capture may be considered “take” as defined in Section 86 of the California Fish and Game Code. In addition, impacts to bat maternity colonies, which are considered native wildlife nursery sites, could be considered potentially significant under the California Environmental Quality Act.

Three structures within the proposed project footprint and vibration zone, and seven additional structures situated within a 500 foot buffer of the proposed project footprint were examined for the presence of roosting habitat. Suitable day roosting habitat for bats was observed at one of the structures within the proposed project footprint and two of the structures within the 500 foot buffer. No bats or evidence of bat use were observed at any of the structures; however, it should be noted that the assessment was performed outside of the bat maternity season (April 1 – August 31), so it is not possible to conclusively determine whether any of the suitable structures serve as maternity roosts. The remaining structures within the study area contained only night roosting habitat or potential day roosting habitat that was of marginal quality, and no bats or evidence of bat use were observed at those locations.

### **Analysis of Potential Impacts to Roosting Bats**

Bat roosting habitat features will not be subject to direct impacts from construction; however, bats roosting in structures within the zone of vibration during the tunnel boring may be subject to vibration related impacts. Although discussions of construction related impacts to bats often mention substrate vibration and noise concurrently, impacts to bats from vibration generated by construction activities have not been well studied and are poorly understood relative to noise related impacts (H.T. Harvey 2019). Following a study in which vibrations generated by construction activities were recorded to determine if these vibrations were disturbing hibernating bats, the authors noted that knowledge of bat resonant frequency, which was not available at the time of that study, is needed to better assess potential disturbances to bats (Adams et al. 2018). Part of this assertion was based on research performed by Norton et al. (2011) demonstrating that mice were more vulnerable than humans to vibration disturbance from jackhammering due to differences in the resonant frequency between mice and humans. Because these data are lacking for bats, potential impacts are assumed XXXX

Ongoing night lighting can be very disruptive to foraging and roosting behaviors. Various studies (e.g., Boldogh et al. 2007; Rydell et al. 2017; Voigt et al. 2018) have concluded that because bright artificial lighting at roost structures has significant negative effects on bats, including the potential for reduced survivorship in a maternity colony, the addition of lighting near an established roost should be considered during the environmental impact review process. Because no aboveground construction is proposed near any of the structures containing potential bat roosting habitat, impacts from nighttime lighting or additional light fixtures are not anticipated from the proposed project.

Foliage roosting bat species such as western yellow bats and hoary bats may roost in trees, including nonnative palm trees, throughout the study. If mature ornamental trees (particularly palm trees) are removed or trimmed for project construction, potential “take” of bats could occur. However, tree removal will be limited to the parking lots where construction of the stations will occur.

### Measures to Minimize Impacts to Bat Maternity Colonies and Day-roosting Bats

Although no direct impacts are proposed at the Union Pacific Railroad bridge over Milliken Avenue, this structure is within the potential vibration impact limits. Data on impacts to bats from vibration are very limited; however, it is possible that if bats use this structure as a maternity roost, high levels of vibration could disturb the colony and result in potential “take” of bats. Tree removal during the maternity season could also result in potential “take” of bats. LSA recommends the following measures to minimize potential impacts to bats from project construction:

- A nighttime acoustic and emergence survey should be performed during the bat maternity season (April 1–August 31) at the Union Pacific Railroad bridge over Milliken Avenue to conclusively determine whether a maternity colony is present and identify any bat species present. This survey should be performed at least one full calendar year before the start of construction to allow adequate time for mitigation planning if a maternity colony is found.
- If a maternity colony is found at the Union Pacific Railroad bridge over Milliken Avenue, a California Department of Fish and Wildlife (CDFW) approved bat biologist will coordinate with the project team and CDFW to determine appropriate species specific minimization measures because different species respond differently to various construction activities.
- To the greatest extent feasible, tree trimming/removal activities shall be performed outside the bat maternity season (April 1 through August 31) to avoid direct impacts to nonvolant (flightless) young that may roost in trees within the study area. This period also coincides with the bird nesting season of March 15 through September 15.
- If night work (i.e., between dusk and dawn) is anticipated within 100 feet of structures where bat roosting is confirmed, night lighting shall be used only in areas of active work, and focused on the direct area(s) of work and away from any roost features to the greatest extent practicable.

## REFERENCES

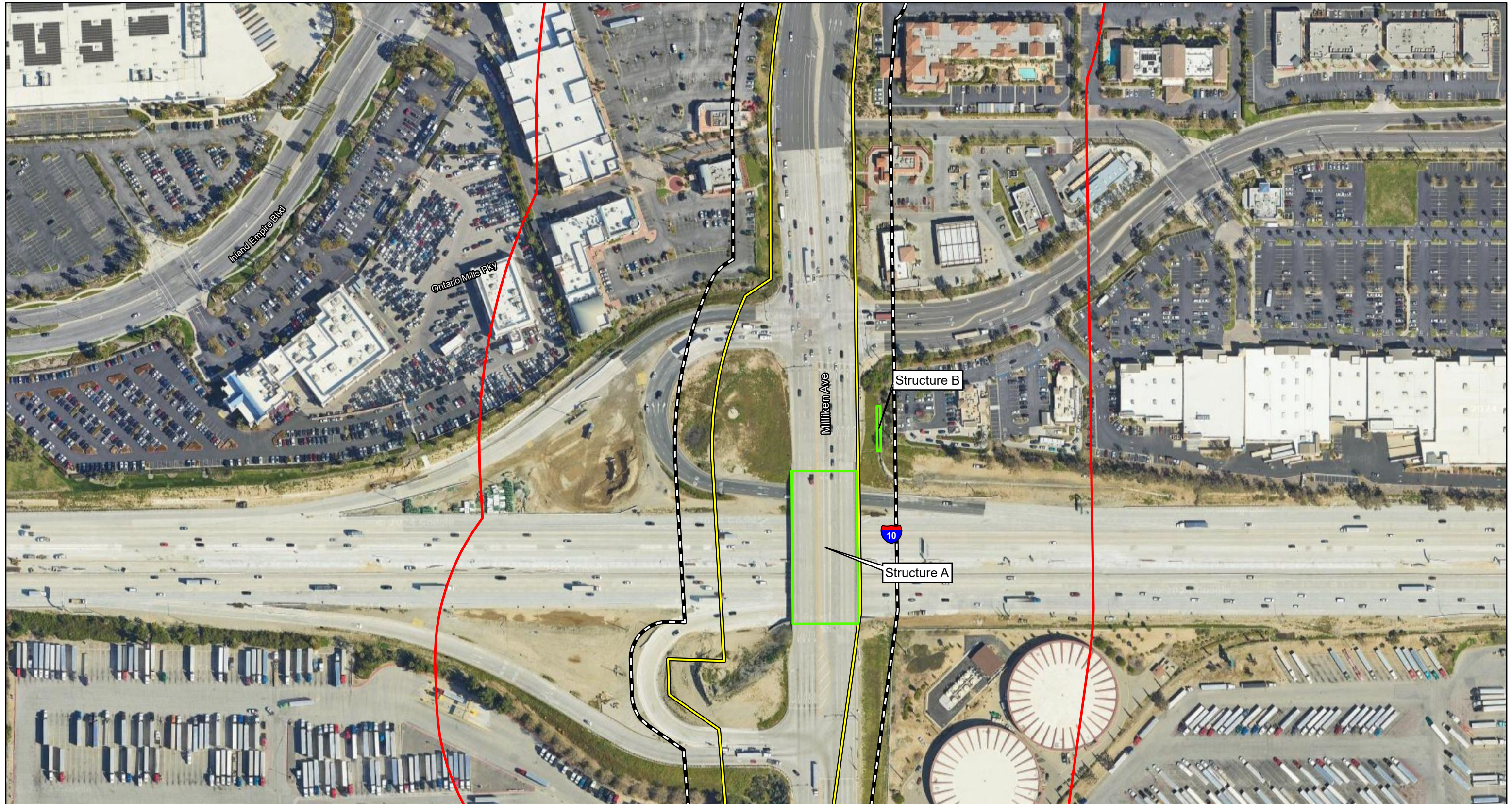
- Adams, R.F., W.S. Morrow, and C.M. Koebel. 2018, Vibration monitoring results near a bat hibernaculum at Mammoth Cave National Park, Kentucky, March 2016: U.S. Geological Survey Scientific Investigations Report 2018–5129, 16 p., <https://doi.org/10.3133/sir20185129>.
- Boldogh, S.D., D. Dobrosi, and P. Samu. 2007. The Effects of the Illumination of Buildings on House Dwelling Bats and Its Conservation Consequences. *Acta Chiropterologica* 9:527–534. doi:10.3161/1733 5329 (2007)9[527:TEOTIO]2.0.C;2.
- Erickson, G.A., E.D. Pierson, W. Rainey, and P. Brown. 2003. *Bat and Bridges Technical Bulletin (Hitchhiker’s Guide to Bat Roosts)*. Prepared for the California Department of Transportation, Sacramento. 143 pp.
- H.T. Harvey & Associates. 2019. *Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions*. Prepared for the California Department of Transportation, Sacramento.
- Johnston, D.S., G. Tatarian, and E.D. Pierson. 2004. *California Bat Mitigation: Techniques, Solutions, and Effectiveness*. Prepared for the California Department of Transportation, Sacramento, and the University Foundation at Sacramento State.
- Keeley, B., and M.D. Tuttle. 1999. *Bats in American Bridges*. Bat Conservation International. Website: <https://www.batcon.org/pdfs/bridges/BatsBridges2.pdf> (accessed December 14, 2016).
- Miner, K.L., and D.C. Stokes. 2005. *Bats in the South Coast Ecoregion: Status, Conservation Issues, and Research Needs*. United States Department of Agriculture Forest Service General Technical Report PSW GTR 195.
- Norton, J.N., W.L. Kinard, and R.P. Reynolds. 2011. Comparative vibration levels perceived among species in a laboratory animal facility. *Journal of the American Association for Laboratory Animal Science* 50(5): 653–659.
- Remington, S. 2000. *The distribution and diversity of bats in Orange County, California*. Pomona, California: California State Polytechnic University. 114 p. Master’s thesis.
- Rydell, J., J. Eklöf, and S. Sánchez Navarro. 2017. Age of Enlightenment: Long Term Effects of Outdoor Aesthetic Lights on Bats in Churches. *Royal Society Open Science* 4(8):161077. <http://dx.doi.org/10.1098/rsos.161077>.
- Smith, H.J., and J.S. Stevenson. 2013. *The thermal environment of a concrete bridge and its influence on roost site selection by bats (Mammalia Chiroptera)*. Proceedings of the 2013 International Conference on Ecology and Transportation (ICOET 2013).
- Voigt, C.C., et al. 2018. *Guidelines for Consideration of Bats in Lighting Projects*. EUROBATS Publication Series No. 8. Bonn, Germany: UNEP/EUROBATS Secretariat. 62 pp.



ATTACHMENT A

FIGURES





- LEGEND**
- Project Footprint
  - 500-ft Buffer
  - Potential Vibration Zone
  - Suitable Day-Roosting Habitat for Bat
  - Suitable Night-Roosting Habitat for Bats
  - Marginally Suitable Day and Night-Roosting Habitat for Bats



0 100 200  
FEET

SOURCE: Google (2023); AECOM (2022)

I:\AEM2201\GIS\MXD\Bio\BatRoostingHabLocs.mxd (3/14/2024)

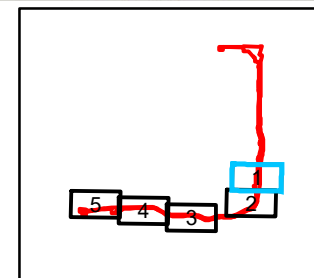
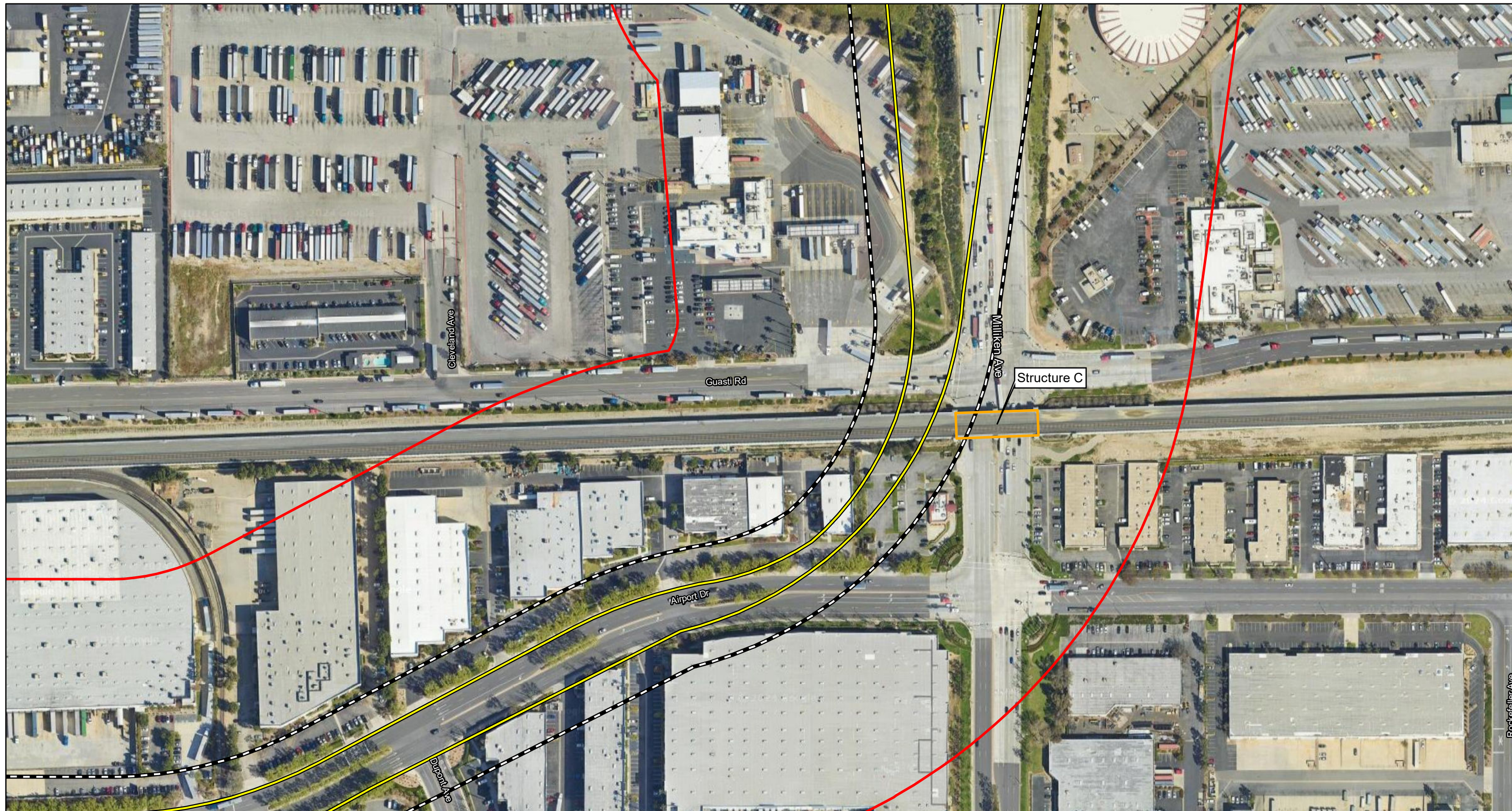


FIGURE 1  
Sheet 1 of 5

ONT Conector Project  
Locations Where Potential Bat Roosting Habitat was Observed





LEGEND

- Project Footprint
- 500-ft Buffer
- Potential Vibration Zone
- Suitable Day-Roosting Habitat for Bat
- Suitable Night-Roosting Habitat for Bats
- Marginally Suitable Day and Night-Roosting Habitat for Bats



0 100 200  
FEET

SOURCE: Google (2023); AECOM (2022)

I:\AEM2201\GIS\MXD\Bio\BatRoostingHabLocs.mxd (3/14/2024)

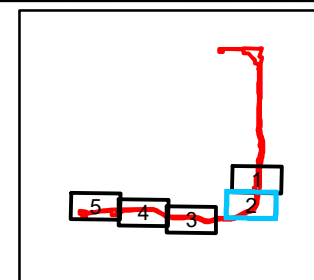
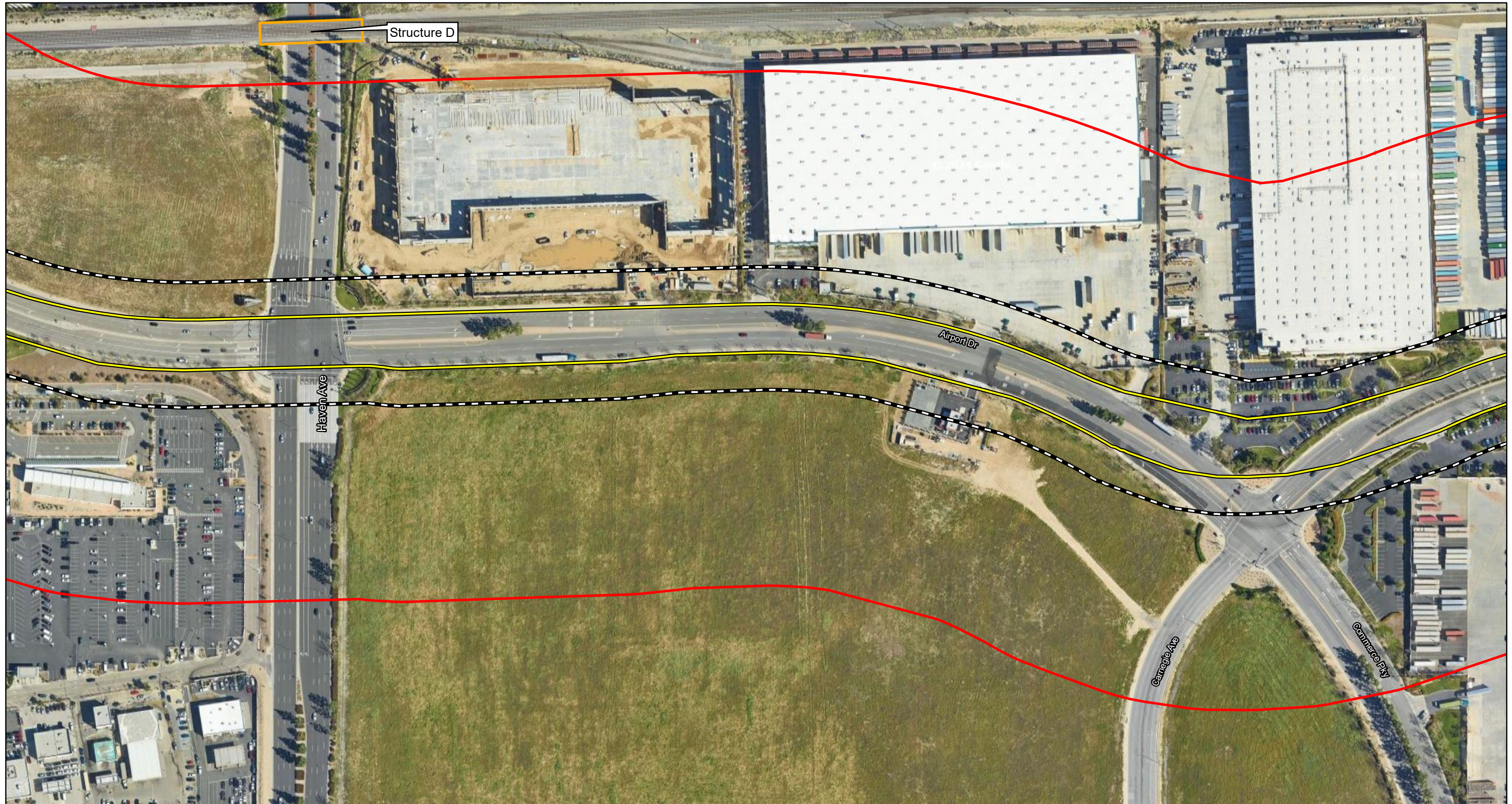


FIGURE 1  
Sheet 2 of 5

ONT Conector Project  
Locations Where Potential Bat Roosting Habitat was Observed





LEGEND

- Project Footprint
- 500-ft Buffer
- Potential Vibration Zone
- Suitable Day-Roosting Habitat for Bat
- Suitable Night-Roosting Habitat for Bats
- Marginally Suitable Day and Night-Roosting Habitat for Bats



0 100 200  
FEET

SOURCE: Google (2023); AECOM (2022)

I:\AEM2201\GIS\MXD\Bio\BatRoostingHabLocs.mxd (3/14/2024)

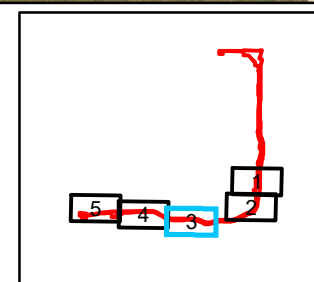
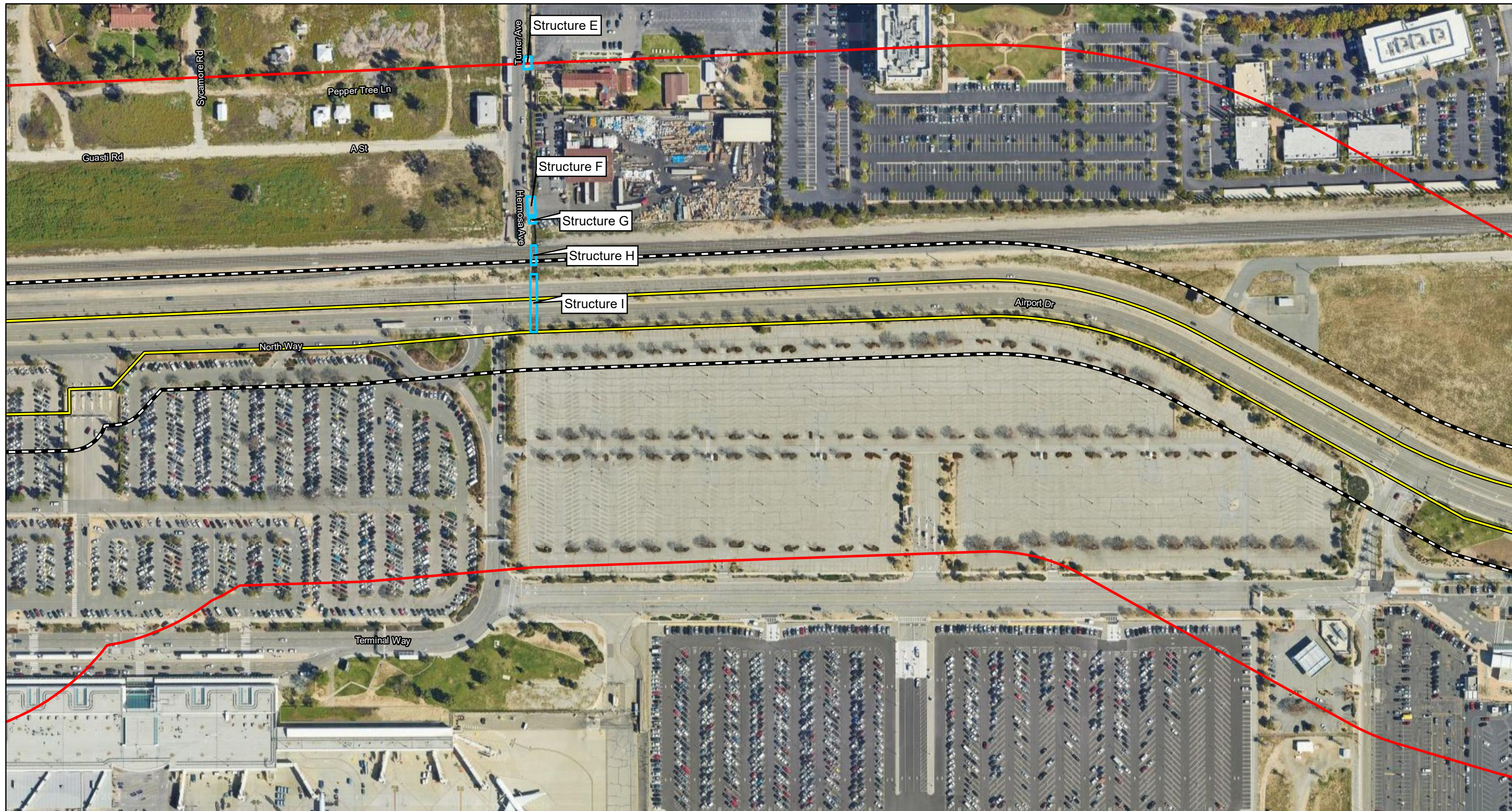


FIGURE 1  
Sheet 3 of 5

ONT Conector Project  
Locations Where Potential Bat Roosting Habitat was Observed





LEGEND

- Project Footprint
- 500-ft Buffer
- Potential Vibration Zone
- Suitable Day-Roosting Habitat for Bat
- Suitable Night-Roosting Habitat for Bats
- Marginally Suitable Day and Night-Roosting Habitat for Bats



0 100 200  
FEET

SOURCE: Google (2023); AECOM (2022)

I:\AEM2201\GIS\MXD\Bio\BatRoostingHabLocs.mxd (3/14/2024)

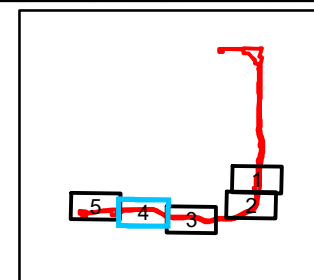


FIGURE 1  
Sheet 4 of 5

ONT Conector Project  
Locations Where Potential Bat Roosting Habitat was Observed





LEGEND

- Project Footprint
- 500-ft Buffer
- Potential Vibration Zone
- Suitable Day-Roosting Habitat for Bat
- Suitable Night-Roosting Habitat for Bats
- Marginally Suitable Day and Night-Roosting Habitat for Bats



0 100 200  
FEET

SOURCE: Google (2023); AECOM (2022)

I:\AEM2201\GIS\MXD\Bio\BatRoostingHabLocs.mxd (3/14/2024)

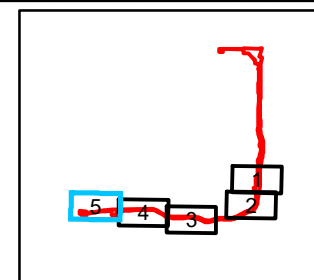


FIGURE 1  
Sheet 5 of 5



Figure 2: Representative Site Photos



Small concrete box culvert adjacent to the Milliken Avenue Overcrossing and the foraging habitat along the drainage.



Representative view of the foraging habitat present along the drainage that extends along the eastern edge of Turner Avenue.



Example of a vegetated “corridor” of ornamental trees and native vegetation suitable for use by bats as foraging habitat. This photo was taken along the eastern edge of Milliken Avenue approximately 600 feet southeast of the Cucamonga Metrolink Station.



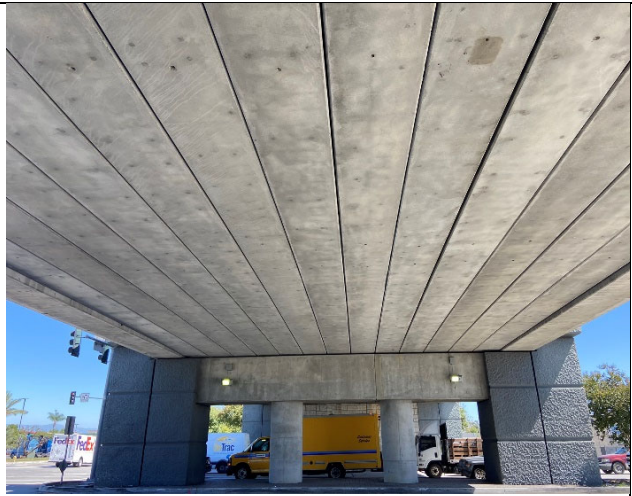
Example of a vegetated “corridor” of ornamental trees and native vegetation suitable for use by bats as foraging and roosting habitat. This photo was taken along the western edge of Milliken Avenue approximately 300 feet northwest of the Union Pacific Railroad bridge over Milliken Avenue.



Figure 3: Representative Site Photos



View of suitable day roosting habitat at the Milliken Avenue Overcrossing (Structure 1), which consists of weep holes and crevices around the pipe (red arrow). The bridge girders are suitable for night roosting.



View of the crevices suitable for use by day roosting bats at the Union Pacific Railroad Bridge over Milliken Avenue (Structure 3).



View of some of the crevices suitable for use by day roosting bats along the retaining wall at the Union Pacific Railroad Bridge over Milliken Avenue (Structure 3).



View of the crevices suitable for use by day roosting bats at the Union Pacific Railroad Bridge over Haven Avenue (Structure 4).



Figure 4: Representative Site Photos



Representative view of the undersides of the concrete slab and stone arch bridges (Structures 5-8) spanning the drainage channel along the eastern edge of Turner Avenue.



Representative view of the undersides of the timber bridge (Structure 9) spanning the drainage channel along the eastern edge of Turner Avenue. The entrance to the culvert beneath East Airport Drive is visible in the background.



View of the culvert that carries the Turner Avenue drainage channel beneath East Airport Drive (Structure 10).



View of the crevices suitable for use by day roosting bats at the Union Pacific Railroad Bridge over Archibald Avenue (Structure 11).

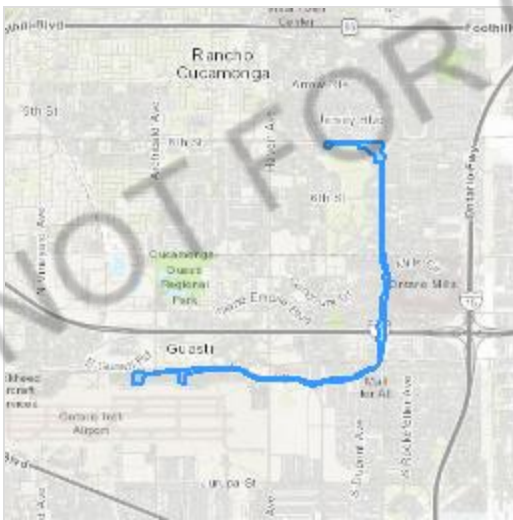
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

San Bernardino County, California



## Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

NOT FOR CONSULTATION



# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [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.

The following species are potentially affected by activities in this location:

## Mammals

NAME	STATUS
<p>San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i>            Wherever found            There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.  <a href="https://ecos.fws.gov/ecp/species/2060">https://ecos.fws.gov/ecp/species/2060</a></p>	Endangered

## Birds

NAME	STATUS
<p>Coastal California Gnatcatcher <i>Polioptila californica californica</i>            Wherever found            There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.  <a href="https://ecos.fws.gov/ecp/species/8178">https://ecos.fws.gov/ecp/species/8178</a></p>	Threatened
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>            Wherever found            There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.  <a href="https://ecos.fws.gov/ecp/species/6749">https://ecos.fws.gov/ecp/species/6749</a></p>	Endangered

## Reptiles

NAME	STATUS
<p>Southwestern Pond Turtle <i>Actinemys pallida</i>            Wherever found            No critical habitat has been designated for this species.  <a href="https://ecos.fws.gov/ecp/species/4768">https://ecos.fws.gov/ecp/species/4768</a></p>	Proposed Threatened

## Amphibians

NAME	STATUS
------	--------

Western Spadefoot <i>Spea hammondi</i>	Proposed Threatened
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5425">https://ecos.fws.gov/ecp/species/5425</a>	

## Insects

NAME	STATUS
Delhi Sands Flower-loving Fly <i>Rhaphiomidas terminatus abdominalis</i>	Endangered
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1540">https://ecos.fws.gov/ecp/species/1540</a>	
Monarch Butterfly <i>Danaus plexippus</i>	Candidate
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	

## Flowering Plants

NAME	STATUS
San Diego Ambrosia <i>Ambrosia pumila</i>	Endangered
Wherever found	
There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/8287">https://ecos.fws.gov/ecp/species/8287</a>	
Slender-horned Spineflower <i>Dodecahema leptoceras</i>	Endangered
Wherever found	
No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4007">https://ecos.fws.gov/ecp/species/4007</a>	

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.



You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

**Bald Eagle** *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

## Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

## Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

## Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

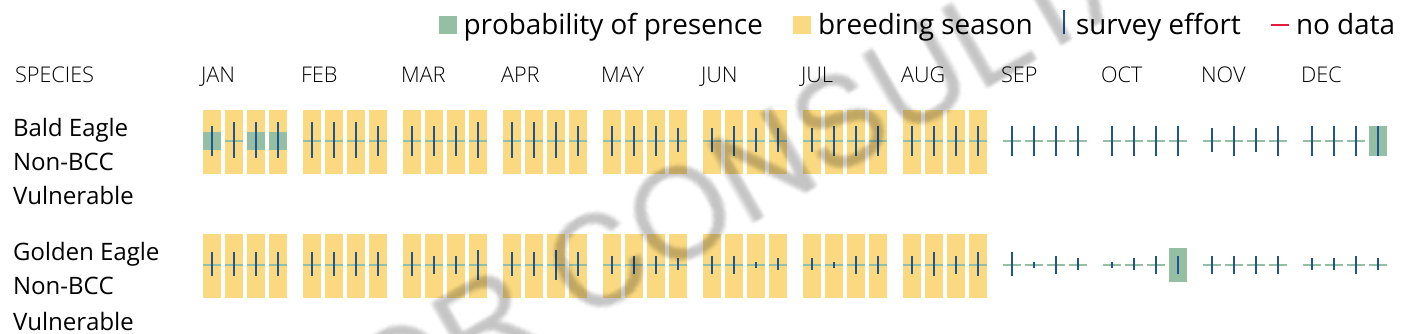
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid

cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around



your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<p><b>Allen's Hummingbird</b> <i>Selasphorus sasin</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a></p>	Breeds Feb 1 to Jul 15
<p><b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>            This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.  <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></p>	Breeds Jan 1 to Aug 31
<p><b>Belding's Savannah Sparrow</b> <i>Passerculus sandwichensis beldingi</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8">https://ecos.fws.gov/ecp/species/8</a></p>	Breeds Apr 1 to Aug 15
<p><b>Black-chinned Sparrow</b> <i>Spizella atrogularis</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9447">https://ecos.fws.gov/ecp/species/9447</a></p>	Breeds Apr 15 to Jul 31
<p><b>Bullock's Oriole</b> <i>Icterus bullockii</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Mar 21 to Jul 25
<p><b>California Gull</b> <i>Larus californicus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 1 to Jul 31

<b>California Thrasher</b> <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
<b>Clark's Grebe</b> <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
<b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a>	Breeds May 20 to Jul 31
<b>Golden Eagle</b> <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
<b>Marbled Godwit</b> <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds elsewhere
<b>Northern Harrier</b> <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8350">https://ecos.fws.gov/ecp/species/8350</a>	Breeds Apr 1 to Sep 15
<b>Oak Titmouse</b> <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a>	Breeds Mar 15 to Jul 15
<b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a>	Breeds May 20 to Aug 31

**Tricolored Blackbird** *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

**Western Grebe** *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

**Wrentit** *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season (■)**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (|)**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

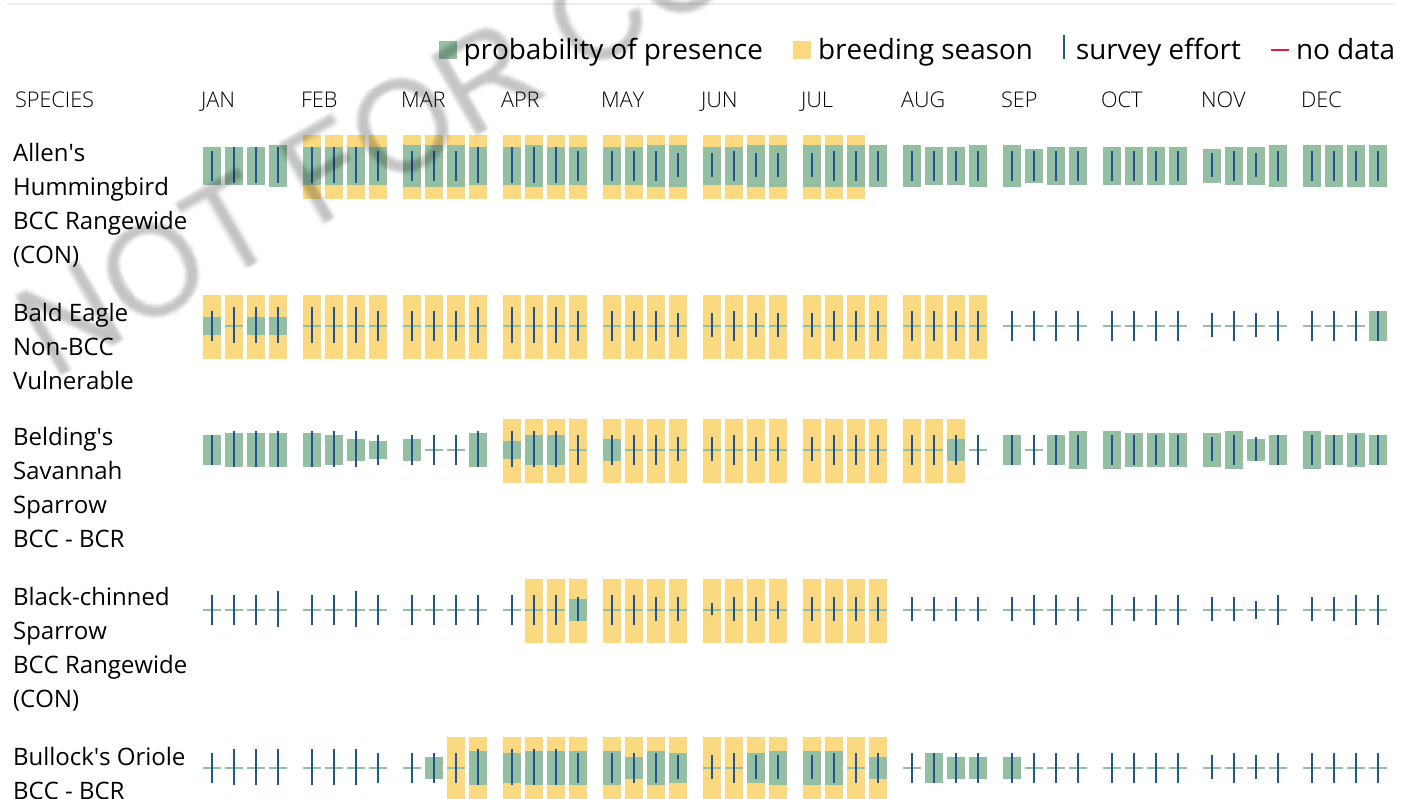
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data (-)**

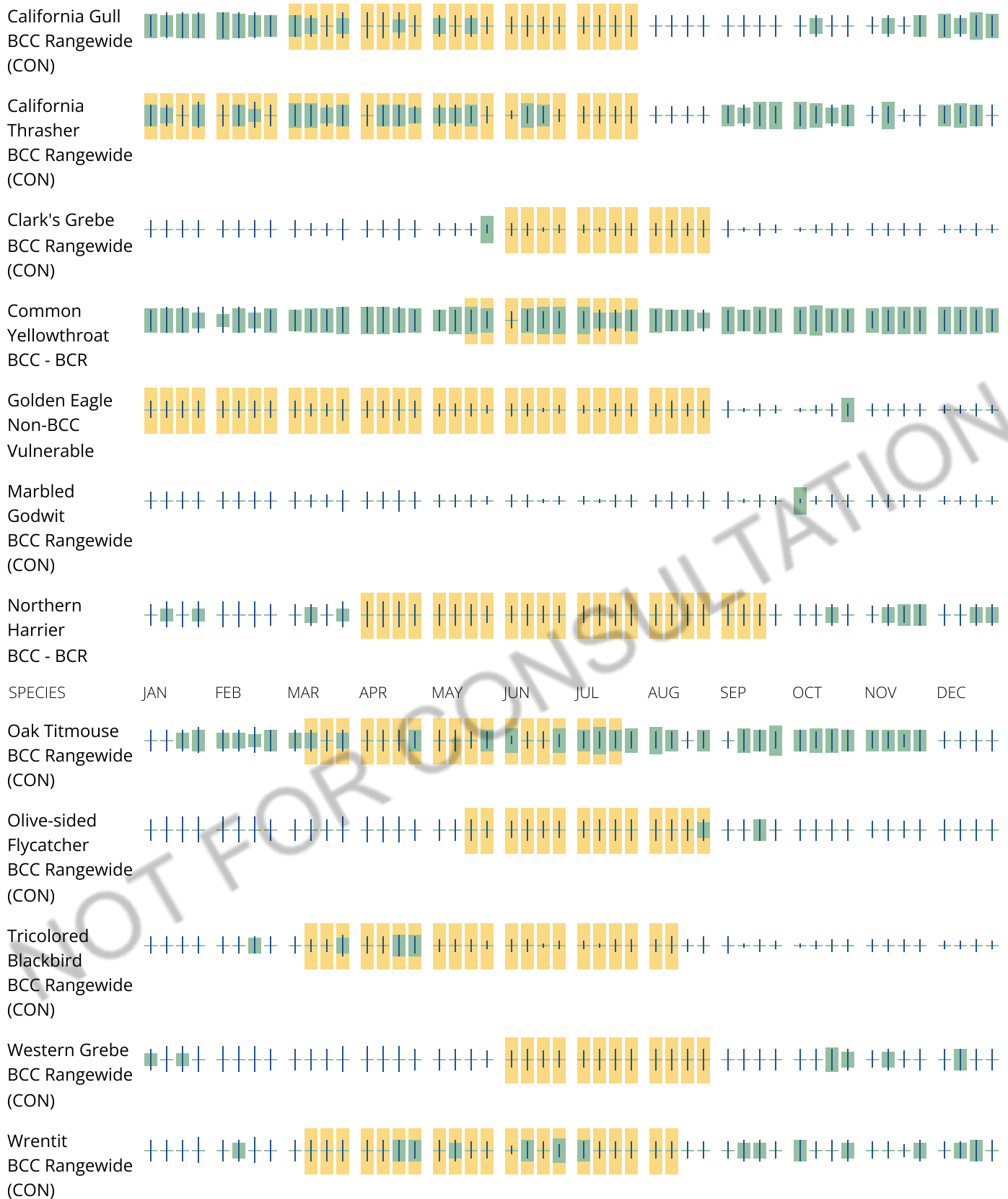
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the

locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

## Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.



The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

## APPENDIX F

### AVOIDANCE AND MINIMIZATION MEASURES

**MM BIO-1 Nesting Habitat For Protected or Sensitive Avian Species.**

1. Vegetation removal and construction shall occur between September 1 and January 31 whenever feasible.
2. Prior to any construction or vegetation removal between February 15 and August 31, a nesting survey shall be conducted by a qualified biologist of all habitats within 500 feet of the construction area. Surveys shall be conducted no less than 3 days and no more than 7 days prior to commencement of construction activities and surveys will be conducted in accordance with CDFW protocol as applicable. If no active nests are identified on or within 500 feet of the construction site, no further mitigation is necessary. A copy of the pre-construction survey shall be submitted to the lead agency SBCTA. If an active nest of a MBTA protected species is identified onsite (per established thresholds) the qualified biologist will establish the appropriate exclusionary buffer based on the species and the no-work buffer shall be maintained between the nest and construction activity. This buffer can be reduced in consultation with CDFW and/or USFWS, if applicable.
3. Completion of the nesting cycle shall be determined by qualified ornithologist or biologist.

**MM BIO-2 Burrowing Owl Nesting Habitat.**

1. Prior to construction activity, a focused protocol survey (four field visits) and pre-construction surveys shall be conducted for burrowing owls where suitable habitat is present within the construction areas. Surveys shall be conducted no less than 14 days prior to commencement of construction activities and surveys shall be conducted in accordance with California Department of Fish and Wildlife burrowing owl survey protocol.
2. If no occupied burrows are found in the survey area, a letter report documenting survey methods and findings shall be submitted to the lead agency San Bernardino Transportation Authority, as well as the California Department of Fish and Wildlife for review and approval, and no further mitigation is necessary.
3. If occupied burrows are found, impacts on the burrows shall be avoided by providing a buffer of 165 feet during the non-breeding season (September 1 through February 14) or 250 feet during the breeding season (February 15 through August 15). The size of the buffer area may be adjusted if a qualified biologist and California Department of Fish and Wildlife determine it would not be likely to have adverse effects on the owls. No project activity shall commence within the buffer area until a qualified biologist confirms that the burrow is no longer occupied. If the

burrow is occupied by a nesting pair, a minimum of 7.5 acres of foraging habitat contiguous to the burrow shall be maintained until the breeding season is over.

4. If disturbance of occupied burrows is unavoidable, on-site passive relocation techniques approved by California Department of Fish and Wildlife shall be used to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist verifies through non-invasive methods that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Mitigation for foraging habitat for relocated pairs shall follow guidelines provided in the California Burrowing Owl Consortium's Burrowing Owl Survey Protocol and Mitigation Guidelines, which ranges from 7.5 to 19.5 acres per pair.

**MM BIO-3 Bat Nesting Habitat.**

1. Prior to construction, during the bat maternity season (April 1–August 31), a qualified biologist shall perform a nighttime acoustic and emergence survey at the Union Pacific Railroad bridge over Milliken Avenue to conclusively determine whether a maternity colony is present and identify any bat species present. This survey shall be performed at least one full calendar year before the start of construction to allow adequate time for mitigation planning if a maternity colony is found. If a maternity colony is found at the Union Pacific Railroad bridge over Milliken Avenue, a California Department of Fish and Wildlife-approved bat biologist will coordinate with the project team and California Department of Fish and Wildlife to determine appropriate species-specific minimization measures because different species respond differently to various construction activities. Upon approval by California Department of Fish and Wildlife, the species-specific minimization measures shall be implemented and developed in consultation with California Department of Fish and Wildlife.
2. To the greatest extent feasible, tree trimming/removal activities shall be performed outside the bat maternity season (April 1–August 31) to avoid direct impacts to nonvolant (flightless) young that may roost in trees within the study area. This period also coincides with the bird nesting season of March 15–September 15.
3. If night work (i.e., between dusk and dawn) is anticipated within 100 feet (ft) of structures where bat roosting is confirmed, night lighting shall be used only in areas of active work and focused on the direct area(s) of work and away from any roost features to the greatest extent practicable.