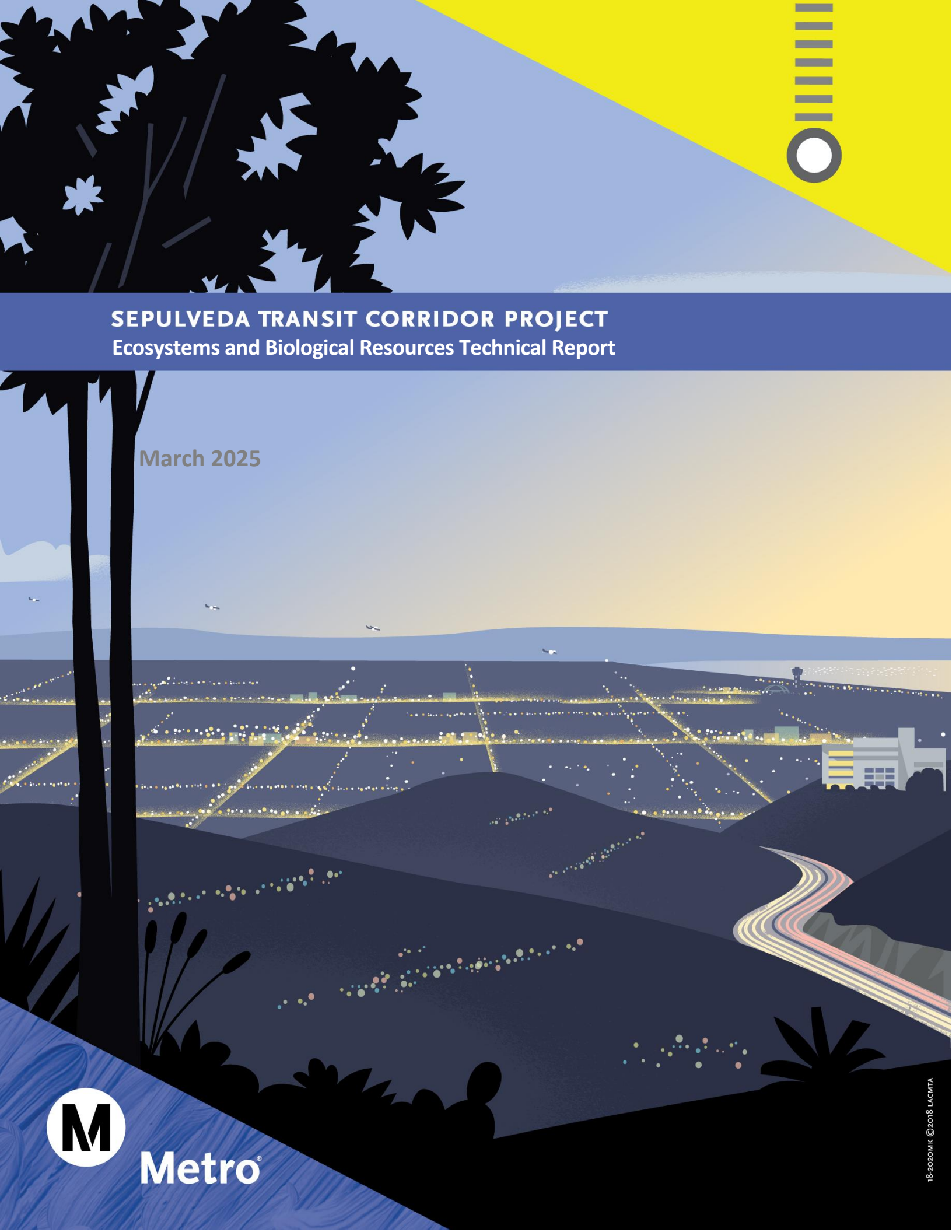
Appendix I. Ecosystems and Biological Resources Technical Report

SEPULVEDA TRANSIT CORRIDOR PROJECT

Ecosystems and Biological Resources Technical Report

March 2025



Metro®

SEPULVEDA TRANSIT CORRIDOR PROJECT

Contract No. AE67085000

Ecosystems and Biological Resources Technical Report

Task 5.24.11

Prepared for:

Metro

Los Angeles County
Metropolitan Transportation Authority

Prepared by:

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Abbreviations and Acronyms

°F	degrees Fahrenheit
ABC	Accelerated Bridge Construction
amsl	above mean sea level
APM	automated people mover
ANR	Agriculture and Natural Resources
BGEPA	Bald and Golden Eagle Protection Act
BHMMP	Bat Habitat Mitigation and Monitoring Plan
BRT	bus rapid transit
Caltrans	California Department of Transportation
CBD	Center for Biological Diversity
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFMP	Community Forestry Management Plan
CFP	California Department of Fish and Wildlife Fully Protected
CIDH	cast-in-drilled hole
City of LA Policy	City of Los Angeles Street Tree Policy
CLAW	Citizens for Los Angeles Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRA	Coastal Resource Area
CRPR	California Rare Plant Rank
CSRL	California Soil Research Lab
CSWRCB	California State Water Resources Control Board
CWA	Clean Water Act
dBA	decibels
DBH	diameter at breast height
DCP	City of Los Angeles Department of City Planning
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	evolutionary significant unit

ExpressLanes project	I-405 Sepulveda Pass ExpressLanes project
FTIP	Federal Transportation Improvement Program
GLAC	Greater Los Angeles County
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HRT	heavy rail transit
HTA	HTA Partners
I-10	Interstate 10
I-405	Interstate 405
IPaC	Information for Planning and Consultation
LACP	Los Angeles City Planning
LADPW	Los Angeles County Department of Public Works
LADWP	City of Los Angeles Department of Water and Power
LASRE	LA SkyRail Express
LAX	Los Angeles International Airport
LOSSAN	Los Angeles-San Diego-San Luis Obispo
LRT	light rail transit
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
MM	mitigation measure
MOW	maintenance-of-way
mph	miles per hour
MRCA	Mountains Recreation and Conservation Authority
MRDC	Metro Rail Design Criteria
MRT	monorail transit
MSF	maintenance and storage facility
NEPA	National Environmental Policy Act
NCCP	Natural Community Conservation Plan
NHD	National Hydrography Dataset
NHMLA	Natural History Museum, Los Angeles
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
NPF	National Park Foundation

NPPA	Native Plant Protection Act
NPS	National Park Service
NWI	National Wetlands Inventory
Project	Sepulveda Transit Corridor Project
quad	quadrangle
ROW	right-of-way
ROWD	Report of Waste Discharge
RSA	Resource Study Area
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCORE	Southern California Optimized Rail Expansion
SCW	South Coast Wildlands
SEA	Significant Ecological Area
SMMC	Santa Monica Mountains Conservancy
SMMNRA	Santa Monica Mountains National Recreation Area
SSC	Species of Special Concern
STCP	Sepulveda Transit Corridor Partners
SWPPP	Storm Water Pollution Prevention Plan
TBM	tunnel boring machine
TPSS	traction power substation
TPZ	Tree Protection Zone
U.S.	United States
U.S.C.	United States Code
UC	University of California
UCLA	University of California, Los Angeles
US-101	United States Highway 101
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish & Wildlife Service
USGS	United States Geological Survey
VA	U.S. Department of Veterans Affairs
Valley	San Fernando Valley
VSM	Vertical shaft sinking machine
WBWG	Western Bat Working Group
WDR	Waste Discharge Requirements
WEAP	Worker Environmental Awareness Plan
Westside	Westside of Los Angeles

WMP	wildlife movement pathway
WOTS	Waters of the State
WOTUS	Waters of the United States

1 INTRODUCTION

1.1 Project Background

The Sepulveda Transit Corridor Project (Project) is intended to provide a high-capacity rail transit alternative to serve the large and growing travel market and transit needs currently channeled through the Sepulveda Pass and nearby canyon roads between the San Fernando Valley (Valley) and the Westside of Los Angeles. The Project would have a northern terminus with a connection to the Van Nuys Metrolink/Amtrak Station and a southern terminus with a connection to the Los Angeles County Metropolitan Transportation Authority's (Metro) E Line. In addition to providing local and regional connections to the existing and future Metro rail and bus network, the Project is anticipated to improve access to major employment, educational, and cultural centers in the greater Los Angeles area.

In 2019, Metro completed the Sepulveda Transit Corridor Feasibility Study and released the Project's *Final Feasibility Report* (Metro, 2019), which documented the transportation conditions and travel patterns in the Sepulveda corridor; identified mobility problems affecting travel between the Valley and the Westside; and defined the Purpose and Need, goals, and objectives of the Project. Using an iterative evaluation process, the Feasibility Study identified feasible transit solutions that met the Purpose and Need, goals, and objectives of the Project. The Feasibility Study determined that a reliable, high-capacity, fixed guideway transit system connecting the Valley to the Westside could be constructed along several different alignments. Such a transit system, operated as either heavy rail transit (HRT) or monorail transit (MRT), would serve the major travel markets in the Sepulveda Transit corridor and would provide travel times competitive with the automobile.

1.2 Project Alternatives

In November 2021, Metro released a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act, for the Project that included six alternatives (Metro, 2021). Alternatives 1 through 5 included a southern terminus station at the Metro E Line Expo/Sepulveda Station, and Alternative 6 included a southern terminus station at the Metro E Line Expo/Bundy Station. The alternatives were described in the NOP as follows:

- Alternative 1: Monorail with aerial alignment in the Interstate 405 (I-405) corridor and an electric bus connection to the University of California, Los Angeles (UCLA)
- Alternative 2: Monorail with aerial alignment in the I-405 corridor and an aerial automated people mover connection to UCLA
- Alternative 3: Monorail with aerial alignment in the I-405 corridor and underground alignment between the Getty Center and Wilshire Boulevard
- Alternative 4: Heavy rail with underground alignment south of Ventura Boulevard and aerial alignment generally along Sepulveda Boulevard in the San Fernando Valley
- Alternative 5: Heavy rail with underground alignment including along Sepulveda Boulevard in the San Fernando Valley
- Alternative 6: Heavy rail with underground alignment including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station on Bundy Drive

The NOP also stated that Metro is considering a No Project Alternative that would not include constructing a fixed guideway line. Metro established a public comment period of 74 days, extending from November 30, 2021 through February 11, 2022. Following the public comment period, refinements to the alternatives were made to address comments received. Further refinements to optimize the designs and address technical challenges of the alternatives were made in 2023 following two rounds of community open houses.

In July 2024, following community meetings held in May 2024, Alternative 2 was removed from further consideration in the environmental process because it did not provide advantages over the other alternatives, and the remaining alternatives represent a sufficient range of alternatives for environmental review, inclusive of modes and routes (Metro, 2024a). Detailed descriptions of the No Project Alternative and the five remaining "build" alternatives are presented in Sections 5 through 10.

1.3 Project Study Area

Figure 1-1 shows the Project Study Area. It generally includes Transportation Analysis Zones from Metro's travel demand model that are within 1 mile of the alignments of the four "Valley-Westside" alternatives from the *Sepulveda Transit Corridor Project Final Feasibility Report* (Metro, 2019). The Project Study Area represents the area in which the transit concepts and ancillary facilities are expected to be located. The analysis of potential impacts encompasses all areas that could potentially be affected by the Project, and the EIR will disclose all potential impacts related to the Project.

1.4 Purpose of this Report and Structure

This technical report examines the environmental impacts of the Project as it relates to ecosystems and biological resources. It describes existing ecosystems and biological resources conditions in the Project Study Area, the regulatory setting, methodology for impact evaluation, and potential impacts from operation and construction of the project alternatives, including maintenance and storage facility site options.

The report is organized according to the following sections:

- Section 1 Introduction
- Section 2 Regulatory and Policy Framework
- Section 3 Methodology
- Section 4 Future Background Projects
- Section 5 No Project Alternative
- Section 6 Alternative 1
- Section 7 Alternative 3
- Section 8 Alternative 4
- Section 9 Alternative 5
- Section 10 Alternative 6
- Section 11 Preparers of the Technical Report
- Section 12 References

Figure 1-1. Sepulveda Transit Corridor Project Study Area

Source: HTA, 2024

2 REGULATORY AND POLICY FRAMEWORK

Several regulations have been established by federal, state, and local agencies to protect and conserve biological resources. The descriptions below provide an overview of agency regulations that may be applicable to the resources that occur within the Project Study Area and require an analysis. The final determination of whether permits are required is made by the regulating agencies.

2.1 Federal

2.1.1 Endangered Species Act

The federal Endangered Species Act (ESA) (16 United States Code [U.S.C.] 1536) and subsequent amendments provide for the conservation of threatened and endangered species and the ecosystems upon which they depend. Section 7 of the ESA requires federal agencies to aid in the conservation of listed species and ensure that their activities do not jeopardize the continued existence of listed species or adversely modify designated Critical Habitat. At the federal level, the U.S. Fish & Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service are responsible for the administration of the ESA based on the species under their respective purview. Consultation with the USFWS for terrestrial species under Section 7 of the ESA would be required if the Project has the potential to affect a federally listed species or its designated Critical Habitat and has a federal nexus. It is anticipated the Project would have a federal nexus and therefore qualify for Section 7 if consultation is necessary.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) fully protects migratory birds and their parts (including eggs, nests, and feathers). Under the MBTA, taking, killing, or possessing migratory birds is unlawful. The majority of avian species native to the United States are protected under the provisions of the MBTA. Introduced species and non-migratory upland game birds are not protected by the MBTA. The removal of nesting habitat during the bird nesting season (generally extending between February 1 and September 1) when eggs or young may be present can result in take of migratory birds protected under the MBTA. Permits for take of non-game migratory birds can be issued for specific activities, including scientific collecting, rehabilitation, propagation, and falconry among others; however, none of these situations apply to the Project. Many avian species that are not federal- or state-listed receive legal protection through MBTA, which protects hundreds of non-game migratory bird species. Protection for these species would be covered under specific mitigation measures associated with the proposed work.

The Project would need to employ measures that would avoid or minimize the potential for take of protected migratory birds and avoid destruction of habitats or nesting areas due to Project construction or operations.

2.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668c), enacted in 1940 and amended several times since, prohibits anyone without a permit issued by the Secretary of the Interior from "taking" bald or golden eagles, including their parts, nests, or eggs. The BGEPA provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The BGEPA defines "take" as "pursue, shoot, shoot at, poison,

wound, kill, capture, trap, collect, molest or disturb." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, and if upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment. If it is determined at any point that either bald or golden eagle may be impacted by operation or construction of the Project, measures would need to be implemented to avoid and minimize the potential for take of either species.

2.1.4 Clean Water Act

The goal of the Clean Water Act (CWA) is to eliminate the discharge of pollutants and to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Permits pursuant to the CWA are required only if U.S. Army Corps of Engineers (USACE)-jurisdictional waters are impacted. The CWA also established the National Pollutant Discharge Elimination System (NPDES) permit system in Section 402. NPDES permits are required for the discharge of pollutants from point sources into navigable waters.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into Waters of the United States (WOTUS), including wetlands. Activities in WOTUS regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. A Section 404 permit is required by the USACE for the dredging or filling of lakes, streams, tidelands, marshes, or low-lying areas behind dikes along the coast as well as the dumping of dredged material into the ocean.

Section 401(a)(1) of the CWA specifies that an applicant for a federal license or permit will obtain a certification from the state in which the discharge originates to obtain authorization to conduct any activity (i.e., construction or operation of facilities that may result in any discharge into navigable waters). Section 401 of the CWA requires a water quality certification from the state for all permits issued by the USACE under Section 404 of the CWA. In California, Regional Water Quality Control Boards (RWQCB) must certify that a project will comply with water quality standards by issuing a CWA Section 401 water quality certification or waiver.

The U.S. Environmental Protection Agency (EPA) and USACE revised the definition of WOTUS (88 FR 61964) on September 8, 2023 as regulated under Section 404 of the CWA. The following are defined as WOTUS and, in general, USACE will assert jurisdiction over:

(1) Waters which are:

  (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all Waters which are subject to the ebb and flow of the tide

  (ii) The territorial seas; or,

  (iii) Interstate waters

(2) Impoundments of Waters otherwise defined as Waters of the United States under this definition, other than impoundments of waters identified under paragraph (5) of this section

(3) Tributaries of waters identified in paragraph (1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water

(4) Wetlands adjacent to the following Waters:

  (i) Waters identified in paragraph (1) of this section; or,

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (2) or (3) of this section and with a continuous surface connection to those waters

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (1) or (3) of this section.

The following are not defined as WOTUS (88 FR 61964), and in general USACE will not assert jurisdiction over:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(9) Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not WOTUS because they are not tributaries, or they do not have a significant nexus to a Traditional Navigable Water. Even when not considered WOTUS, these geographic features (e.g., swales, ditches) may still contribute to a surface hydrologic connection between an adjacent wetland and a Traditional Navigable Water.

The Los Angeles River is considered a WOTUS because it supports relatively permanent surface flow and is a tributary to the San Pedro Bay/Pacific Ocean (territorial sea). However, impacts to the Los Angeles River are not anticipated, and therefore a CWA permit is not anticipated.

2.1.5 Section 10 of the Rivers and Harbor Act

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 322) requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in, over, or under

any navigable WOTUS. Structures or work outside the limits defined for navigable WOTUS require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable WOTUS, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction.

Portions of the Los Angeles River that are considered navigable WOTUS are limited to the mouth of the river at San Pedro Bay to the point of the mean high tide (2.5 feet Mean Sea Level) line which occurs just below the Pacific Coast Highway Bridge in Long Beach, California (USACE, 1978). However, impacts to the Los Angeles River are not anticipated, and therefore a Section 10 permit is not anticipated.

2.1.6 Section 14 of the Rivers and Harbor Act (Section 408 Program)

The USACE Section 408 program requires permission for a local government, company, or individual to alter or occupy a USACE civil works project and their associated lands (33 U.S.C. Section 408). Projects that require Section 408 permission include work on a levee, adding hydropower to a dam, building a bridge across a navigable waterway maintained and surveyed by USACE, or construction within the footprint of the USACE easement for a levee. The Section 408 program verifies that changes to authorized civil works projects will not be injurious to the public interest and will not impair the usefulness of the project. This Project may require Section 408 permission following further coordination with, and review from the USACE. Further, when a permit issued by USACE is required for a project, pursuant to the federal ESA and prior to issuance of a permit, USACE would consult with USFWS regarding a project's potential to affect federally listed species. If during consultation it is determined that a project may affect a federally listed species, authorization from USFWS pursuant to the ESA would also be required.

2.1.7 Habitat Conservation Planning

The USFWS Habitat Conservation Plan (HCP) Program provides a pathway forward to balancing wildlife conservation and development. The primary objective of the HCP Program is to conserve species and the ecosystems they depend on while streamlining permitting process for economic development. An HCP is typically prepared under Section 10 of the ESA and is designed for non-federal entities to obtain an incidental take permit. HCPs are successful conservation tools because they can anticipate, prevent, and resolve controversies and conflict associated with project permitting (USFWS, 2023b). The Project does not occur within the boundaries of any existing regional HCPs that would influence implementation of the Project (as described in Section 2.3.10), nor would preparation of an HCP be applicable to the Project.

2.1.8 Santa Monica Mountains National Recreation Area

The Santa Monica Mountains National Recreation Area (SMMNRA) is under jurisdiction of the National Park Service (NPS) but is a cooperative effort that joins federal, state and local park agencies with private preserves and landowners to protect the natural and cultural resources of the Santa Monica Mountains. Stretching for 50 miles across the northwestern boundary of the Los Angeles Basin, the California State Parks system owns 42,000 acres, the NPS controls 23,620 acres, and the rest of the recreation area is in local agency, parks, and private property conservation easements. Within the

SMMNRA boundary, NPS only regulates lands that are NPS-owned. However, certain activities detailed in Title 36 Code of Federal Regulations Chapter 1, such as mineral rights, are subject to regulations imposed by NPS on all land within the national park unit land regardless of ownership.

Over 20 individual state and municipal parks occur in the SMMNRA, including Topanga State Park, Leo Carrillo State Park, Malibu Creek State Park, Point Mugu State Park, and Griffith Park. The SMMNRA protects some of the most significant examples of terrestrial Mediterranean-type ecosystems and coastal marine environments anywhere in the world, with over 1,000 plant species providing habitat for approximately 500 mammal, bird, reptile, and amphibian species (NPF, 2021). The various parks and other conserved areas under the SMMNRA protection provide scenic vistas, nature viewing, hiking, biking, and horseback riding opportunities, often through undisturbed native chaparral habitats. Multiple management plans for lands within SMMNRA may apply to the Project.

The General Management Plan for SMMNRA ensures that park managers are guided by policy, science, and public opinion to safeguard the mission of the park. Three agencies administer this plan and manage SMMNRA: the National Park Service, California State Parks and the Santa Monica Mountains Conservancy. The general plan includes five separate management areas; the proposed Project falls within the “moderate intensity area,” which describes two goals that are applicable:

- Preserve natural and cultural resources of area
- Allow harmonious development with natural settings

The SMMNRA Action Plan provides a model for a climate friendly park to encourage sustainably plan. SMMNRA aims to reduce the emissions via three strategies that will apply to the proposed Project:

- Strategy 1: Identify and implement mitigation actions that the park can independently take to reduce GHG emissions resulting from activities within and by the park
- Strategy 2: Increase climate change education and outreach efforts
- Strategy 3: Monitor progress with respect to reducing emissions and identify areas for improvement

The Trail Management Plan was being prepared by the NPS, CPS, SMMC and the Mountains Recreation & Conservation Authority. The intention of this plan is to establish vision for future development and management of the SMMNRA trail network. However, the SMMNRA TMP has been placed on indefinite hold as the NPS has moved away from broad general plans. Therefore, this plan does not apply to the proposed Project.

The Invasive Plant Management Plan and Environmental Assessment for Redwood National Park and SMMNRA was established as an approach for protecting natural and cultural resources from the impacts of nonnative invasive plants. The document outlines best management practices that will be applied to the proposed Project within SMMNRA.

The NPS enforces Title 36 Code of Federal Regulations, and the United States Codes, Titles 16, 18 and 21. With these codes, it is prohibited to possess, destroy, injure, deface, remove, dig, or disturb plants or plant parts or products thereof from their natural state (NPS, 2023). Additionally, it is prohibited to use or possess wood gathered from within the park area except in designated areas where dead wood on the ground may be collected for use, such as for campfire fuel. All trees, regardless of species, are protected within the SMMNRA; trees can be removed upon authorization by the applicable entity based on location within the SMMNRA (e.g., NPS, County of Los Angeles).

2.2 State

2.2.1 California Endangered Species Act and California Fish and Game Code

The California Fish and Game Code (CFGC) regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, and includes the California Endangered Species Act (CESA) under Sections 2050 through 2115. The California Department of Fish and Wildlife (CDFW) is responsible for administration of the CESA. Section 2081 of CESA allows CDFW to issue an Incidental Take Permit for state-listed threatened or endangered species, should the Project have the potential to "take" a state-listed species that has been detected within or adjacent to the Project. Certain criteria are required under CESA prior to the issuance of such a permit, including the requirement that impacts of the take are minimized and fully mitigated. Unlike the federal ESA, there are no state agency consultation procedures under CESA. For projects that affect species listed under both the federal and California ESAs, compliance with federal regulations will satisfy California's regulations if the CDFW determines that the federal incidental take authorization is "consistent" with the CESA. Projects that result in a take of a state-only listed species require an Incidental Take Permit pursuant to Section 2081 of the CESA.

Further, Sections 3503 and 3503.5 of the CFGC prohibit the taking of nesting birds, their nests, eggs, or any portion thereof during the nesting season. Typically, the breeding/nesting season is from February 1 through September 1, which captures the various breeding/nesting durations for bird species that occur within the region. Depending on each year's seasonal factors, the breeding season can start earlier and/or end later.

Additionally, the CFGC regulates impacts to streambeds and associated riparian vegetation and includes Lake and Streambed Alteration Agreement (LSAA) regulations under Section 1600 et seq. If CDFW jurisdictional areas are impacted by a project that would divert, obstruct, or change the natural flow or bed, channel or bank of any river, stream, or lake, a Notification for an LSAA is required to be submitted to the CDFW.

Should potential take of state-listed species be anticipated as a result of operation or construction of the Project, coordination with CDFW would be required and issuance of an Incidental Take Permit and/or concurrence with federal incidental take authorization, which would ultimately be determined by the agency.

2.2.2 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying the CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

If it is determined through future focused survey efforts that plants protected under the NPPA are present and may be impacted by operation or construction of the Project, CDFW must be notified, and measures would need to be implemented to avoid and minimize the potential for take.

2.2.3 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne), codified as Division 7 ("Water Quality") of the State Water Code, established the responsibilities and authorities of the State Water Resources

Control Board and the nine RWQCBs. Each RWQCB prepares and adopts a Water Quality Control Plan, or Basin Plan, which incorporates the unique aspects of a particular region. Regional differences may include existing water quality, beneficial uses of surface and ground waters, and localized water quality problems. The RWQCBs implement Basin Plans by issuing and enforcing waste discharge regulations to individuals, communities, or businesses whose discharges can affect water quality. These regulations can be either Waste Discharge Requirements (WDR) for discharges to land or NPDES permits for discharges to surface water. The extent of waters subject to the authority of RWQCBs (Waters of the State; WOTS) is considered to be the same as and include all WOTUS, as discussed in Section 2.1.4. However, RWQCBs may also issue Water Discharge Requirements for impacts to waters that are not under jurisdiction of the USACE (e.g., isolated wetlands, isolated or ephemeral waters).

Recently, the RWQCB approved "Procedures," also known as the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" (CSWRCB, 2019). This policy defines what constitutes a wetland and how wetlands should be delineated and protected in the state.

Should the operation or construction of the Project result in the discharge of waste, a Report of Waste Discharge (ROWD) must be filed and reviewed by the RWQCB, after which they will respond by issuing a WDR.

2.2.4 Natural Community Conservation Planning and Habitat Conservation Planning

CDFW's Natural Community Conservation Planning (NCCP) program is an effort by the State of California and private and public partners that takes a broad, ecosystem-based approach to planning for the protection of biological diversity. An NCCP identifies and provides regional protection of plants, animals, and their habitats while allowing compatible and appropriate economic activity. An HCP allows for local agencies to work in endangered species' habitat by extending their federally acquired endangered species permit (i.e., take authorization) to all projects or activities that are covered.

The Project does not occur within the boundaries of any existing regional NCCPs or HCPs that would influence implementation of the Project (as described in Section 2.3.10), nor would preparation of a NCCP or HCP occur. It is assumed that any impacts to federally or state listed species would require consultation with the USFWS and CDFW.

2.2.5 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact. This report has been prepared for Project compliance with CEQA.

2.3 Regional and Local

2.3.1 Significant Ecological Area Program

Los Angeles County first began to inventory biotic resources and identify important areas of biological diversity in the 1970s. Today, the primary mechanism used by Los Angeles County to conserve biological diversity is a planning overlay called Significant Ecological Areas (SEA) designated in Los Angeles County's *General Plan Conservation and Natural Resources Element* (LA County, 2022). SEAs are ecologically important land and water systems that support valuable habitat for plants and wildlife

species; these areas are often integral to the preservation of rare, threatened, or endangered species and conservation of biological diversity in Los Angeles County.

While SEAs are not preserves, use of a SEA must avoid conflicts with the goals of the SEA Program since the County of Los Angeles deems these areas important to facilitate a balance between development and resource conservation. The SEA Program, which helps guide development within SEAs, is a combination of the General Plan overlay with the SEA conditional use permit process. The SEA Program's objective is to conserve genetic and physical diversity of biological resources for long-term sustainability. Development activities in the SEAs are reviewed closely to conserve water and biological resources such as streams, oak woodlands, and threatened or endangered species and their habitat. The intent of the SEA Program is not to preclude development but to allow controlled development without jeopardizing the biotic diversity of Los Angeles County. Development within the boundaries of a SEA requires a conditional use permit, which is reviewed by the Significant Ecological Area Technical Advisory Committee, an advisory committee to the County's Regional Planning Commission with members from private and public sectors who have a range of expertise in ecology and habitat restoration.

Discussion and spatial representation of the SEA within the Project Study Area can be found in Section 5.1.5.7 (Figure 5-4), Section 6.2.5.7 (Figure 6-28), Section 7.2.5.7 (Figure 7-27.), Section 8.2.5.7 (Figure 8-28), Section 9.2.5.7 (Figure 9-24), and Section 10.2.5.7 (Figure 10-20).

2.3.2 Los Angeles County General Plan

The *Los Angeles County General Plan 2035*, adopted in October 2015 and updated in July 2022, provides the policy framework and establishes the long-range vision for how and where the unincorporated areas of the county will grow (LA County Planning, 2024). In Chapter 9. Conservation and Natural Resources Element, presents guidelines for the conservation of natural resources and preservation of open space areas, including the SMMNRA. Section III Biological Resources states that the main types of biological resources within the area include "regional habitat linkages; forests, coastal zone; riparian habitats; streambeds and wetlands; woodlands; chaparral; desert shrubland; alpine habitats; Significant Ecological Areas (SEAs); and Coastal Resource Areas (CRAs)". The plan sets two goals applicable to the proposed Project:

- Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and SEAs.
- Goal C/NR 4: Conserved and sustainably managed woodlands.

The Project components that occur on unincorporated land within Los Angeles County would consider the preservation and conservations goals of the *Los Angeles County General Plan.*

2.3.3 Los Angeles Countywide Sustainability Plan "OurCounty"

Within unincorporated areas of Los Angeles County, the Los Angeles Countywide Sustainability Plan "OurCounty" (LA County, 2019) presents an inclusive sustainability plan to balance values of environment, equity, and economy for present and future generations. The Project would contribute to attaining the goal to reduce car dependency by providing convenient, safe, and affordable transportation systems, including public transit, that would reduce the number of miles people travel in private vehicles.

Actions related to trees are included in three of the 12 goals presented within OurCounty which include targets to increase urban tree canopy, increase the number of native trees on public properties, and improving pedestrian health and safety through reducing urban heat and stormwater runoff with installation of street trees as part of a "living streets" approach. Short term, direct actions in OurCounty include development of a Community Forestry Management Plan (CFMP) that would strengthen protection of native tree species and provide guidelines for planting new trees in the County excluding those that are naturally forested (such as state or federal forests). The CFMP, called *Room to Grow*, was adopted in late summer 2024. The CFMP details future actions that could affect tree mitigation from the Project within unincorporated County land. The plan calls for an update to the County Oak Tree Ordinance within the next one to five years and development of an Oak Woodlands Ordinance based on the County Plan (discussed previously). While OurCounty and the CFMP provide goals and targets for trees within unincorporated County land, they do not protect trees or specify measures to quantify impacts and therefore are not included in mitigation number calculations for the Project.

2.3.4 Los Angeles County Oak Tree Ordinance

The Los Angeles County Oak Tree Ordinance (Ordinance 22.46.2100 Oak Tree Regulations; hereafter referred to as the County Oak Tree Ordinance) applies to unincorporated areas of the county and recognizes oak trees as significant historical, aesthetic, and ecological resources. The goal of the ordinance is to create favorable conditions for the preservation and propagation of this unique and threatened heritage plant. Under the ordinance, "a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus" (LA County, 2023a) within 200 feet of proposed construction. To qualify as protected under this ordinance, single stem oaks must be at diameter at breast height (DBH), defined as 4.5 feet above natural grade) measuring 8 inches or more at DBH. Oaks with multiple trunks must have a combined DBH of the two largest trunks totaling 12 inches or more. Trees meeting these criteria are protected under the County Oak Tree Ordinance; a permit from the Director of Public Works is required prior to any modifications to the tree. The ordinance defines heritage oak trees as those that are 36 inches or more in diameter at DBH or any oak tree that has significant historical or cultural importance regardless of DBH (Ordinance 22.56.2090). Replacement of affected oak trees is at least 2:1 ratio on- or off-site. Alternatively, the ordinance allows for payment of an in-lieu fee, which would be subject to evaluation through CEQA. The ordinance does not provide a replacement ratio for heritage oak trees; presumably they will be greater than 2:1. Any oak trees that were planted, grown, or held for sale by a licensed nursey were considered exempt from the County Oak Tree Ordinance jurisdiction (LA County, 2023a).

2.3.5 Los Angeles County Oak Woodlands Conservation Management Plan

Within unincorporated lands of Los Angeles County, the County Oak Tree Ordinance (discussed in Section 2.3.2) protects individual oak trees while additional protections are provided to groups of oak trees through the *Los Angeles County Oak Woodlands Conservation Management Plan* (hereafter referred to as the County Plan)[1] (LA County Planning, 2011). The County Plan applies to contiguous groups of two or more native trees of the genus *Quercus* (including scrub oaks) that have at least a 5-inch DBH. To qualify as an oak woodland, the County Plan matches the California Department Fish and Wildlife Code (Section 1361) definition of "an oak stand with greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover" (LA County Planning, 2011). Canopy cover is calculated in the County Plan by establishing if 10 times the size of each tree's canopy

[1] Joseph Decruyenaere, email message to Marie Solis, Robert Glaser, Jose De La Rosa and William Chen. February 27, 2024.

overlap; where they do, the oak stand is considered to have 10 percent or greater relative cover and therefore qualifies as an oak woodland. One or more oaks along a street or in a parking lot on unincorporated county land without other associated oak woodland species do not qualify as a woodland regardless of canopy cover. These trees are protected by the County Oak Tree Ordinance discussed in Section 2.3.2.

The County Plan requires no net loss of oak woodlands within Los Angeles County. A permit and mitigation are required for any action with the potential to impact oak woodlands since they would be considered a significant impact. When impacts to oak woodlands are unavoidable, one of the following mitigation measures must be implemented:

- Acquire oak woodland habitat comparable to the habitat that was impacted. The recommended replacement ratio for off-site mitigation is a 2:1 ratio (i.e., providing 2 acres of oak woodland protection for every acre lost).
- Restore degraded oak woodlands on-site when circumstances at the site allow for long-term sustainability. When not feasible, off-site restoration should be prioritized by purchasing oak woodland habitat or conducting replacement planting.
- Contributing to Los Angeles County's Oak Forests Special Fund at a rate based on the estimated value of oak woodland to be lost.
- Follow other mitigation measures developed by the county.

2.3.6 City of Los Angeles General Plan

The City of Los Angeles intends to preserve natural resources, manage outdoor recreation, and maintain open space. Chapter 6 of the General Plan, "Open Space and Conservation" describes the goals and policies to address issues faced by the City related to these elements (DCP, 2001). One goal set by the plan is applicable to the Project:

- GOAL 6A - An integrated citywide/regional public and private open space system that serves and is accessible by the City's population and is unthreatened by encroachment from other land uses.

Policies identified to accomplish Goal 6A that the Project would consider include:

- Coordinate city operations and development policies for the protection and conservation of open space resources by preserving habitat linkages, where feasible, to provide wildlife corridors and to protect natural animal ranges.
- Reassess the environmental importance of the County of Los Angeles designated Significant Ecological Areas (SEAs) that occur within the City of Los Angeles and evaluate the appropriateness of the inclusion of other areas that may exhibit equivalent environmental value.
- Conserve and manage the undeveloped portions of the city's watersheds, where feasible, as open spaces which protect, conserve, and enhance natural resources.
- Provide for an on-site evaluation of sites located outside of targeted growth areas, as specified in amendments to the community plans, for the identification of sensitive habitats, sensitive species, and an analysis of wildlife movement, with specific emphasis on the evaluation of areas identified on the Biological Resource Maps contained in the Framework Element's Technical Background Report and Environmental Impact Report.

- Encourage an increase of open space where opportunities exist throughout the city to protect wild areas such as the Sepulveda Basin and Chatsworth Reservoir.

The Project would consider the applicable preservation, management, and maintenance goals and policies set forth in the *City of Los Angeles General Plan* when on City of Los Angeles land.

2.3.7 City of Los Angeles Protected Tree and Shrub Ordinance

Protected trees under the City of Los Angeles' Native Tree Protection Ordinance (Ordinance No. 177404 Protected Tree Relocation and Replacement) (City of LA Ordinance) include the following (Section 17.02 of the Los Angeles Municipal Code):

- Any tree in the oak genus indigenous to California excluding scrub oak (*Quercus berberidifolia*)
- Southern California black walnut (*Juglans californica*)
- Western sycamore (*Platanus mexicana*)
- California bay (*Umbellularia californica*)

The Native Tree Protection Ordinance was amended by Ordinance No. 186873 in December 2020 to include two shrub species:

- Mexican elderberry (*Sambucus mexicana*)[2]
- Toyon (*Heteromeles arbutifolia*)

This ordinance protects individual trees and shrubs within city limits, including on properties owned by private landowners, University of California, Los Angeles (UCLA), and Caltrans.[3] To be considered protected, trees and shrubs must measure 4 inches DBH for a single stem plant or cumulative for all trunks in multi-stem individuals. This ordinance excludes any tree or shrub grown or held for sale by a licensed nursery, or trees or shrubs planted or grown as a part of a planting program.

Under this ordinance, the Board of Public Works must issue a permit before any protected trees or shrubs are damaged, relocated, or removed. This includes pruning, which must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture to avoid adversely affecting the health of any tree.

Issuance of a permit under this ordinance requires a Tree Report to be submitted by a Tree Expert defined as a person with at least four years of experience in the business of transplanting, moving, caring for, and maintaining trees. Additionally, this expert must have qualifications that meet one of the following requirements:

- A certified arborist with the International Society of Arboriculture who holds a valid California license as an agricultural pest control advisor,
- A certified arborist with the International Society of Arboriculture who is a licensed landscape architect, or
- A registered consulting arborist with the American Society of Consulting Arborists.

[2] For purposes of this assessment, naming convention follows the Santa Monica Mountain National Recreation Area's Vegetation Classification system (NPS, 2006). *Sambucus mexicana* is synonymous with scientific names *Sambucus caerulea (*Raf.) and *S. nigra* L. *caerulea* (Raf.) Bolli and common name "blue elderberry."

[3] Teresa Estrada, phone call by C. Hargreaves to LA Dept of Urban Forestry Division, July 19, 2024

A Tree Expert Tree Report is required for stand-alone removal permits from the Department of Public Works, Urban Forestry Department and will require additional data collection within the preferred alternative's Ground Disturbance Area after landowner access is granted and an assessment of indirect impacts. The Tree Report must include field survey methods and details of each protected tree or shrub in height, diameter, canopy spread, physical condition, and locations of protected trees and shrubs. When removal/replacement is required for more than two protected trees or shrubs, the permit must be considered at a Board of Public Works public hearing. If a protected tree or shrub must be removed, a permit for protected tree/shrub removal must be obtained from the Los Angeles Board of Public Works in accordance with the City of Los Angeles's Native Tree Protection Ordinance. Per the ordinance, the tree/shrub removal permit may require replanting of native trees or shrubs of the protected species within the project vicinity or at another location within the City of Los Angeles as mitigation. This ordinance requires replacement of protected trees and shrubs at a 4:1 ratio per individual. Replacement of any protected tree must also be a protected tree species defined by the ordinance; the same is true for protected shrubs. The size of each replacement tree will be a 15-gallon or larger individual, measuring 1 inch or more in diameter 1 foot above the base, and not less than 7 feet in height as measured from the base. The size and number of replacement trees shall approximate the value of the tree being replaced (DCP, 2020).

2.3.8 City of Los Angeles Street Tree Policy

The City of Los Angeles Department of Public Works, Bureau of Street Services, Urban Forestry Division (Urban Forestry) manages removal, replacement and maintenance of street trees and landscaped median islands within the Los Angeles city boundaries through enforcement of the City of Los Angeles Street Tree Policy (City of LA Policy) (City of Los Angeles, 1980). Street trees are those of any species occurring in the public right-of-way (ROW); trees on private property are not covered by this policy. A permit from Urban Forestry is required for removal of a street tree. Under the City of Los Angeles Municipal Code Section 62.170, the permittee may be required to plant a replacement tree within 40 days of the permit issuance as a condition of the permit; selection of species will be coordinated with the Urban Forestry Division on a case-by-case basis. Replacement of removed street trees is mitigated at a 2:1 replacement to removal ratio. Replacement trees will preferably be installed on-site but species and location of replacement will be determined by a City-selected investigator. Maintenance of replacement trees, including watering, pruning, general care, and replacement of trees as needed, will be required for 5 years after installation. While City of Los Angeles Municipal Code Section 62.177 allows for a payment of in-lieu fees when the required replacement trees cannot be feasibly planted on-site, the in-lieu fee must be evaluated by CEQA to adequately satisfy mitigation for removed street trees.

2.3.9 Metro Tree Policy

Per the Metro Tree Policy (Metro, 2022a), Metro assumes responsibility to protect trees impacted by their construction projects, which includes a sustainable tree replacement and establishment program for unavoidable tree removals. Prior to the start of construction, Metro will prepare a tree protection plan identifying Tree Protection Zones for all trees within Metro property lines designated for retention. The Metro Tree Policy is applicable to trees impacted by construction that are not already protected by any other ordinance or the City of LA Policy, such as tree species on private property that are not protected. To the degree feasible, Metro will plan and design new construction or additions so that well-established trees are preserved. Well-established trees will be protected from long and short-term construction-related damage, such as direct damage from equipment and root loss caused by soil

compaction. A mitigation plan will be prepared for any damaged or removed trees in consultation with a certified arborist.

Street trees removed by Metro will be replaced with 36-inch standard box trees at a minimum 2:1 ratio per individual, at or near the location of removal. Removal of heritage trees and protected trees (designated by pertinent local ordinances) are to be avoided whenever possible but, when unavoidable, will be replaced at a 4:1 ratio by trees of the same variety. In addition, Metro will coordinate with the applicable entities as needed, in the event a tree must be removed. Metro will also hold responsibility for a 3-year establishment period for replacement trees located within Metro property lines or Metro's ROW, as well as those associated with Metro capital projects that are installed outside of Metro property and ROW. During the establishment period, a certified arborist will assist in tree maintenance through regular inspections and recommended actions needed to retain or recover a tree's health. For long-term maintenance, Metro will hold responsibility of trees located only within Metro property lines or ROWs.

2.3.10 City of Santa Monica General Plan

The City of Santa Monica incorporates citizens' goals and an evaluation of the city's natural resources into "The Conservation Element" of the General Plan (City of Santa Monica, 1975), which describes the goals and policies to address issues faced by the City related to conservation. Three goals set by the plan are applicable to the Project that the Project must comply with when on land owned by City of Santa Monica are:

- Preservation of the ecological balance and natural resources of the city and conservation of the energies and materials without serious interference with community needs
- An atmosphere free of air pollution
- A community whose appearance is in harmony with itself and setting

The Project would consider the applicable conservation goals and policies set forth in the *City of Santa Monica General Plan* when on properties owned by the City of Santa Monica.

2.3.11 City of Santa Monica Tree Ordinance

The City of Santa Monica's Municipal Code (Chapter 7.40.110, Tree Code Permit Requirements) states that no person shall remove, cut, trim, prune, plant, injure, or interfere with any tree, shrub, or plant upon any street, sidewalk, parkway, alley, or other public property without having first obtained a city permit authorizing such work. Trees located within the City of Santa Monica (within city boundaries or on parcels owned by the City of Santa Monica) are under the jurisdiction of the City of Santa Monica Tree Code (Tree Code). The permit may be granted by the Santa Monica City Director on the condition that the owner or authorized representative bears the cost of the permitted work and the cost of replanting and maintenance of any tree, shrub, or plant.

The Project would consider the requirements for impacts to tree as described in the *Santa Monica Urban Forest Master Plan* (City of Santa Monica, 2017) and as determined by the City Director.

2.3.12 Natural Community Conservation Planning and Habitat Conservation Planning

NCCPs and HCPs are regulatory frameworks designed to protect species and habitats while allowing for compatible land use and development. To date, only one NCCP/HCP, the City of Rancho Palos Verdes NCCP/HCP, is finalized and being implemented in Los Angeles County (CDFW, 2023c). This plan area

occurs on the Palos Verdes Peninsula, 15 miles to the south of the Project and does not coincide with the Project. Therefore, there are no applicable NCCP/HCP regulations to the Project.

2.3.13 Western Bat Working Group

The Western Bat Working Group (WBWG) is a nonprofit organization with members from agencies, organizations, and individuals interested in bat research, management, and conservation in North America across 10 regions. Conservation work conducted by WBWG is funded through state and federal management agencies, non-governmental organizations, and private donations. WBWG has developed a Western Bat Species Regional Priority Matrix to provide details on the overall status for bat species within western North America by region. The matrix provides a ranking (High, Medium, Low, or Periphery) to indicate conservation risk for a species within a region.

The WBWG itself does not have any regulatory authority; however, it provides important guidelines and recommendations for bat conservation that can be applied to operation or construction of the Project, should impacts to medium or high-risk species be anticipated.

2.4 Regulatory Approach

The following permitting approach is anticipated:

PM BIO-1: ***Stormwater Pollution Prevention Plan Development***

- *A Storm Water Pollution Prevention Plan (SWPPP) will be prepared prior to the start of construction. The SWPPP will identify the design features and best management practices that will be used:*
  - *To manage drainage-related issues (e.g., erosion, sedimentation, and non-stormwater discharges) during construction activities. Erosion-control measures will be regularly checked by inspectors, biologist(s), and/or resident engineer. Fencing and erosion-control measures in all construction areas will be inspected a minimum of once per week.*
  - *To establish material handling and staging areas and prevent discharges or spills from entering waterways, including vehicle fueling practices and waste management as follows:*
  - *For refueling guidelines: Fueling of equipment will occur in designated fueling zones within the construction staging areas. Drip pans, drip cloths, or absorbent pads will be used during fluid replacements. All equipment used within the approved construction limits will be maintained to minimize and control fluid and grease leaks. Provisions will be made to contain and immediately clean up unintentional spills of fuel, oil, or fluid. When handling toxic substances, construction vehicles will carry a Hazardous Material Spill Kit for use in the event of a spill. All construction personnel working on-site will be trained in using these kits. Spill containment materials must be on-site or readily available for any equipment maintenance or refueling.*
  - *For waste management: Spoils, trash, and any construction-generated debris will be removed to an approved off-site disposal facility. Trash and food items will be contained in closed containers and removed daily to prevent discharges or spills from entering waterways. Litter and debris will*

be cleaned up daily from the site. Hazardous waste will be stored in appropriately labeled containers in a proper staging area (i.e., with secondary containment or indoors or under cover). Any hazardous spills will be immediately cleaned up and reported.

PM BIO-2: ***Regulatory Requirements***

- *Special-Status Species: Once a preferred alternative is selected, coordination with California Department of Fish and Wildlife (CDFW) and U.S. Department of Fish and Wildlife (USFWS) will be required to determine what, if any, permitting is required for the Project. The State may require an Incidental Take Permit (Fish & Game Code Section 2081(b)), and consultation with USFWS may be required per Section 7 of the Endangered Species Act.*
- *Aquatic Resources: Prior to approval of the Project plans and specifications, Public Works will coordinate with USACE to confirm CWA regulatory compliance and integrate permit conditions into the plans and specifications. USACE may authorize the Project per a Section 14 of the Rivers and Harbors Act Section 408 Program permission. The Regional Water Quality Control Board may authorize the Project per a Section 401 Water Quality Certification. CDFW may authorize the Project per a Streambed Alteration Agreement pursuant to California Fish and Game Code Section 1602.*

3 METHODOLOGY

The following section describes the desktop and field assessment methodologies used for the biological resource evaluation. The biological resource evaluation was conducted to document the existing biological resources and to evaluate the potential to occur for sensitive vegetation communities and special-status plant and wildlife species.

For the purposes of analysis, the following terms were defined, listed in order of decreasing size:

- **Project Study Area** represents the area in which the transit concepts and ancillary facilities are proposed, including the Transportation Analysis Zones from Metro's travel demand model that are within 1 mile of the alignments. The Project Study Area is approximately 15.5 miles long and 7 miles wide and is approximately centered on Interstate 405 (I-405).
- The **Resource Study Area** (RSA) is defined for each project alternative, excluding the No Project Alternative (Figure 6-10, Figure 7-10, Figure 9-11, Figure 10-9, and Figure 101-10-6). Each RSA includes that project alternative's disturbance footprint (composed of all underground, surface, and aerial project components) plus a 500-foot radius buffer around areas of surface-level disturbance. The ground-disturbance buffer captures all areas subject to potential indirect impacts from implementation of the Project; temporary and permanent ground disturbance is discussed in the following section, Ground Disturbance Area. Direct or indirect effects are not anticipated at the surface from underground tunnel construction due to the depth of activities; accordingly, the buffer was not applied to underground tunnel segments. Activities associated with tunnel construction that have surface-level equipment usage have potential for surface-level effects, so are incorporated into temporary or permanent ground disturbance areas and buffered. Specifically for grouting operations associated with underground tunnel construction, activities will occur either underground without associated surface-level disturbance and so are not buffered, or will occur at surface level and are buffered to account for potential surface-level disturbances.
- Discussion of specifics for underground configurations including locations, tunnel depth, installation, and associated at-grade components are presented in the Operating Characteristics section for applicable alternatives (Section 6.1.1, Section 7.1.1, Section 8.1.1, Section 9.1.1, and Section 10.1.1). Indirect impacts may include elevated noise and dust levels, soil compaction, and increased human activity, among others. Indirect impacts beyond 500 feet would be diffuse and are not anticipated to significantly impact biological resources.
- While indirect impacts are anticipated to be less than significant beyond the 500-foot radius buffer, home ranges for wildlife in the vicinity with extensive home ranges (e.g., mountain lion) are large enough that additional area needs to be considered to capture the geographic extent of wildlife movement and migratory patterns and analyze for movement-related impacts. For the purposes of this analysis, non-developed areas of the Santa Monica Mountains were considered. The boundary for the mountain range near the Project was derived from the NPS Vegetation Classification of the Santa Monica Mountains National Recreation Area and Environs in Ventura and Los Angeles Counties, California (Keeler-Wolf and Evens, 2006) and is approximated by the area between W Sunset Boulevard in the south and Valley Vista Boulevard in the north (Figure 5-4).
- **Ground Disturbance Area** is one component of the RSA; it includes aboveground project components that require surface-disturbance activities such as drilling, excavating, clearing, grading, pile driving, topsoil stripping, and/or vegetation removal to execute the Project. The Ground Disturbance Area comprises both temporary and permanent impacts, including surface impacts

associated with aerial and underground components (e.g., access points, staging locations, cut-and-cover station construction, aerial alignment support structures and guideway, etc.). Impacts to vegetation within the Ground Disturbance Area have potential to affect special-status wildlife or plant species both directly and through modifications to their habitat. Within the Ground Disturbance Area, areas of impact are defined and demarcated as either temporary or permanent in nature; areas of temporary and permanent impacts do not spatially overlap.

- Specifically, aerial and underground components were classified as either temporary or permanent ground disturbance as follows:
  - Aerial guideways and their components (i.e., support structure columns, spans the monorail and heavy rail travels between columns) are considered permanent ground disturbance for the length of the aerial guideway. Surface impacts associated with aerial guideway construction (e.g., staging locations, construction access, etc.) were categorized as either permanent or temporary ground disturbance.
  - Underground features (e.g., the tunnel, traction power station substations built into tunnel-adjacent caverns) were excluded from the Ground Disturbance Area. Surface impacts associated with underground construction (e.g., staging locations, launch sites for the boring machine, etc.) were categorized as either permanent or temporary ground disturbance.
- Impacts are anticipated from project construction activities such as clearing, grading, excavating, drilling, and/or vegetation removal. The limits of the Ground Disturbance Area were determined by reviewing project plans, aerial photography, and evaluating potential construction limits.
- **Tree Survey Area** comprises the Ground Disturbance Area (where direct impacts are anticipated) and an associated 10-foot buffer to account for variance in Global Positioning System (GPS) accuracy. Within unincorporated Los Angeles County land, the Tree Survey Area is extended out to 200 feet from the Ground Disturbance Area for trees in the genus *Quercus* (to be compliant with requirements of the Los Angeles County Oak Tree Ordinance, detailed in Section 2.3.2). Field surveys for an initial inventory assessment were completed within the Tree Survey Area (Appendix B, Initial Protected Tree and Shrub Inventory Memorandum); the inventory included trees whose canopy or trunk intersected the Tree Survey Area that also met the size requirements for the applicable ordinance or policy.

3.1 Legal Protections and Definitions

Special-status species, special-status vegetation communities, wetlands and riparian habitat, and wildlife corridors designations and categorizations used herein follow the definitions below:

- Plant species designated by the California Native Plant Society as California Rare Plant Ranks (CRPR) 1B and 2
  - CRPR 1B: Plants that are rare, threatened, or endangered in California and elsewhere
  - CRPR 2: Plants that are rare, threatened, or endangered in California, but more common elsewhere
- Sensitive natural vegetation communities with a state ranking of S1 to S3

  - S1 = Critically Imperiled — Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state
  - S2 = Imperiled — Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state
  - S3 = Vulnerable — Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state
- Wildlife species designated as endangered, threatened, or candidate for listing under the federal Endangered Species Act (ESA)
- Wildlife species designated as endangered, threatened, candidate for listing, or a Species of Special Concern (SSC) under the California ESA (CESA)
- Essential wildlife connectivity areas protected by the California Department of Fish and Wildlife
- Nesting birds protected under the Migratory Bird Treaty Act
- Water of the United States (WOTUS), wetlands, and riparian habitats protected under the Clean Water Act (CWA)
- Bald and golden eagles protected under the Bald and Golden Eagle Protection Act (BGEPA)
- Bats considered Medium or High Priority by the Western Bat Working Group (WBWG)

3.2 Literature Review

A desktop literature review was conducted prior to field work to understand both the historical and existing conditions associated with the Project Study Area in order to evaluate Project impacts more effectively. Historical imagery available on Google Earth (2023) was utilized for comparisons of the Project Study Area back to 1985 to provide a visual reference of physical changes undergone during this time. A search of applicable public databases was conducted to obtain information about the presence of, or lack thereof, sensitive biological resources including wildlife, plants, wildlife movement corridors, and aquatic features.

The information associated with the literature review was used to characterize the Project Study Area and further inform the potential for sensitive biological resources to occur under current conditions. The data gathered herein was consolidated and utilized as a reference to inform the subsequent biological field survey.

3.2.1 Special-Status Wildlife and Plant Database Searches

The literature review included the following databases to identify special-status plants and wildlife with the potential to occur:

- California Natural Diversity Database (CNDDB)
- U.S. Fish & Wildlife Service (USFWS) online Information for Planning and Consultation (IPaC) environmental review program
- eBird

- California Native Plant Society (CNPS) Rare Plant Inventory
- iNaturalist
- Western Bat Working Group (WBWG) for ranking of bat species with potential to occur

Applicable search area was defined using 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (quad) maps that correspond with project component locations, with adjacent quad maps being included in the search area when a project component was within 2 miles of the boundary; the specific quad maps searched varied per alternative. Details on search area are presented in each project alternative's respective chapter.

Tracking of species within California when there is conservation concern, which includes many not formally federal or state listed, is done through the CNDDB. The California Department of Fish and Wildlife (CDFW) uses additional designations for species not listed as endangered and threatened to aid in their goal of maintaining viable populations of native species. One of these, "Fully Protected" (CFP), includes legal protections; CFP species may not be taken or possessed except for under special permit from the CDFW for scientific purposes, relocation of a bird species for the protection of livestock, or if they are a covered species under a NCCP. CDFW Species of Special Concern (SSC) and Watch List species are afforded no official legal status but may receive special consideration during the environmental review process. Along with ESA- and CESA-covered species, wildlife classified by CDFW as CFP and SSC were included in the analysis for potential to occur within each alternative's search area. The January 2024 CNDDB Special Animals List was utilized to determine CDFW special-status wildlife designations (CDFW, 2024a). The State and Federally Listed Endangered, Threatened, and Rare Plants of California list from January 2024 was used to determine CDFW special-status plant designations (CDFW, 2024c).

Many avian species that are not federal or state listed (i.e., not special-status) receive legal protection through Migratory Bird Treaty Act, which protects hundreds of non-game migratory bird species from take, including their nests. Protection for these species will be covered under specific mitigation measures associated with the proposed work.

The USFWS's Information for Planning and Consultation (IPaC) is a free, digital planning tool that assists in environmental review to assess if a project could impact federally listed or candidate species, designated critical habitat (USFWS, 2024b), and other sensitive resources managed by the USFWS (USFWS, 2024a). Through use of the online mapping tool, an official list of potential resources with potential to occur were evaluated within the appropriate quad map search area for each alternative.

Specific to avian species, the eBird database was queried to determine if special-status avian species had been detected in the Project Study Area. eBird is among the world's largest biodiversity-related science projects, which documents bird distribution, abundance, habitat use, trends, etc. eBird is an avian database that is managed, maintained, and vetted by the Cornell Lab of Ornithology where the public can record avian species detections on a checklist of likely birds for that date and region. Unusual observations, including species out of their normal geographic range or high numbers of birds, are vetted by regional avian specialists (eBird, 2023a). This database was used as a supplemental resource to augment available data from scientific databases for the purposes of this report.

The CNPS has maintained an inventory of rare and endangered plants of California since 1974; this Rare Plant Inventory is recognized as the authoritative resource of sensitive California plants. The inventory has multiple uses, including as an education tool, in scientific research, for conservation planning, and to prepare environmental documents (CNPS, 2024). Each plant within the list is assigned a CRPR in

collaboration with the CNDDB. The rankings categorize the rarity of each species; there are six total ranks. Only plant species with CRPRs of 1B or 2A are included in the analysis herein.

The literature review included a query of iNaturalist — an online citizen science platform established to share biodiversity information on species occurrence and identification — to determine if recent observations of special-status species were documented within each project alternative's RSA. Within the database, observations are recorded and reviewed by members of the community to determine the consensus on species identification; "Research Grade" is the finest level of identification certainty. iNaturalist observations become candidates for Research Grade when (1) they contain a photo, date, and GPS coordinates and (2) species identification is confirmed by at least three community members' assessment and review. Only Research Grade iNaturalist observations were considered herein. iNaturalist was used as a supplemental resource to augment available data from scientific databases for the purposes of this report.

Evaluation of bat species utilized the WBWG ranking system in addition to database searches (CNDDB and IPaC) to determine if bat species with potential to occur were special status. Although designation under the WBWG does not afford bat species legal status or formal protection at this time, the objectives of the WBWG designations are to identify bat species that are either threated or at risk and encourage practices that benefit bat populations, support practices that minimize unavoidable impacts, and recommend mitigation as needed (WBWG, 2017). Therefore, these species may receive special consideration during the environmental review process as well. Bat species were included when ranked Medium or High Priority Species.

Information from the aforementioned databases was used to prepare a comprehensive list of special-status species with potential to occur, that warranted further evaluation.

3.2.2 CDFW Sensitive Vegetation Communities

The CNDDB also tracks natural communities; vegetation communities can be classified as sensitive when they are rare and/or under threat, including those that may support special-status plant or wildlife species or receive regulatory protection (i.e., Section 404 of the CWA and/or Sections 1600 et seq. of the California Fish and Game Code) (CDFW, 2023b). The CDFW and CNPS provide guidance on determining sensitivity of a vegetation community (CDFW, 2024d) and the CNDDB tracks their occurrences. The CDFW provides a ranking system for natural communities at a global (G) and state (S) level with values ranging from 1 through 5, where lower numbers represent the rarest and threatened; ranking incorporates the rarity of each community and threats to the community at the assessment level. Communities rated S1 (very rare or threatened within the state) through S3 are considered sensitive and are to be considered during the environmental review process (CDFW, 2024d). Classification of vegetation communities for sensitivity follows the *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009) and includes alliances and associations that classify plant composition and site conditions (e.g., habitat conditions, topography, soils, etc.) through a combination of dominant and codominant species. Alliances are broad units of vegetation that are defined by the dominant or characteristic species and reflect recurring patterns of plants across a landscape; they are commonly used in vegetation mapping. An alliance is made up of one or more associations, which are the primary unit of vegetation and reflect patterns of species occurrence and frequency (Jennings et al., 2009). If the alliance is sensitive and ranked S1 to S3, all nested associations are also sensitive. However, if an alliance is not sensitive and has multiple associations, some associations may be considered sensitive while others within the same alliance are not. For the purposes of this report, vegetation mapping was completed at the alliance level resulting in vegetation communities being considered "potentially

sensitive" if any associations within the alliance that could be present (i.e., the associated plant species' ranges overlap with the Project) and are ranked S1 to S3. Determination of sensitivity will occur during field surveys after the preferred alternative is selected when codominant species can be used to determine which association is present and if it is sensitive.

3.2.3 Wildlife Corridors

The following resources were referenced during the literature search to evaluate potential presence of wildlife movement corridors within the Project Study Area. These resources provide information on the location, size, and scale (i.e., primary or secondary classification types), and overall function of regional linkages applicable to the Project. Reference materials included the following:

- California Essential Habitat Connectivity Project (CDFW, 2023)
- Citizens for Los Angeles Wildlife Corridors and Habitat Connectivity (CLAW, 2023)
- South Coast Wildlands (SCW) Missing Linkages (South Coast Wildlands, 2008)
- Santa Monica Mountains Conservancy's (SMMC) Habitat Linkage Planning Map (SMMC, 2021)
- National Park Service's (NPS) Lions in the Santa Monica Mountains (NPS, 2023)
- Pacific Flyway Council of Migratory Bird Management (Pacific Flyway Council, 2023)
- City of Los Angeles Department of City Planning Draft Wildlife Ordinance (DCP, 2022)
- Wildlife Resources Map (DCP, 2023)

SCW is a nonprofit organization dedicated to ensuring functional habitat connectivity across diverse wildland networks. SCW works with respected conservation biologists, ecologists, wildlife agencies, land managers and planners, and other conservation organizations to develop and implement regional conservation strategies. Habitat linkages have been catalogued in Southern California as part of a coordinated statewide effort to identify and preserve or restore these corridors (Penrod et al., 2001).

In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resource that facilitates population growth and diversity. Habitat fragments are isolated patches of habitat separated by otherwise foreign or inhospitable areas, such as urban housing, commercial development, and highways. Two types of wildlife migration corridors seen in urban settings are regional corridors, defined as those linking two or more large areas of natural open space, and local corridors, defined as those allowing resident wildlife to access critical resources (e.g., food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable wildlife corridor consists of more than an unobstructed path between habitat areas but also must have the appropriate vegetation to provide food and cover to both transient species and resident populations and a lack of stressors and threats within and adjacent to the corridor for wildlife to use it successfully. Within the City of Los Angeles, traditional wildlife corridors where pieces of habitat that are usually linear link two or more natural habitat patches are uncommon. Instead, wildlife movement is most likely to occur within areas that are protected for wildlife but can also include marginal habitat or developed areas (DCP, 2021). The City of Los Angeles has identified a regional wildlife movement pathway (WMP) between the western Santa Monica Mountains and Griffith Park (known as WMP 13) through fragmented habitat; this pathway has been documented in use by medium and large mammals (DCP, 2021).

3.2.4 Aquatic Resources

A desktop analysis of detailed information on the location and characteristics of aquatic surface water features was completed using available mapping of watersheds, streams, wetlands, and soils within the

Project Study Area. To identify areas that may be subject to the jurisdiction of USACE under Section 404, RWQCB under Section 401, of the federal CWA, and CDFW under Section 1600 of the California Fish and Game Code the following resources were queried:

- U.S. Geological Survey's National Hydrography Dataset (NHD) (USGS, 2023)
- USFWS's National Wetlands Inventory (NWI) (USFWS, 2023a)
- Web Soil Survey (USDA-NRCS, 2023a, 2023b)
- SoilWeb (UC-ANR, 2023)

The NHD dataset defines spatial locations of surface waters and is designed to provide the most comprehensive coverage of surface water data for the United States. The NHD contains features such as lakes, ponds, streams, rivers, canals, dams, and stream gages. The NWI was established by the USFWS to conduct a nationwide inventory of U.S. wetlands to provide information on the distribution and type of wetlands. As part of the NWI, the USFWS developed a wetland classification system (Cowardin et al., 1979) that serves as the federal standard for wetland classification. The NHD (USGS, 2023) and NWI (USFWS, 2023a) were queried for occurrences of surface waters within the RSA.

These data are designed to be used in general mapping and the analysis of surface water systems. Using basic NHD features like flow network, linked information, and other characteristics, it is possible to study cause-and-effect relationships. For example, use of these tools could determine how a source of poor water quality upstream could affect a fish population downstream.

General biological surveys for a variety of species were historically conducted within the region in association with prior projects in the region, including previous Metro projects. The two primary documents reviewed for relevant biological resources include:

- *North Hollywood to Pasadena Bus Rapid Transit (BRT) Corridor Planning and Environmental Study Biological Resources Technical Report* (Metro, 2020)
- *Recirculated Draft EIR, Eastside Transit Corridor Phase 2, Section 3.3, Biological Resources* (Metro, 2022b)

3.3 Biological Surveys

Biological surveys comprised a combination of desktop analysis and field surveys for aquatic and biological resources, including a preliminary tree inventory. Data was collected for each project alternative; since field surveys were not conducted for the Project Study Area, combined data from each project alternative's RSA was used for the No Project Alternative. Field surveys were conducted April 10, 2023, through April 14, 2023; May 18, 2023; July 7, 2023; and March 27, 2024. Field survey methodology was a combination of pedestrian, windshield, and binocular surveys, depending on access and visibility. Accessible areas in the public right-of-way (ROW) and the Getty Center were surveyed using meandering transects; inaccessible areas visible from the public ROW were scanned with binoculars or through windshield surveys when safe access was not feasible. Data was recorded in the ArcGIS Field Maps mobile application. Property access was limited to public ROW and within the Getty Center; portions of the survey area could not be visually assessed due to access or safety issues (especially around Stone Canyon Reservoir). Inaccessible portions of the survey area that were not visible from the public ROW were assessed through desktop with aerial imagery.

3.3.1 Special-Status Species and Vegetation Mapping

Biological field surveys were conducted to document existing conditions and potential for special-status plants, special-status wildlife species, special-status vegetation communities, and birds protected under the Migratory Bird Treaty Act within the Ground Disturbance Area. Resource-specific focused botanical or wildlife surveys were not conducted for the Project at this time and will be completed once a preferred alternative is identified.

Desktop analysis was utilized to map vegetation communities for the Ground Disturbance Area and a 500-foot buffer. Vegetation communities listed in this report are based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009). Vegetation mapping was completed using a combination of publicly available mapping (from the NPS's Santa Monica National Recreation Area) (NPS, 2004-2019) where available and high-quality aerial imagery (Google Earth) elsewhere. The minimum mapping unit for the SMMNRA data is 0.5 hectares, and communities present in smaller patches are conservatively assumed to be consistent with surrounding classifications for the purpose of this analysis. No less than 10 percent of the SMMNRA vegetation mapping was field-truthed for the Ground Disturbance Area; if discrepancies between field observations and desktop analysis were 0.5 hectare or greater, field observation data was considered more accurate and presented herein. Vegetation communities within the SMMNRA dataset include classifications into the Calveg (Classification and Assessment with Landsat of Visible Ecological Groupings) system, which is used to classify existing vegetation into categories of vegetated or non-vegetated units for resource planning purposes. Vegetation classified as "urban" was removed from the SMMNRA vegetation mapping dataset to represent the non-developed areas within the Santa Monica Mountains that are presented herein.

3.3.2 Protected Tree and Shrub Inventory

An initial protected tree and shrub inventory was conducted within the Tree Survey Area to determine the quantity and species with potential to be impacted by construction (Appendix B, Initial Protected Tree and Shrub Inventory Memorandum). Portions of the RSA outside the Tree Survey Area (underground tunnels and the 500-foot buffer on the Ground Disturbance Area) were not inventoried since ground disturbance is not expected to occur in those areas.

This initial tree inventory recorded trees measuring 4 inches in DBH or greater for a single stem plant or cumulative for trunks in multi-stem individuals; this method encompasses those protected under potentially applicable ordinances and policies (see Section 2, Regulatory and Policy Framework). The Tree Protection Zone (i.e., dripline or canopy of the tree/shrub) of inventoried trees falls at least partially within the Tree Survey Area; individual trees or shrubs whose Tree Protection Zone was not within the survey area were not inventoried. No shrub species, other than toyon and Mexican elderberry, of any size were recorded. Each inventoried tree of appropriate size was determined to be protected under one applicable ordinance or policy based on species and landowner (listed in Appendix B, Attachment 2, Tree Map Series). Inventoried trees with protection include the following:

- Trees from the oak genus as follows:
  - Any oak species indigenous to California (excluding scrub oak) within the City of Los Angeles
  - Any oak species measuring 8-inch DBH or greater for individuals or a combined DBH of the two largest trunks totaling 12 inches or more for multi-stemmed trees within unincorporated County of Los Angeles land

  - Any native oak trees (excluding scrub oak) that occur in a contiguous group of two or more with at least 5-inch DBH within unincorporated County of Los Angeles land
- Southern California black walnut, western sycamore, and California bay within the City of Los Angeles
- Shrub species Mexican elderberry and toyon within the City of Los Angeles
- Street trees occurring within public ROW
- Trees within the City of Santa Monica
- Trees within the SMMNRA

Each tree/protected shrub or cluster of trees/protected shrubs were mapped with an identification number and data collected included scientific name, common name, and trunk DBH. Species not protected under the regulations above (Section 2.3, Regional and Local) and trees with a DBH of less than 4 inches were not recorded; non-protected species typically consisted of ornamental trees and shrubs planted on private property.

Inventoried trees and protected shrubs were mapped individually as points, when possible, while clusters of trees or protected shrubs were mapped as polygons when two or more individuals were proximate, visibility was limited, and/or property access was denied. Each tree or shrub or cluster was assigned to one ordinance or policy based on tree species, size requirements, location, and landowner/jurisdiction. Details on field sampling and desktop analysis methods can be found in the Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, Field Surveys section, and applicable ordinance or policy for each tree is included the detailed tree inventory (Appendix B, Attachment 1, Tree Inventory Tables). If a tree or protected shrub did not meet protection criteria of the City of LA Ordinance or County Oak Tree Ordinance, it was still considered protected under either the City of Los Angeles Street Tree Policy or Metro Tree Policy. Trees within SMMNRA and on land owned by City of Santa Monica will have mitigation determined through coordination with or at the discretion of the landowner. For purposes of this analysis, mitigation ratios for these trees is assumed to be within the range of replacement trees for the Metro Tree Policy to the City of LA Ordinance for a preliminary estimate, between 2:1 and 4:1. The mitigation requirements and maintenance periods vary depending on the ordinance or policy governing the tree (see Table 3.3-9). If retention of a heritage or protected tree (as defined by local ordinance or policy) is not possible, the Metro Tree Policy dictates a 4:1 replacement ratio per individual with trees of the same variety.

3.3.3 Aquatic Resources

Field surveys were conducted to evaluate the presence of USACE-jurisdictional WOTUS, RWQCB-jurisdictional WOTS, and CDFW-jurisdictional streambeds and any associated riparian habitat. The hydrological field assessment and Aquatic Resources Delineation (Appendix A) were performed within the Ground Disturbance Area. The field investigation included documenting existing conditions and potential jurisdictional resources within the Ground Disturbance Area for each of the five alternatives. The methods and results of the jurisdictional determination are detailed in Appendix A. If appropriate, the Aquatic Resources Delineation will be submitted to USACE as a preliminary jurisdictional determination and will be provided with state and federal streambed/waters permit applications.

3.4 CEQA Thresholds of Significance

For the purposes of this report, impacts are considered significant if the Project would:

- 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 & Wildlife Service.
- 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 & Wildlife Service.
- 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.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4 FUTURE BACKGROUND PROJECTS

This section describes planned improvements to highway, transit, and regional rail facilities within the Project Study Area and the region that would occur whether or not the Project is constructed. These improvements are relevant to the analysis of the No Project Alternative and the project alternatives because they are part of the future regional transportation network within which the Project would be incorporated. These improvements would not be considered reasonably foreseeable consequences of not approving the Project as they would occur whether or not the Project is constructed.

The future background projects include all existing and under-construction highway and transit services and facilities, as well as the transit and highway projects scheduled to be operational by 2045 according to the *Measure R Expenditure Plan* (Metro, 2008), the *Measure M Expenditure Plan* (Metro, 2016), the Southern California Association of Governments (SCAG) *Connect SoCal, 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS) (SCAG, 2020a, 2020b), and the Federal Transportation Improvement Program (FTIP), with the exception of the Sepulveda Transit Corridor Project (Project). The year 2045 was selected as the analysis year for the Project because it was the horizon year of SCAG's adopted RTP/SCS at the time Metro released the NOP for the Project.

4.1 Highway Improvements

The only major highway improvement in the Project Study Area included in the future background projects is the Interstate 405 (I-405) Sepulveda Pass ExpressLanes project (ExpressLanes project). This would include the ExpressLanes project as defined in the *2021 FTIP Technical Appendix, Volume II of III* (SCAG, 2021a), which is expected to provide for the addition of one travel lane in each direction on I-405 between U.S. Highway 101 (US-101) and Interstate 10 (I-10). Metro is currently studying several operational and physical configurations of the ExpressLanes project, which may also be used by commuter or rapid bus services, as are other ExpressLanes in Los Angeles County.

4.2 Transit Improvements

Table 4-1 lists the transit improvements that would be included in the future background projects. This list includes projects scheduled to be operational by 2045 as listed in the *Measure R and Measure M Expenditure Plans* (with the exception of the Project) as well as the Inglewood Transit Connector and LAX APM. In consultation with the Federal Transit Administration, Metro selected 2045 as the analysis year to provide consistency across studies for Measure M transit corridor projects. The Inglewood Transit Connector, a planned automated people mover (APM), which was added to the FTIP with *Consistency Amendment #21-05* in 2021, would also be included in the future background projects (SCAG, 2021b). These projects would also include the Los Angeles International Airport (LAX) APM, currently under construction by Los Angeles World Airports. The APM will extend from a new Consolidated Rent-A-Car Center to the Central Terminal Area of LAX and will include four intermediate stations. In addition, the new Airport Metro Connector Transit Station at Aviation Boulevard and 96th Street will also serve as a direct connection from the Metro K Line and Metro C Line to LAX by connecting with one of the APM stations.

During peak hours, heavy rail transit (HRT) services would generally operate at 4-minute headways (i.e., the time interval between trains traveling in the same direction), and light rail transit (LRT) services would operate at 5- to 6-minute headways. During off-peak hours, HRT services would generally operate at 8-minute headways and LRT services at 10- to 12-minute headways. Bus rapid transit (BRT) services would generally operate at peak headways between 5 and 10 minutes and off-peak headways between

10 and 14 minutes. The Inglewood Transit Connector would operate at a headway of 6 minutes, with more frequent service during major events. The LAX APM would operate at 2-minute headways during peak and off-peak periods.

Table 4-1. Fixed Guideway Transit System in 2045

Transit Line	Mode	Alignment Description[a]
Metro A Line	LRT	Claremont to downtown Long Beach via downtown Los Angeles
Metro B Line	HRT	Union Station to North Hollywood Station
Metro C Line	LRT	Norwalk to Torrance
Metro D Line	HRT	Union Station to Westwood/VA Hospital Station
Metro E Line	LRT	Downtown Santa Monica Station to Lambert Station (Whittier) via downtown Los Angeles
Metro G Line	BRT	Pasadena to Chatsworth[b]
Metro K Line	LRT	Norwalk to Expo/Crenshaw Station
East San Fernando Valley Light Rail Transit Line	LRT	Metrolink Sylmar/San Fernando Station to Metro G Line Van Nuys Station
Southeast Gateway Line	LRT	Union Station to Artesia
North San Fernando Valley Bus Rapid Transit Network Improvements	BRT	North Hollywood to Chatsworth[c]
Vermont Transit Corridor	BRT	Hollywood Boulevard to 120th Street
Inglewood Transit Connector	APM	Market Street/Florence Avenue to Prairie Avenue/Hardy Street
Los Angeles International Airport APM	APM	Aviation Boulevard/96th Street to LAX Central Terminal Area

Source: HTA, 2024

[a]Alignment descriptions reflect the project definition as of the date of the Project's Notice of Preparation (Metro, 2021).

[b]As defined in Metro Board actions of July 2018 and May 2021, the Metro G Line will have an eastern terminus near Pasadena City College and will include aerial stations at Sepulveda Boulevard and Van Nuys Boulevard.

[c]The North San Fernando Valley network improvements are assumed to be as approved by the Metro Board in December 2022.

4.3 Regional Rail Projects

The future background projects would include the Southern California Optimized Rail Expansion (SCORE) program, which is Metrolink's Capital Improvement Program that will upgrade the regional rail system (including grade crossings, stations, and signals) and add tracks as necessary to be ready in time for the 2028 Olympic and Paralympic Games. The SCORE program will also help Metrolink to move toward a zero emissions future. The following SCORE projects planned at Chatsworth and Burbank Stations will upgrade station facilities and allow 30-minute all-day service in each direction by 2045 on the Metrolink Ventura County Line:

1. Chatsworth Station: This SCORE project will include replacing an at-grade crossing and adding a new pedestrian bridge and several track improvements to enable more frequent and reliable service.
2. Burbank Station: This SCORE project will include replacing tracks, adding a new pedestrian crossing, and realigning tracks to achieve more frequency, efficiency, and shorter headways.

In addition, the Link Union Station project will provide improvements to Los Angeles Union Station that will transform the operations of the station by allowing trains to arrive and depart in both directions,

rather than having to reverse direction to depart the station. Link Union Station will also prepare Union Station for the arrival of California High-Speed Rail, which will connect Union Station to other regional multimodal transportation hubs such as Hollywood Burbank Airport and the Anaheim Regional Transportation Intermodal Center.

5 NO PROJECT ALTERNATIVE

The only reasonably foreseeable transportation project under the No Project Alternative would be improvements to Metro Line 761, which would continue to serve as the primary transit option through the Sepulveda Pass with peak-period headways of 10 minutes in the peak direction and 15 minutes in the other direction. Metro Line 761 would operate between the Metro E Line Expo/Sepulveda Station and the Metro G Line Van Nuys Station, in coordination with the opening of the East San Fernando Valley Light Rail Transit Line, rather than to its current northern terminus at the Sylmar Metrolink Station.

5.1 Existing Conditions

5.1.1 General Characterization of the Project Study Area

The northern and southern portions of the Project Study Area, depicted on, are comprised of highly developed and urbanized neighborhoods. These urbanized areas contain limited biological resources that are generally restricted to parks and undeveloped areas that contain predominantly non-native landscaped vegetation; occasional patches of native vegetation are present, typically as plantings rather than naturally occurring vegetation. Habitat in this condition is primarily suitable for species that can tolerate at least some level of urbanization and are acclimated to human influence including numerous MBTA-protected bird species and wildlife (e.g., raccoon, striped skunk, Virginia opossum, and coyote)

The Los Angeles River flows west to east through the Project Study Area, mostly in a box channel (i.e., concrete walls forming a rectangular channel). Within Sepulveda Basin however, a swath of riparian habitat approximately 2 miles long is present along the Los Angeles River; this area could provide suitable habitat for plants and wildlife. Riparian habitat is also present in the Basin along four north-to-south–flowing creeks that feed into the Los Angeles River (Haskell Creek, Woodley Creek, Hayvenhurst Channel, and Bull Creek east to west).

I-405 is a major arterial freeway running north-south through the middle of the Project Study Area, connecting communities in the San Fernando Valley with the Los Angeles Basin through the Sepulveda Pass in the Santa Monica Mountains. The freeway serves as a barrier for wildlife movement within the Santa Monica Mountains, as roads in urban areas threaten wildlife by acting as barriers to movement through increased mortality, reduced habitat quality and connectivity, changes in behavior, and restrictions to genetic flow (Riley et al. 2014; Coffin, 2007; Riley et al. 2006).

The middle portion of the Project Study Area bisects the Santa Monica Mountains, which run east-west through the Project Study Area. This area is less developed and is composed of steep slopes covered by remnant native chaparral habitats and non-native grassland. Native habitat is interspersed with upscale single-family residences along north-south–oriented roadways running atop ridgelines and through canyons and valleys. Portions of the SMMNRA are within the Santa Monica Mountains in the Project Study Area; the SMMNRA consists of approximately 150,000 acres and provides habitats to more than 1,000 different plant and 500 wildlife species (National Park Conservation Association, 2023).

5.1.2 Elevations and Topography

Elevations range within the Project Study Area from approximately 800 feet above mean sea level (amsl) at the northern end to 1,600 feet amsl in the middle, and approximately 160 feet amsl at the southern end of the Project Study Area. The general topography of the Project Study Area includes several, parallel, north-to-south–oriented inland valleys that run through the Santa Monica Mountains. The

Santa Monica Mountains, including the Sepulveda Pass, are composed of rugged steep mountain terrain with narrow canyons that are located between two flat urbanized valleys.

5.1.3 Climate

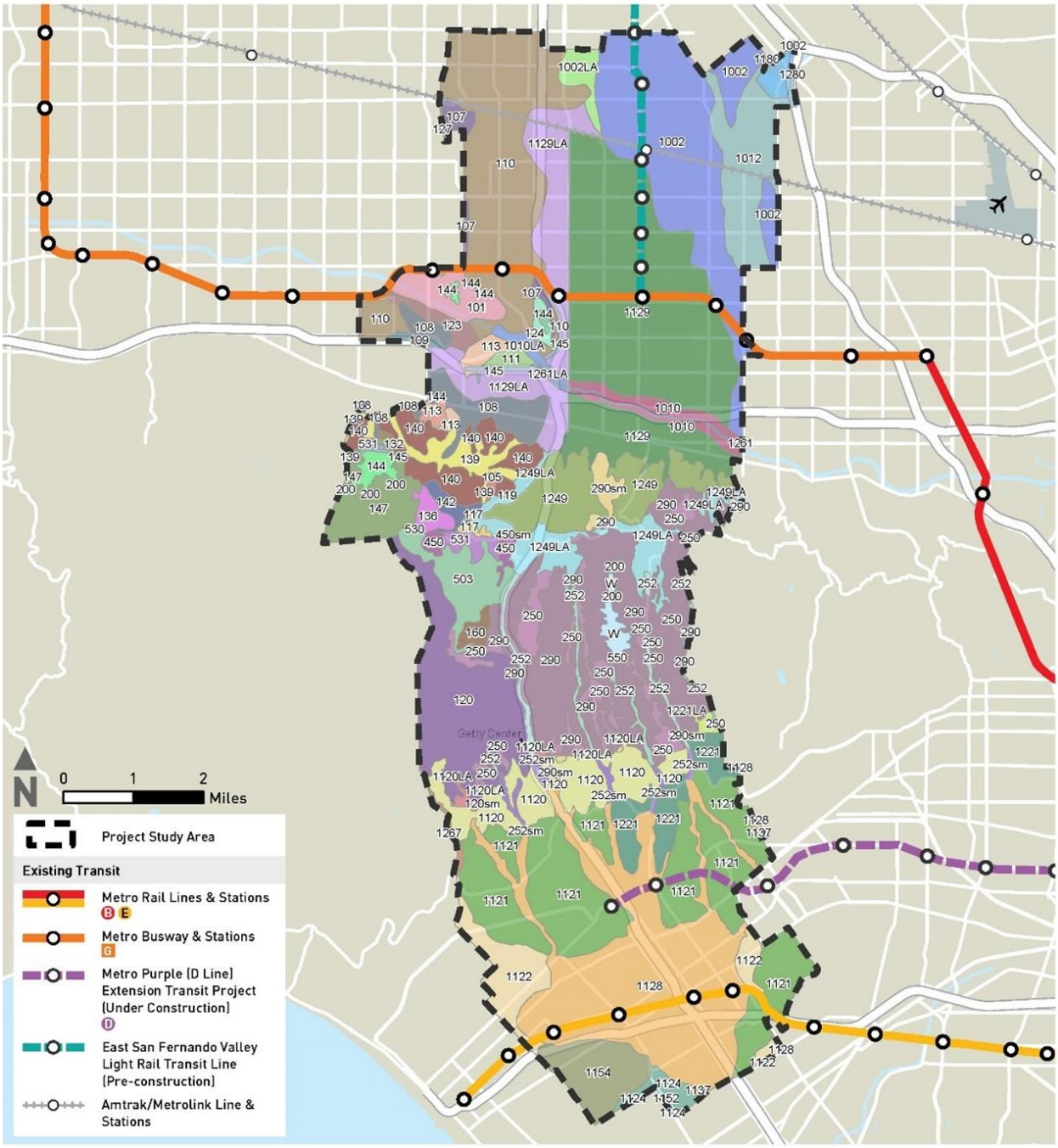
Precipitation in Los Angeles County is derived from frontal low-pressure systems that originate over the Pacific Ocean and generally travel southeast into southern California. Precipitation normally occurs during the cooler months of the year from November through March and is infrequent during the summer months. As throughout southern California, rainfall in the Los Angeles River Watershed and the Ballona Creek Watershed alternates between wet and dry periods. The average annual precipitation in the Project Study Area is approximately 13 to 18 inches. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the region. The Project Study Area is located within a Mediterranean climate zone, characterized by dry, warm summers and mild, wet winters. The mean temperature range for the months of November through April is 41 degrees Fahrenheit (°F) to 73°F. The mean temperature range for the months of May through October is 58°F to 79°F.

Between October 2022 and September 2023, approximately 26.46 inches of precipitation were recorded at LAX approximately 5 miles south of the Project Study Area; 88 percent of the precipitation occurred between November and March. Compared to the 30-year average for this location, the 2023 water year was 206 percent above normal (NOAA, 2023), indicating the 2023 biological and wetlands and waters surveys were conducted during an above average rainfall season.

5.1.4 Soils

The Project Study Area comprises numerous soil types that serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. Soil analysis was included in the Aquatic Resources Delineation (Appendix A) to evaluate for presence or absence of hydric soils that would form under anerobic conditions, such as those that occur in wetlands. An in-depth detailed analysis of subsurface components including soils is presented in the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* (Metro, 2025a). According to the U.S. Department of Agriculture, Natural Resources Conservation Service *Soils Report* for Los Angeles County, California, part of the Project Study Area falls in the Los Angeles County, California, Southeastern soil survey area, with the remaining portions in the West San Fernando Valley soil survey area and the SMMNRA soil survey area (USDA-NRCS, 2023a). Soil types in these soil survey areas are shown on Figure 5-1 with the figure legend on Figure 5-2.

Figure 5-1. No Project Alternative: Soils Map



Source: USDA-NRCS, 2023a

Figure 5-2. No Project Alternative: Soils Map Legend

Source: USDA-NRCS, 2023a

5.1.5 Biological Resources within the Project Study Area

This section describes biological resources known or with potential to occur within the Project Study Area. The search area for biological resources with potential to occur was defined as all U.S. Geological Survey (USGS) 7.5-minute quadrangles that co-occur with the Project Study Area, and all adjacent quadrangles. For the No Project Alternative, searches were conducted for Beverly Hills, Van Nuys, and

Canoga Park quadrangles and surrounding 11 quadrangles: Topanga, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood.

Wildlife, vegetation communities, plant species, and jurisdictional aquatic features are described in the following subsections.

5.1.5.1 Wildlife

Most wildlife expected in the urbanized areas of the Project Study Area, such as the San Fernando Valley to the north and the westside communities of Los Angeles to the south, are regionally common species adapted to human disturbances. These common species include birds (most of which are protected by the Migratory Bird Treaty Act [MBTA]), reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, bats), and larger mammals such as coyotes.

One of the primary indicators of wildlife distribution within the Project Study Area is the location of permanent and ephemeral water sources. Overall, there are few water sources within the Project Study Area thereby limiting diversity of species. Water is present in the Los Angeles River (predominantly within a concrete-lined drainage), Encino Reservoir, Stone Canyon Reservoir, and at lakes on UCLA campus. Water is also present within the Sepulveda Basin in Haskell, Woodley and Bull Creeks and human-made lakes, including Lake Balboa, Wildlife Lake, and several smaller ponds. These water bodies provide foraging, breeding, migrating, and wintering habitat for a variety of wildlife species such as amphibians, birds, bats, and others.

The middle portion of the Project Study Area coincides with the Santa Monica Mountains where there is greater wildlife diversity than the developed urban areas of the Project Study Area. Native habitat is present in large tracts of undeveloped land that can provide suitable conditions for additional local, native species compared to urban environments, as well as potential for less common local, native species to exist. Approximately 450 wildlife species occur across the Santa Monica Mountains (NPS, 2019a), although not all species are expected to occur within the Project Study Area. The Santa Monica Mountains provide important core habitat for wildlife species to reproduce and connect to other open space areas essential for wildlife dispersal. Additionally, avian species migrate into the Santa Monica Mountains during the summer for breeding and others during the fall to overwinter.

A list of wildlife species detected during the spring 2023 field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across the alternatives.

Special-Status Wildlife Species

Special-status wildlife species include those listed as endangered, threatened, or candidate for listing under the ESA and those designated as endangered, threatened, or candidate for listing under the California Endangered Species Act (CESA). Additionally, species receive federal protection under BGEPA (i.e., bald eagle and golden eagle), the MBTA, and state protection under California Environmental Quality Act (CEQA) Guidelines Section 15380(d).

Many other species are considered by the California Department of Fish and Wildlife (CDFW) to be California Species of Special Concern (SSC) and others are on a CDFW watch list. The California Natural Diversity Database (CNDDB) tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB Rank. Although CDFW SSC and Watch List species and species that are tracked by the CNDDB but not formally listed are afforded no official legal status, they may receive special consideration during the environmental review process. CDFW further classifies some species as “Fully Protected,” indicating that the species may not be taken or possessed except for scientific purposes, under special permit from CDFW. Additionally, CFGC

Sections 3503, 3505, and 3800 prohibit the take, destruction, or possession of any bird, nest, or egg of any bird except English house sparrows and European starlings unless authorization is obtained from CDFW. Bat species defined by the Western Bat WBWG as Medium or High Priority Species are also included in the analysis.

Based on database searches of CNDDB, Information for Planning and Consultation (IPaC), iNaturalist and eBird, 69 special-status wildlife species were identified (CDFW, 2023a; USFWS, 2024a; iNaturalist, 2024a to 2024n; iNaturalist, 2024y to 2024aa; eBird, 2024a through 2024k). Since the database search covers a wide area surrounding the Project Study Area, results included three pelagic species that are not considered herein. The remaining 66 special-status wildlife species are listed in Table 5-1 with an assessment of their potential to occur within the Project Study Area. Within Table 5-1, rows discussing species that were known to occur or to have a high potential to occur within the Project Study Area are highlighted blue.

Table 5-1. Special-Status Wildlife Species Potential to Occur within the Project Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC	Occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Is a dietary generalist but often prefers to forage in grasslands and shrublands with abundant milkweeds, wild buckwheat, dusty maidens, lupines, medics, and sages.	**Present.** Suitable habitat for the species occurs in the Project Study Area and the species has been documented historically and recently in the Project Study Area (iNaturalist, 2024a; CDFW, 2023a). Historic observations are from the northern and southern ends of the Project Study Area; a recent 2019 observation is located in the northern end of the Santa Monica Mountains at Deervale-Stone Canyon Park in Sherman Oaks (iNaturalist, 2024a).
Branchinecta lynchi	Vernal pool fairy shrimp	FT	Restricted to vernal pools in grasslands, sandstone depressions. Found in Contra Costa County, Shasta County to Riverside County, early December–early May.	**No Potential.** Suitable habitat is not present in the Project Study Area.
Danaus plexippus	Monarch	FC	Two subpopulations within the United States; within California, monarchs are considered *Danaus plexippus* pop 1, California overwintering population (CDFW, 2023a). Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress; occasionally western sycamore and coast live oak) with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico; small aggregations also observed inland in Inyo and Kern Counties. Typically within 1.5 miles of the Pacific Ocean.	**Low.** Suitable habitat such as Eucalyptus tree groves occur within the Project Study Area; however, the species normally overwinters in dense Eucalyptus tree groves along the coastal plain near the Pacific Ocean. There are no known overwintering locations within the Project Study Area (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Euphilotes battoides allyni	El Segundo blue butterfly	FE	Restricted to remnant coastal dune habitat in Southern California. Host plant is coast buckwheat (*Eriogonum parvifolium*); larvae feed only on the flowers and seeds while adults use it as a major nectar source.	**No Potential.** No suitable habitat is present in the Project Study Area.
Streptocephalus woottoni	Riverside fairy shrimp	FE	Restricted to deep vernal pools and ponds within annual grasslands that may be found within sage scrub and chaparral habitats. Range is limited to Ventura, Los Angeles, Riverside, Orange, and San Diego Counties; occurrences also in Baja California, Mexico.	**No Potential.** No suitable habitat is present in the Project Study Area. The nearest observation is from 2005, approximately 4 miles south of the Project Study Area (CDFW, 2023a).
Fish				
Catostomus santaanae	Santa Ana sucker	FT	Endemic to Southern California and only found within the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. This species was once historically present throughout the Los Angeles and Santa Ana basins in southern California but is now restricted to three geographically separate populations. Specifically, within the Los Angeles River Watershed, known populations occur at Big Tujunga Creek in the Hansen Reach, two tributaries in the Hansen Reach, and one tributary in either the Big Tujunga Reach or Los Angeles Reach (potentially including but not limited to Fall Creek, Mill Creek, Arroyo Seco Creek, and Bell Creek) (USFWS, 2017).	**Low.** The Project Study Area falls within the geographic range for Santa Ana sucker and suitable habitat in the form of the Los Angeles River is present. However, the portion of this body of water that occurs within the Project Study Area demonstrates common habitat degradation symptoms characteristic of urban areas, including degraded water quality and hydrological modifications. The majority of the river within the Project Study Area is a concrete-lined channelized river and therefore does not provide the habitat characteristics preferred by this species (i.e., substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of algae) (USFWS, 2010). The combination of limited known population extent, poor habitat quality, and presence of movement barriers within the Project Study Area, greatly limit potential for this species to occur.
Eucyclogobius newberryi	Tidewater goby	FE	Brackish water habitats along the California coast. Found in shallow lagoons and lower stream reaches with still water with high oxygen.	**No Potential.** No suitable habitat is present in the Project Study Area.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Gasterosteus aculeatus	Unarmored threespine stickleback	FE	Found in slow-moving freshwater streams or rivers shaded with dense vegetation.	**No Potential** No suitable habitat is present in the Project Study Area.
Gila orcuttii	Arroyo chub	SSC	Prefers slow-moving sections of permanent, small to moderate-sized streams with sand or mud substrate with more than half of the habitat as runs and pools ~ 10 cm deep and reaches of permanent water more than 2 km long.	**Low.** Suitable habitat is present in the Project Study Area in the soft bottom portion of the Los Angeles River within the Sepulveda Basin. In 1993, arroyo chub at this location were reported as present but scarce (Swift et al., 1993). However, several rounds of recent sampling within the Basin in the Los Angeles River and Bull Creek (2012-2014, 2016, 2019) found no arroyo chub present (Drill et al., 2023, O'Brien and Barabe, 2022). The current distribution appears to be upstream, at headwater sections of streams; this species may be extirpated from the Sepulveda Basin.
Oncorhynchus mykiss irideus pop. 10	Steelhead – Southern California Distinct Population Segment	FE	Requires freshwater streams and creeks with access to coastal estuaries and the ocean.	**No Potential.** No suitable habitat is present in the Project Study Area.
Amphibians				
Anaxyrus californicus	Arroyo toad	FE/SSC	Gravelly or sandy washes, stream and riverbanks, and arroyos. Also, upland habitat near washes and streams such as sage scrub, mixed chaparral, Joshua tree woodland, and sagebrush habitats.	**No Potential.** No suitable habitat is present in the Project Study Area.
Rana draytonii	California red-legged frog	FT/SSC	Inhabits quiet pools of streams, marshes, and occasionally ponds usually below 1,200 m (3,936 feet). Requires permanent or nearly permanent water bodies and is associated with dense vegetation close to water.	**No Potential.** No suitable habitat is present in the Project Study Area.
Rana muscosa	Southern mountain yellow-legged frog	FE/SE	Found above 1,800 m (5,940 feet) in the Sierra Nevada. Associated with streams, lakes, and ponds, in montane riparian with various pine species and wet meadow habitats.	**No Potential.** No suitable habitat is present in the Project Study Area.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Spea hammondii	Western spadefoot	SSC	Temporary ponds, vernal pools, and backwaters of slow-flowing creeks. Also, upland habitats such as grasslands and coastal sage scrub where burrows are constructed.	**No Potential.** No suitable habitat is present in the Project Study Area.
Taricha torosa	Coast Range newt	SSC	Found in a variety of habitats typically associated with wet forests, oak forests, chaparral, and rolling grasslands.	**No Potential.** No suitable habitat is present in the Project Study Area.
Reptiles				
Actinemys pallida	Southwestern pond turtle	FP/SSC	Found in marshes, rivers, streams, ponds, and similar water sources, usually with aquatic vegetation.	**Present.** Suitable habitat is present and recent observations are documented throughout the Project Study Area from the Sepulveda Basin Recreation Area in the north in 2021 to UCLA in the south in 2018 (iNaturalist, 2024b).
Anniella stebbinsi	Southern California legless lizard	SSC	Habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. May occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Lives mostly underground, burrowing in loose sandy soil.	**Moderate.** Suitable habitat is present, and the species was observed approximately 3 miles southeast of the Project Study Area at Kenneth Hahn State Recreation Area in 2018 and about 2 miles south of the Project Study Area at Los Angeles Airport in 2010 (iNaturalist, 2024c).
Arizona elegans occidentalis	California glossy snake	SSC	Occurs in Southern California and as far south as Baja California. Often observed in a variety of habitats including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats.	**Low.** Suitable habitat is present in the Project Study Area; however, there are no records of observations within the Project Study Area. Two historical records (1937 and 1946) located individuals approximately 6 miles east of the Project Study Area (CDFW, 2023a).
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC	A variety of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	**Present.** Suitable habitat is present, and several recent observations exist within the southern portion of the Project Study Area (CDFW, 2023a; iNaturalist, 2024d).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Phrynosoma blainvillii	Coast horned lizard	SSC	Occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation throughout the central and Southern California coast. Ants are the main food source but also spiders, beetles, and termites. Forages on the ground in open areas, usually between shrubs and often near ant nests.	**Present**. Suitable habitat is present, and several recent observations exist throughout the Project Study Area (iNaturalist, 2024e). Additionally, one historical CNDDB occurrence is present in the northern end of the Project Study Area (1947) (CDFW, 2023a).
Thamnophis hammondii	Two-striped garter snake	SSC	Ranges from near Salinas in Monterey County south along the coast, mostly west of the Southern Coast Ranges, to Southern California where it ranges east through the Transverse Ranges and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather.	**Present**. Suitable habitat and multiple recent sightings (2017 through 2021) are present within the northern half of the Project Study Area (iNaturalist, 2024f). Also, a 2010 CNDDB occurrence with an obscured location is present immediately west of the Project Study Area in a flood control debris basin (CDFW, 2023a).
Birds				
Agelaius tricolor	Tricolored blackbird	ST/SSC	Historically breeds in freshwater marshes with cattails and other emergent vegetation; increasingly breeds in agricultural fields when traditional wetlands are not present. Forages in wetlands, cultivated fields, grasslands, and at dairies and feedlots.	**Present.** Suitable habitat is present within the Project Study Area. This species is documented multiple times (2021, 2022, 2023) in the Sepulveda Basin Recreation Area (iNaturalist, 2024g; eBird, 2024b), predominantly around Lake Balboa, as recently as May 2023.
Aquila chrysaetos	Golden eagle	CFP	Nests on cliff ledges and trees on steep slopes. Hunting grounds include nearby grasslands, sage scrub, or broken chaparral. Require very large territories.	**Low**. Suitable nesting habitat is not present in the Project Study Area; however, this species has potential to fly over or forage locally while in transit to preferred habitat and/or during migration in the isolated grasslands or sparsely vegetated hillsides within the Project Study Area. Two CNDDB nest observations from the 1980s are more than 10 miles west of the Project Study Area (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Asio otus	Long-eared owl	SSC	Occupies a variety of habits including forested areas or groves of deciduous trees or conifers with expansive meadows, or isolated groves and streamside groves in deserts.	**No Potential**. No suitable habitat is present in the Project Study Area.
Athene cunicularia	Burrowing owl	SC, SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows.	**Present**. Isolated patches of suitable habitat are present within the Project Study Area (particularly in the Sepulveda Basin Recreation Area in the northwestern section). This species has been recorded within the Project Study Area as recently as 2020 at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024c); observations at this location were documented during the non-breeding season.
Buteo swainsoni	Swainson's hawk	ST	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**Present**. Suitable migration habitat is present within the Project Study Area; suitable breeding habitat is not present. The species may transit through the Project Study Area during migration and migrating individuals were documented within the Project Study Area in Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024d).
Charadrius montanus	Mountain plover	SSC	Inhabits flat open areas with sparse vegetation, short grass, or bare ground.	**No Potential**. No suitable habitat is present in the Project Study Area.
Charadrius nivosus nivosus	Western snowy plover	FT/SSC	Found primarily in open, sandy areas adjacent to water including ocean beaches and barrier islands. May also be found on barren shores of saline lakes inland. Ranges from Western United States to South America.	**No Potential**. No suitable habitat is present in the Project Study Area.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Circus hudsonius	Northern harrier	SSC	Breeds predominantly in wetland habitats but will also use upland habitats. Prefers grasslands and agricultural fields during migration and in winter. The species occurs year-round in Los Angeles County.	**Present**. Suitable migration habitat is present within the Project Study Area; suitable breeding habitat is not present. The species does transit through the Project Study Area during migration and will forage over grasslands and lightly vegetated hillsides. Individuals have been recently observed within the Project Study Area in the north at Woodley Park in the Sepulveda Basin Wildlife Reserve and centrally located in the Santa Monica Mountain foothills near Stone Canyon Reservoir and Bel Air (iNaturalist, 2024h; eBird, 2024e).
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FT/SE	Riparian woodlands scattered throughout Southern California. Riparian forests are integral to this subspecies' persistence.	**No Potential**. No suitable habitat is present in the Project Study Area. One historical record from 1894 located an individual approximately 3 miles north of the Project Study Area is presumed extirpated (CDFW, 2023a).
Contopus cooperi	Olive-sided flycatcher	SSC	Breeds in coniferous forests throughout California from sea level to high mountain elevations.	**Present.** Suitable migration habitat is present within the Project Study Area; suitable breeding habitat is not present. This species can briefly use areas in the Project Study Area as stopover habitat during migration. Individuals have been observed in the Project Study Area in the north at Woodley Park at Sepulveda Basin Wildlife Reserve as recently as 2023, and centrally located in the Santa Monica Mountain foothills south of Bel Air in 2022 (iNaturalist, 2024i; eBird, 2024f).
Cypseloides niger	Black swift	SSC	Preferred nesting locations are behind or beside waterfalls, or cliffs near water.	**No Potential**. No suitable roosting or nesting habitat is present in the Project Study Area.
Empidonax traillii extimus	Southwestern willow flycatcher	FE/SE	Restricted to a few colonies in riparian woodlands scattered throughout Southern California. Riparian forests are integral to this subspecies' persistence.	**No Potential**. No suitable habitat is present in the Project Study Area.
Gymnogyps californianus	California condor	FE/SE/CFP	Open oak savanna grasslands and foothills, and beaches with coastal mountains.	**No Potential.** No suitable habitat is present in the Project Study Area.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Haliaeetus leucocephalus	Bald eagle	SE/CFP	Nests in old growth trees near the coast or other bodies of water where fish or other prey sources are available.	**Present**. This species is known to occur within the Project Study Area with recent observations in 2021 and 2023 at Woodley Park in the Sepulveda Basin Wildlife Reserve during the non-breeding season (eBird, 2024g). No suitable breeding habitat is present. The closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).
Lanius ludovicianus	Loggerhead shrike	SSC	Uncommon year-round resident of Southern California. Found in grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for concealing and protecting nests.	**Present.** Suitable habitat is present within the Project Study Area. This species is known to occur within the Project Study Area with recent observations (2022) at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024h).
Laterallus jamaicensis coturniculus	California black rail	ST/CFP	Found in some coastal, brackish, and freshwater marshes of California.	**No Potential**. No suitable habitat is present in the Project Study Area.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	SE	Found only in coastal salt marshes of Southern California down into Baja California, Mexico.	**No Potential**. No suitable habitat is present in the Project Study Area.
Polioptila californica	Coastal California gnatcatcher	FT/SSC	Prefers Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). Generally avoids steep slopes above 25% and dense, tall vegetation.	**Low**. While the Project Study Area is located within the species range, suitable breeding habitat is generally absent. Low quality chaparral habitat is present in small patches in the Project Study Area that may be used for dispersal. There are species records as recent as 2023 over 1 mile south of the Project Study Area (Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve [eBird, 2024i]). Since the species is a short-distance disperser and suitable habitat is lacking north of the Project Study Area, individuals are not likely to occur within the Project Study Area. Furthermore, the species appears to be rare within the Santa Monica Mountains with few recent records, all located over 5 miles away (CDFW, 2023a; iNaturalist, 2024j; eBird, 2024i).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Pyrocephalus obscurus	Vermilion flycatcher	SSC	Inhabits a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, parks, and cemeteries.	**Present.** Suitable habitat is present within the Project Study Area. This species was observed as recently as 2024 within the Project Study Area at Woodley Park in the Sepulveda Basin Wildlife Reserve, and Los Angeles National Cemetery (eBird, 2024j).
Rallus obsoletus levipes	Light-footed Ridgway's rail	FE/SE/CFP	Found in Southern California in coastal salt marshes, especially those dominated by cordgrass.	**No Potential**. No suitable habitat is present in the Project Study Area.
Riparia riparia	Bank swallow	ST	Inhabits riverbanks and gravel pits where sandy, vertical bluffs are available for the birds to dig their burrows and nest in colonies.	**No Potential**. No suitable habitat is present in the Project Study Area.
Sterna antillarum browni	California least tern	FE/SE/CFP	Nests on open, sandy, or shelly beaches and dunes with limited vegetation along the Pacific coast of California and Baja California, Mexico.	**No Potential**. No suitable habitat is present in the Project Study Area.
Strix occidentalis occidentalis	California spotted owl	SSC	Generally found in coniferous forests, and oak and riparian woodlands.	**No Potential.** No suitable habitat is present in the Project Study Area.
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Migrate into California in late March/early April and depart for their winter grounds in September. Nest in low, dense riparian thickets along water or along intermittent streams. Forages in riparian and adjacent shrubland in the nesting season.	**Present**. Occupied nesting and foraging habitat are present within the Project Study Area within the Sepulveda Basin Wildlife Reserve in riparian habitat along the Los Angeles River and the connecting Bull Creek (eBird, 2024k). Specifically, the species was detected in Haskell and Bull Creeks for at least the last 9 years (eBird, 2024k). Also, this species was documented by several observers along I-405 occur within the Sepulveda Pass, precise locations could not be determined as they are obscured (observations recorded in 2015, 2022, and 2023) (iNaturalist, 2024k).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Mammals				
Antrozous pallidus	Pallid bat	SSC/WBWG – High Priority	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**No Potential**. No suitable habitat is present in the Project Study Area.
Corynorhinus townsendii	Townsend's big-eared bat	SSC/WBWG – High Priority	Coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands, and deserts. Most common in mesic sites with caves or other roost cavities.	**No Potential**. No suitable habitat is present in the Project Study Area.
Euderma maculatum	Spotted bat	SSC/WBWG – High Priority	Occurs in foothills, mountains, grasslands, and deserts in Southern California. Requires large, isolated cliffs for roosting (Luce and Keinath, 2007). Distribution is patchy, likely due to roosting habitat requirements.	**Low**. Suitable habitat is present in the Project Study Area, although with limited distribution. One CNDDB occurrence exists from 2007, approximately 14 miles west of the Project Study Area.
Eumops perotis californicus	Western mastiff bat	SSC/WBWG – High Priority	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**Low**. Suitable habitat is present in the Project Study Area. One recent observation from 2021 is located approximately 3 miles east of the Project Study Area (iNaturalist, 2024l) and two historical records (1921 and 1925) without precise locations exist within the Project Study Area (CDFW, 2023a).
Lasionycteris noctivagans	Silver-haired bat	WBWG – Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Present**. Suitable foraging and roosting habitat are present in the Project Study Area. Two observations from 1985 are within the Project Study Area (CDFW, 2023a).
Lasiurus frantzii	Western red bat	SSC/WBWG – High Priority	Generally associated with stands of riparian habitat consisting of mature sycamores and cottonwoods. Forages over grasslands, shrublands, open woodlands, forests, croplands, and occasionally urban settings. Roosts primarily in trees.	**Low**. Suitable habitat is present in the Project Study Area. One recent observation from 2019 is known 6 miles east of the Project Study Area (iNaturalist, 2024m) and a second from 2007 was made approximately 9 miles west of the Project Study Area during acoustical surveys (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Lasiurus cinereus	Hoary bat	WBWG – Medium Priority	Most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. Prefers open habitats or habitat mosaics; requires water. Spends winter months in warmer habitats such as Southern California, Mexico, and Central America while summer is typically spent in the northern portions of California and north into Canada (Bolster, 1998). Roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat with large mature trees.	**Present.** Portions of the Project Study Area provide suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. One recent (2022) observation in the Santa Monica Mountains near Sherman Oaks (iNaturalist, 2024n) and one observation from 1986 (CDFW, 2023a) are located within the Project Study Area.
Lasiurus xanthinus	Western yellow bat	SSC/WBWG – High Priority	Found in valley foothills riparian, desert riparian, desert wash, and palm oases. Forages among trees and over water. Roosts in foliage, tree holes and buildings.	**Low.** Suitable habitat is present in the Project Study Area; however, the species prefers more arid desert regions.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC	Typical habitats include early stages of chaparral, open coastal sage scrub, and grasslands near the edges of brush.	**Low**. Suitable habitat is present in the Project Study Area; however, it is fragmented from contiguous potentially suitable habitats. One CNDDB occurrence of this species in 2008, from Big Tujunga Wash, south of Interstate 210, approximately 6 miles from the Project Study Area (CDFW, 2023a).
Macrotus californicus	California leaf-nosed bat	SSC/WBWG – High Priority	Lowland desert scrub. Uses caves or abandoned mine tunnels for rest sites during the day. May use natural rock shelters in canyon walls. Also uses open buildings, bridges, rocks, and mines for temporary night roosts.	**No Potential**. No suitable habitat is present in the Project Study Area.
Microtus californicus stephensi	South coast marsh vole	SSC	Found in tidal marshes in Los Angeles, Orange, and southern Ventura counties.	**No Potential**. No suitable habitat is present in the Project Study Area.
Myotis ciliolabrum	Western small-footed myotis	WBWG – Medium Priority	Caves or crevices in or near forested areas. Prefers moist areas.	**No Potential**. No suitable habitat is present in the Project Study Area.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Neotoma lepida intermedia	San Diego desert woodrat	SSC	Common to abundant in Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats.	**No Potential**. No suitable habitat is present in the Project Study Area.
Nyctinomops femorosaccus	Pocketed free-tailed bat	SSC	Rugged cliffs, rocky outcrops and slopes in desert shrub and pine oak forests.	**No Potential**. No suitable habitat is present in the Project Study Area.
Nyctinomops macrotis	Big free-tailed bat	SSC	Pinyon-juniper and Douglas fir forests, chaparral and oak forests in rugged, rocky habitats, low-lying arid areas.	**No Potential**. No suitable habitat is present in the Project Study Area.
Onychomys torridus ramona	Southern grasshopper mouse	SSC	This species inhabits a variety desert and temperate shrubland habitats. It is found in hot, arid valleys; and semi-desert areas that may include desert scrub; creosote, and shortgrass prairies.	**No Potential**. No suitable habitat is present in the Project Study Area.
Perognathus longimembris pacificus	Pacific pocket mouse	SSC	Fine sandy substrates of coastal dunes, river alluvium, and sage scrub habitats. Typically ranging approximately 2 miles from the ocean on marine terraces.	**No Potential**. No suitable habitat is present in the Project Study Area.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Sparsely vegetated areas with alluvial deposits of sandy soils.	**Low**. Suitable habitat is present in the Project Study Area; however, the species has only been found historically in the San Fernando Valley which is now highly urbanized. One historical observation from 1903 of a collected male specimen was immediately east of the Project Study Area (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Puma concolor	Mountain lion	SC	Generally found throughout California in temperate coniferous/deciduous forest, coastal chaparral, foothills, and mountains. Often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Within the Santa Monica Mountains, mule deer make up the bulk of mountain lions' diet (87% of 700 kills analyzed by NPS), although smaller prey can supplement when opportunity arises, preferentially coyotes then raccoons (NPS, 2023).	**Present.** Mountain lions are known to occur within the Project Study Area, specifically in the Santa Monica Mountains where an estimated population of 10 to 15 adult individuals is well documented by the National Park Service (NPS, 2023). Several GPS-collared mountain lions have been tracked within the Project Study Area, predominantly west of I-405 throughout the Sepulveda Pass (NPS, 2023). Lion movement is hindered by I-405 and mortality is documented on the freeway (NPS, 2023). In July 2019, the NPS documented that one collared mountain lion (P-61) successfully crossed I-405 in the Sepulveda Pass area for the first time in the 17 years of study (NPS, 2019b); he was struck and killed on I-405 two months later (NPS, 2022). More recently, an uncollared mountain lion was found deceased on northbound I-405 near The Getty Museum on July 4, 2024 (Darling, 2024).
Sorex ornatus salicornicus	Southern California saltmarsh shrew	SSC	Coastal marshes in Los Angeles, Orange, and Ventura Counties. Requires dense vegetation and woody debris for cover.	**No Potential**. No suitable habitat is present in the Project Study Area.
Taxidea taxus	American badger	SSC	Most abundant on drier open stages of shrub, forest, and herbaceous habitats with friable soils to dig burrows. Often associated with vast tracts of grassland areas but also occurs in grassy canyons. Needs sufficient food, friable soils, and uncultivated ground. Preys on burrowing rodents, especially California ground squirrels. Uncommon, permanent resident found throughout most of the state.	**No Potential**. No suitable habitat is present in the Project Study Area due to the lack of vast open, grassy habitat.

Source: HTA, 2024

[a]Special-status wildlife species identified during reviews of the California Natural Diversity Database (CNDDB) (CDFW, 2023a) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; a review of IPaC (USFWS, 2024a) for the project region; and eBird and iNaturalist for the Project Study Area.

Notes:

Federal Status Designations
FE = Federally Endangered
FC = Federal Candidate for Listing
FT = Federally Threatened
FP = Federally Proposed

State Status Designations:
CFP = CDFW Fully Protected
SC = State Candidate Species for Listing
SE = State Endangered
SSC = Species of Special Concern designated by CDFW
ST = State Threatened

Western Bat Working Group (WBWG) Priority Levels:

WBWG-High = Designated by the WBWG as High Priority – species that are imperiled or are at high risk of imperilment.

WBWG-Medium = Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

Potential to Occur Guidelines:

Present = Species is documented by the CNDDB, eBird, iNaturalist, or another database as occurring in the Project Study Area. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Project Study Area; however, no records occur directly within the Project Study Area. Species has been detected within 1 mile of the Project Study Area. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat is present within the Project Study Area is of marginal quality. No records occur in Project Study Area, but the species has been documented over 1 mile from the Project Study Area.

Low = Suitable habitat within the Project Study Area is of low quality. There are no known recent occurrences within or near the Project Study Area.

No Potential = Suitable habitat is not present for the species.

Thirty of the wildlife species were concluded to be known or have potential to occur within the Project Study Area (Table 5-1); the remaining 36 were determined to have no potential to occur. Species with no potential to occur due to a lack of suitable habitat within the Project Study Area are excluded from each project alternative's RSA analysis and are not discussed further in this document. Species with a low potential are considered unlikely to be detected within the Project Study Area or impacted by the No Project Alternative due to the lack of known recent occurrences and suitable habitat within the Project Study Area; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail below.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate species present within the Project Study Area. This species of bumble bee occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Crotch's bumble bee is found in a wide variety of natural and disturbed habitat types; they are dietary generalists and are often found foraging in grasslands and shrublands on a wide variety of plant species with strong preferences for native sage (*Salvia* spp.) species, (*Asclepias* spp.) milkweed, and species within the pea family (*Fababcea*), including lupines (*Lupinus* spp.), vetches (*Vicia* spp.), and deerweed (*Acmispon glaber*). On June 12, 2019, the California Fish and Game Commission voted to add Crotch's bumble bee as a Candidate Endangered species under the CESA (Hatfield and Jepsen, 2021). Suitable habitat, including chaparral, is found in the middle of the Project Study Area in the Santa Monica Mountains. The species is known to occur within the Project Study Area both historically and as recently as 2019, with an observation at Deervale-Stone Canyon Park in Sherman Oaks (iNaturalist, 2024a).

Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys pallida*) is listed as a CDFW SSC and is known to occur within the Project Study Area. In October 2023, this species was proposed for listing as Federally Threatened by the USFWS. While proposed species are not protected from take prohibitions under ESA until the rule to list is finalized, consultation with USFWS is required under Section 7 if actions will risk the continued existence of a proposed species. As of 2014, western pond turtle (*Actinemys marmorata*) was recognized as two distinct species — northwestern (which remained *A. marmorata*) and southwestern pond turtle (*A. pallida*) — based on geographic range. The range of the southwestern pond turtle extends from central and southwestern California south into Baja California, Mexico. This includes areas of the central Coast Range from near northern Monterey County, California, portions of the Transverse Range into the Mojave River watershed, and areas south into Baja California, Mexico (50 CFR Part 17; Federal Register / Vol. 88, No. 190 / Tuesday, October 3, 2023 / Proposed Rules). This species occurs in ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, basking sites, and suitable upland habitat for egg-laying. The southwestern pond turtle's population is in decline due to disease, habitat destruction and alteration, and the introduction of predators such as the American bullfrog (*Lithobates catesbeianus*) and striped bass (*Morone saxatilis*) (USFWS, 2024c). Suitable habitat for the species occurs within the Project Study Area. Records for either *A. marmorata* or *A. pallida* were included in database searches as only *A. pallida* would be present in the Project Study Area. The species has been observed in ponds or other aquatic habitat found at the UCLA campus or in the human-made stream at Mildred E. Mathias Botanical Garden in 2018 and 2021, the Sepulveda Basin Wildlife Reserve in 2021, and along I-405 by the Getty Center in 2021 (iNaturalist, 2024b).

Southern California Legless Lizard

The Southern California legless lizard (*Anniella stebbinsi*) is a CDFW SSC and has moderate potential to occur within the Project Study Area. It is a fossorial lizard potentially present in suitable habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. The Southern California legless lizard may occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Marginally suitable habitat for the species occurs along the Sepulveda Pass within the Project Study Area, where a mixture of chaparral and coastal scrub habitat types were observed during the field survey. Marginally suitable habitat is present, and the species was observed approximately 2 miles south of the Project Study Area in Playa Vista in 2016, approximately 3.5 miles southeast of the Project Study Area at Kenneth Hahn State Recreation Area, and in 2018 approximately 2 miles south of the Project Study Area at LAX in 2010 (iNaturalist, 2024c).

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFW SSC and is known to occur within the Project Study Area. This subspecies occurs in Southern California and as far south as Baja California and is observed in a variety of habitats including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats. Suitable habitat including chaparral and coastal sage scrub is present within the Project Study Area, and there are recent observations of the species throughout the Sepulveda Pass in the Santa Monica Mountains. In 2018, an individual was observed 1,000 feet east of I-405 (iNaturalist, 2024d), and in 2007, two adults were observed 0.5 mile west of I-405 (CDFW, 2023a).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvilli*) is a CDFW SSC and is known to occur within the Project Study Area. This species occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation and is present throughout the central and southern California coast. The coast horned lizard's main food source is ants, although they also consume spiders, beetles, and termites. They forage in open areas on the ground, usually between shrubs and often near ant nests. Suitable habitat for the species occurs in the Santa Monica Mountains specifically in the Sepulveda Pass in the form of chaparral and coastal sage scrub. The CNDDB occurrences are historical (1916 and 1947) (CDFW, 2023a); however, there have been several recent observations within and adjacent to the Project Study Area in the Sepulveda Pass (observed in the years 2015, 2016, 2019, 2020) (iNaturalist, 2024e); therefore, the species is assumed extant in the Project Study Area.

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW SSC with high potential to occur within the Project Study Area. The two-striped garter snake ranges from near Salinas in Monterey County south along the coast (mostly west of the south Coast Ranges) to southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and dusk during hot weather. Loss of wetland habitats has contributed to a reduction in the range of this snake (California Herps, 2023) and declines in the population have been attributed to human impacts, including urban development and flood control in the southern part of its range, as well as habitat modification by livestock, drought, loss of native prey, and predation by invasive species in the northern range (Jennings and Hayes, 1994). Suitable habitat for the species occurs within the Project Study Area and recent sightings are present within and adjacent to the Project Study Area near Will Rogers State Historic Park (iNaturalist, 2024f), in Beverly Glen near Stone Canyon Reservoir (iNaturalist,

2024f), and within a flood control debris basin immediately west of the Project Study Area in 2010 (CDFW, 2023a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as state threatened and CDFW SSC that is known to occur within the Project Study Area. A resident songbird of California that shares its limited range with Washington, Oregon, and a short distance into Baja California, Mexico. Its population is in decline mainly due to the loss of preferred breeding habitats consisting of native wetlands and marshes where it can form nesting colonies that include 1,000s of breeding individuals. It feeds on available insects, snails, grains, and a variety of other locally abundant resources. Suitable habitat is present within the Project Study Area. This species is known to occur as recently as 2023 at Woodley Park in the Sepulveda Basin Wildlife Reserve. Suitable breeding habitat is not present; the area is being used for foraging (eBird, 2024b). This species also has potential to forage in the grassland parcels at the northwest portion of Project Study Area.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is CDFW SSC and is known to occur within the Project Study Area. In addition, this species was petitioned for protection as threatened or endangered under CESA in March 2024 (CBD et al., 2024); in August 2024, CDFW's evaluation report determined that there was sufficient evidence to indicate listing of burrowing owl may be warranted (CDFW, 2024e). On October 10, 2024, the Fish and Game Commission approved the petition and the western burrowing owl became a candidate for listing as threatened under CESA (CDFW, 2024f). As a candidate species, burrowing owl will receive protections under CESA while a full status review occurs over a 12 to 18 month long review period. It is a semi-colonial owl found in open grasslands, prairies, farmlands, deserts, scrubland, and other disturbed areas with low-growing vegetation. In coastal southern California, burrowing owl is found mainly in grassland and open scrub from the coast to the foothills and is strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows. It has been nearly extirpated as a breeding species from coastal San Luis Obispo, Santa Barbara, Ventura, Los Angeles, and Orange Counties (Shuford and Gardali, 2008). Isolated areas of suitable habitat are present within the Project Study Area. Burrowing owl has been recorded within the Project Study Area as recently as 2020 at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024c); however, only during the late fall and winter season, outside of the breeding season.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state threatened and known to occur as a migrant within the Project Study Area. Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Swainson's hawk breed in stands with few trees within grasslands, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands in the Central Valley. This species requires suitable foraging areas adjacent to breeding habitat, which includes grasslands, grain or alfalfa fields, or livestock pastures that support rodent populations. Along with rodents, they feed on amphibians, reptiles, and large arthropods. Suitable breeding habitat for this species is not present within the Project Study Area as it falls outside of the breeding range typical for Swainson's hawk. However, this species may transit through the Project Study Area during migration. Observations of migrating individuals are documented with the Project Study Area in Woodley Park in the Sepulveda Basin Wildlife Reserve located on the northern end of the Project Study Area (eBird, 2024d).

Northern Harrier

Northern harrier (*Circus hudsonius*) is a CDFW SSC (when nesting) that is known to occur as a migrant within the Project Study Area. Los Angeles lies at the southwestern vicinity of the species breeding range in the United States. This species is low-flying and typically prefers grasslands, weedy agricultural fields, marshes, and other flat areas with large tracts of dense, low-growing vegetation, preferably undisturbed. As a ground-nesting species, northern harriers prefer to nest in tall, dense vegetation along the coastal slope and in inland valleys. In Los Angeles County, this species is found year-round but is more common as a winter visitor than as a resident breeder per records research in CNDDB (CDFW, 2023a), eBird (eBird, 2024e), and iNaturalist (iNaturalist, 2024h). There is no suitable breeding habitat within the Project Study Area; however, the species does transit through during migration and forages over grasslands and lightly vegetated hillsides. The species has been observed within the Project Study Area in Woodley Park in the Sepulveda Basin Wildlife Reserve, and the foothills near Stone Canyon Reservoir and Bel Air (eBird, 2024e).

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is a CDFW SSC that is known to occur as a migrant within the Project Study Area. Olive-sided flycatcher is found in coniferous forests throughout California from sea level to high mountain elevations. This species breeds in coniferous forests and uses meadows and open areas adjacent to forests to forage. Olive-sided flycatchers feed on a variety of insects, most of which are caught in flight. Suitable breeding habitat for this species is not present within the Project Study Area; however, this species may use the Project Study Area as stopover habitat during migration. Individuals of this species have been observed on the northern end of the Project Study Area at Woodley Park at Sepulveda Basin Wildlife Reserve as recently as 2023, and in the central portion of the Project Study Area within the Santa Monica Mountain foothills, south of Bel Air in 2022 (iNaturalist, 2024i; eBird, 2024f).

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is state endangered and CDFW Fully Protected (CFP). This species is known to occur within the Project Study Area during the non-breeding season or as flyovers. It ranges throughout North America and inhabits forests and open grasslands nearby to a water source to forage. The eagle's main source of prey is fish, although they will forage on a variety of prey that may include reptiles, mammals, amphibians, and carrion. The population was once in serious decline due to hunting and pesticides; however, with protections put in place, this species has successfully rebounded with a continually increasing population evidenced in databases searches. This species was documented in the Project Study Area at Woodley Park in the Sepulveda Basin Wildlife Reserve as recently as 2024 (eBird, 2024g). However bald eagles do not breed within the vicinity of the Project Study Area; the closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC (when nesting) that is known to occur within the Project Study Area. This songbird ranges throughout North America, inhabiting open country with short vegetation and lower sized shrubs and trees sparsely spaced throughout the landscape. Loggerhead shrikes are found throughout deserts, agriculture lands, grasslands, cemeteries, and golf courses. While they eat a variety of prey items similar to a raptor including insects, amphibians, reptiles, small mammals, and other songbirds, they lack the talons of a raptor. Instead, shrikes impale and/or wedge prey items on shrubs, trees, cacti, barbed wire fencing, and other similar features for caching and consumption. Suitable habitat is present within the Project Study Area. This species is documented as

recently as 2022 at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024h) and has potential to occur in scattered areas throughout the Project Study Area, such as the Los Angeles National Cemetery.

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus obscurus*) is a CDFW SSC (when nesting) that is known to occur within the Project Study Area. The species is a small songbird found within the tyrant flycatcher family, named for the adult males' bright vermilion red and contrasting black coloration. The southwestern U.S. is the northern extent of its typical range, which extends up from Central and South America. Vermilion flycatchers are found within a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, golf courses, parks, and cemeteries. Suitable habitat is present within the Project Study Area; this species is known to occur as recently as 2023 at Woodley Park in the Sepulveda Basin Wildlife Reserve, and breeding was confirmed with dependent fledglings observed at Los Angeles National Cemetery in 2023 (eBird, 2024j).

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is federally and state endangered and is known to occur within the Project Study Area in the Sepulveda Basin (eBird, 2023k). Specifically, the species has been detected in 2023 in the Sepulveda Basin Recreation Area, and in 2015 and 2018 in Bull Creek and around Lake Balboa (eBird, 2023k). Least Bell's vireo occur as summer breeders within southern California; they migrate into California in late March/early April and depart for their winter grounds in September. This species builds nests in low, dense riparian thickets along water or along intermittent streams and during the nesting season, they forage in riparian and adjacent shrubland habitats. Suitable nesting and foraging habitat is present within the Project Study Area within the Sepulveda Basin Recreation Area in riparian habitat found along the Los Angeles River and connecting Bull Creek. This species has also been documented in iNaturalist by several observers to occur within the Sepulveda Pass, precise locations could not be determined because they are obscured (observations recorded in 2015, 2022, and 2023) (iNaturalist, 2024k). Therefore, the species is considered present within the Project Study Area.

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a WBWG Medium Priority Species that is known to occur within the Project Study Area. This species occurs throughout much of North America into northern Mexico primarily in coastal and montane forests, especially within old growth forests. Roosts are located in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. While preferring to roost in old growth forest, they forage over disturbed areas, clearings, roadways, forested riparian areas along rivers and streams, and various other water sources. Suitable foraging and roosting habitat are present in the Project Study Area. Two observations from 1985 are within the Project Study Area (CDFW, 2023a).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a WBWG Medium Priority Species that is known to occur in the Project Study Area. This species is the most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. This species spends winter months in warmer winter habitats such as Southern California, Mexico, and Central America and summer is typically spent in the northern portions of California and into Canada (Bolster, 1998). They typically roost concealed in the foliage of deciduous and coniferous trees generally near the edge of a clearing. Dense foliage associated with medium to large trees in open or mosaic habitat occurs in the Project Study Area, specifically along the Sepulveda Pass and the Sepulveda Basin Wildlife Preserve, but

also in other sections with large mature trees. Portions of the Project Study Area provide both suitable, foraging, and roosting habitat in the form of trees, vegetation, and human-made structures. There is a CNDDB occurrence from 1986 (CDFW, 2023a), where a female hoary bat was collected in Van Nuys approximately 1 mile to the east of the Project Study Area. The species has also been observed in the Santa Monica Mountains near Sherman Oaks to the east of the I-405 freeway, within the Project Study Area (iNaturalist, 2024n), resulting in the conclusion that the species is present.

Mountain Lion

The mountain lion (*Puma concolor*) is a "specially protected" species in California following the passage of the California Wildlife Protection Act of 1990 (Proposition 117), which makes it illegal to possess transport, sell, and hunt the species (CDFW, 2023d). The mountain lion was also recently proposed for state listing under CESA within a proposed evolutionary significant unit (ESU) located in Southern California and the central coast (CDFW, 2023d). In April 2020, CDFW accepted this ESU as a candidate for state listing as threatened or endangered. Under CESA, species classified as a candidate species are afforded the same protection as listed species while they undergo a review process (CDFW, 2023d). Mountain lions are generally found throughout the state where suitable habitat such as temperate coniferous/deciduous forest, coastal chaparral, foothills and mountains occurs. They are often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Mountain lions are known to occur within the Project Study Area, specifically in the Santa Monica Mountains (NPS, 2023). Mountain lions are well documented in the Santa Monica Mountains by the NPS, and their population is estimated at around 10 to 15 adult individuals (NPS, 2023). Several GPS-collared mountain lions have been tracked to occur west of the I-405 freeway and the Alternative 5 RSA (NPS, 2023). Mountain lion mortalities have been documented on the freeway (NPS, 2023), as recently as July 2024 (Darling, 2024). However, successful crossings have occurred by one collared mountain lion in 2019 (NPS, 2019b) and uncollared individuals are also present east of I-405 (NPS, 2022; NPS, 2019b).

Wildlife Corridors

Within the heavily urbanized areas that comprise the northern and southern portions of the Project, opportunities for wildlife movement are limited. No landscape habitat linkages were identified within the Project Study Area by the SCW; instead, within this highly urbanized area, animal movement will be facilitated by remnant riparian habitat, underpasses, culverts and stretches of contiguous or semi-contiguous habitat. Ornamental vegetation may provide some opportunities for cover, resting, foraging, and nesting to localized bird and wildlife populations; however, such areas do not function as major wildlife movement corridors.

The Santa Monica Mountains are located in the middle of the Project Study Area and serve as both a regional and local wildlife movement corridor; they are present in 36 percent (15,537.8 of 43,460.2 acres) of the Project Study Area. The Santa Monica Mountains are lacking connection with other mountain ranges in the area, largely due to urbanization. However, they retain open areas and native habitats that provide east-west movement opportunities; to the west are large undeveloped areas of natural vegetation and to the east are the Verdugo Mountains and San Gabriel Mountains. The City of Los Angeles has identified a regional pathway within this mountain range that is not represented by one single route but instead incorporates multiple options through natural and developed areas: Wildlife Movement Pathway 13—Santa Monica Mountains-Griffith Park. Within the mountain range, natural, open spaces are interspersed with areas of development. While the majority of the Santa Monica Mountains within the Project Study Area contains scattered residential development, 44 percent is considered non-developed (as defined by removing "urban" classified categories from the SMMNRA vegetation mapping, see Section 3.3.1 for details). This patchwork of development intersecting with

natural areas creates fragmented habitat and poses a threat to species due to lack of space and movement (i.e., habitat to travel between) and threatens wildlife survival from increased risk of inbreeding and loss of genetic diversity.

Mammals including mule deer (*Odocoileus hemionus*), mountain lions (*Puma concolor*), and bobcats (*Lynx rufous*) can have large territorial ranges that span many miles; these species are documented as present in the Santa Monica Mountains. In their current state, I-405 and other major roads in the Project Study Area act as a functional barrier to wildlife movement for most terrestrial wildlife. If wildlife is able to successfully cross I-405, small-scale refugia are present east of the freeway within Stone Canyon Reservoir (750 acres) and Franklin Canyon Park (Mountains Recreation and Conservation Authority land, 605 acres) or Griffith Park (4,210 acres). Within the Project Study Area, west-to-east wildlife movement is aided by native habitat on both sides of I-405, providing shelter and cover to approach and exit the freeway corridor, but vehicle presence and speed on the freeway are major impediments to crossings. There are limited opportunities for wildlife to move north to south due to the urban landscape surrounding the mountains in both directions. Currently, the permeability of I-405 and other major roads in the Project Study Area is limited for most terrestrial wildlife, contributing to habitat fragmentation and restricted breeding and hunting opportunities, especially for large mammals. Impacts to gene flow resulting from movement barriers and subsequent signs of inbreeding depression have been observed in Southern California mountain lions (Huffmeyer et al., 2022), decreasing overall population health.

The Santa Monica Mountains Conservancy's (SMMC) Eastern Santa Monica Natural Resource Protection Plan states habitat connectivity, particularly leading up to and east of I-405, is in danger (ESMM-NRPP, 2021). The SMMC has published a habitat linkage map indicating presence of four wildlife corridors that cross I-405 in the Santa Monica Mountains: Mulholland Drive bridge, Skirball Center bridge, Bel Air Crest Drive underpass, and Sepulveda Boulevard underpass by the Getty Center (SMMC, 2021). They are also identified as wildlife movement pathways by the City of Los Angeles (DCP, 2021). NPS research before, during, and after the I-405 Freeway Widening Project studied the use of these potential corridors and found that while wildlife used all four during the preconstruction and early construction phases, fewer animals and species used them post-construction (NPS, 2024a). Species that were observed post-construction included raccoon, Virginia opossum, coyote, mule deer and fox squirrel. Cameras placed in the vicinity of the crossings showed that the species who were no longer observed crossing were still present in the area; this includes mountain lions although they were not observed at any of the crossings during the study. On January 22, 2025, a wildfire began east of I-405, adjacent to the Sepulveda Boulevard underpass and burned through adjacent vegetation, reducing cover for wildlife attempting to cross here. It is likely that wildlife movement in this area will be temporarily altered until the habitat recovers.

Mountain lions utilize the Santa Monica Mountains as a major linkage corridor between the surrounding mountain ranges in Southern California. Freeways, roads, buildings, and fencing have created barriers to mountain lion, along with other wildlife movement, resulting in the remaining undeveloped land becoming highly fragmented habitat (CLAW, 2023). The major causes of death among mountain lions are vehicle collisions, rodenticide poisoning, depredation permits, and mountain lions killing other mountain lions.

I-405 creates a major barrier to mountain lion movement. At present time, I-405 is generally considered impermeable to mountain lions inhabiting land east of I-405, preventing their movement to the western portion of the Santa Monica Mountains (NPS, 2023). However, a few mountain lions have made it across I-405 successfully. Examples of mountain lions crossing I-405 include mountain lions P-22, P-61, and

P-97. P-22 was born in the Santa Monica Mountains and was determined to have crossed both the I-405 and US-101 freeways to make his way to Griffith Park; he was not collared at the time of his crossing (NPS, 2019b). The NPS also documented one collared mountain lion (P-61) crossing I-405 in the Sepulveda Pass successfully on July 19, 2019. However, these examples are few and far between since many mountain lions who attempt to cross I-405 are unsuccessful, such as P-97, who was struck and killed in the Sepulveda Pass near Getty Center Drive in 2022 (NPS, 2023) and an uncollared lion that was killed off Sepulveda Boulevard near The Getty Museum in July 2024 (Darling, 2024). As of December 2022, at least 32 mountain lions are documented as struck and killed by vehicles in the SMMNRA in the last 20 years, two of which occurred on I-405 (NPS, 2023). Mountain lions have been documented traveling up to the edge of I-405 but not crossing (NPS, 2023), further indicating freeways and other physical barriers are affecting wildlife behavior. Mountain lions in the Santa Monica Mountains are experiencing exacerbated impacts of edge effects and limited habitat and are suffering from territorial fighting, low genetic diversity, and low prey populations. Furthermore, escape routes during wildfires may be blocked and migration into previously burned areas may be restricted due to roads and other urban development. A study conducted by University of California (UC) Davis and partners concluded the Santa Monica Mountains lion population is at risk of becoming locally extinct within the next 50 years. The study recommended increases in landscape connectivity to maintain healthy lion populations in the greater Los Angeles metropolitan area (Benson et al., 2019).

In general, wildlife species are likely to use habitat within the Project Study Area for local movement related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover) versus regional movement due to the highly urbanized nature of most of the project and the barrier created by I-405. Due to the size of the Project Study Area, it is likely to be part of the home range of many species, which may be present at different times of year, depending on available resources.

Water bodies within the Project Study Area support local wildlife movement, such as Encino Reservoir and Sepulveda Basin in the western portion and Stone Canyon Reservoir in the eastern portion. These areas provide resting, foraging, and nesting opportunities for wildlife species. Collectively these waterbodies provide habitat for wildlife species to move through the Los Angeles Basin and San Fernando Valley. Furthermore, several species of warblers, sparrows, and raptors that breed in northern latitude spend the winter months in the Project Study Area. This includes species covered by the MBTA including the yellow-rumped warbler (*Setophaga coronata*), white-crowned (*Zonotrichia leucophrys*) and golden-crowned sparrows (*Zonotrichia atricapilla*), and several raptor species.

The Project Study Area occurs along the Pacific Flyway, a major north-south flyway for migratory birds moving between breeding grounds and overwintering sites or following food sources. Within the Project Study Area, the potential stopover locations for migratory birds are generally correlated with vegetation cover and are near water, such as the Sepulveda Basin Recreation Area and Stone Canyon Reservoir. These areas are particularly important for migrating waterfowl. Within the Sepulveda Basin, the Los Angeles River flows west to east through the Project Study Area. The majority of the river within the Project Study Area is a concrete-lined channelized river, approximately 2.5 miles within the Sepulveda Basin with a natural, earth bottom and is vegetated with riparian habitat. The narrow riparian corridor along the Los Angeles River includes a variety of plant and habitat layers (i.e., mature trees, shrubs, and herbaceous vegetation) that facilitate bird movement along the river. Within the Sepulveda Basin Recreation Area, several water bodies occur that support wildlife movement through the Project Study Area, including Lake Balboa, Woodley Creek, Haskell Creek, Japanese Garden Lake, and Wildlife Lake.

Bats

There are 24 species of bats found in Los Angeles County, 18 of which are considered rare or sensitive by a variety of entities (NHMLA, 2023). In particular, the WBWG identifies several species as Medium or High Priority for consideration of conservation measures. Bat species found in Los Angeles County are known to have behavioral and ecological interactions with transportation structures, especially those involving bridges. Bat species responses to anthropogenic disturbances differ, with some responding positively and some negatively. Anthropogenic disturbances that affect bats include the following (Caltrans, 2019):

- Habitat loss, fragmentation, and degradation
- Chemical pollution to drinking water from construction waste and to air from construction vehicle emissions
- Light pollution resulting from artificial lighting
- Noise pollution from construction activities
- Increased predation
- Introduced diseases, such as white-nose syndrome
- Climate change
- Vehicular collisions

The Project Study Area provides habitat for day and night roosting bats such as trees, bridges, culverts, buildings, and other structures. The tree-lined streets found throughout the Project Study Area could potentially support roosting bats, such as the hoary bat and western mastiff bat. Large bridges spanning the Los Angeles River may provide suitable bat roosting habitat and foraging habitat for species such as Mexican free-tailed bat and *Myotis* species. However, no sign of bats including individuals, guano (i.e., scat), staining on walls from urine, or vocalizations were detected during the spring 2023 reconnaissance-level field surveys.

5.1.5.2 Plants

Vegetation Communities

Vegetation communities in the highly urbanized areas of the northern and southern portions of the RSA are generally absent and consist mainly of the land cover class developed. Developed, ruderal, agricultural, and cleared land classifications are generally considered to provide lower quality habitat due to absent or sparse vegetation, limited plant diversity, and regular disturbance associated with human activities. Special-status wildlife species may use these areas for activities such as foraging or while in transit and special-status plants could be present, but they are more likely to be found in vegetated habitats subject to less disturbance. Habitat types are described in detail below.

Vegetation communities in the Santa Monica Mountains, which are less developed and run east-west through the middle of Project Study Area, include ceanothus chaparral, laurel sumac shrubland, toyon shrubland, coast live oak woodland, and various other native vegetation communities. Vegetation communities listed below are presented in descending order of abundance within the Project Study Area; spatial representation of their locations is provided in Appendix B, Attachment 2, Tree Map Series. A comprehensive list of plant species observed during field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for the various types of biological surveys across the six alternatives. Since field surveys were not conducted for the No Project Alternative, a compiled list of vegetation communities and acreages observed across the combined alternatives is presented in Table 5-2.

Table 5-2. No Project Alternative: Vegetation Community Acreage

Vegetation Community/Land Cover Type[a]	Sensitive Natural Vegetation Community (Authority)	Acres[b]	Percent of Total Vegetation
Developed	Not applicable	3,888.3	82.7
Post Fire Shrub Regeneration and Undifferentiated Categories including Artificial Cuts/Embankments, Exotic Vegetation, Firebreaks	Not applicable	296.6	6.3
Ceanothus Chaparral	Not applicable	111.3	2.4
Agricultural Land	Not applicable	66.0	1.4
California Walnut Woodland	Yes (CDFW)	63.1	1.3
Laurel Sumac Shrubland	Potentially depending on codominant species (CDFW)	57.5	1.2
California Annual Grassland	Not applicable	49.3	1.0
Black Sage Shrubland	Potentially depending on codominant species (CDFW)	30.7	0.7
Coast Live Oak Woodland	Not applicable	21.6	0.5
Ruderal	Not applicable	18.3	0.4
Undifferentiated Categories including Riparian Vegetation and Chaparral Shrubland	Potentially depending on species composition (CDFW)	16.9	0.4
Toyon Shrubland	Potentially depending on codominant species (CDFW)	16.6	0.4
Coyote Brush Shrubland	Potentially depending on codominant species (CDFW)	9.8	0.2
Open Water	Not applicable	9.8	0.2
Chamise-Black Sage Shrubland	Potentially depending on codominant species (CDFW)	9.1	0.2
Scrub Oak Shrubland	Potentially depending on codominant species (CDFW)	6.9	0.1
Bush Mallow Shrubland	Potentially depending on codominant species (CDFW)	4.6	0.1
California Buckwheat Shrubland	Potentially depending on codominant species (CDFW)	4.5	0.1
Cleared Land	Not applicable	4.0	0.1
Sugar Bush Shrubland	Yes (CDFW)	4.0	0.1
California Sagebrush Shrubland	Potentially depending on codominant species (CDFW)	3.2	0.1
California Encelia Shrubland	Potentially depending on codominant species (CDFW)	3.0	0.1
California Sycamore Woodland	Potentially depending on codominant species (CDFW)	2.5	0.1
California Sagebrush-California Buckwheat Shrubland	Potentially depending on codominant species (CDFW)	2.4	0.1
Mexican Elderberry Shrubland	Not applicable	0.9	<0.1
Total		**4,701.0**	**100**

Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in total calculation due to rounding errors.

CDFW = California Department of Fish and Wildlife

Developed

The developed cover class consists of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or minimal ornamental landscaping. Ornamental landscaping was demarcated during the tree and shrub inventory as a subset of the developed cover class. The ornamental landscaping subcategory is characterized by developed areas dominated by ornamental trees, shrubs, grasses, and herbs, with some areas including native species. The dominant ornamental trees include carob tree (*Ceratonia siliqua*), Chinese banyan (*Ficus microcarpa*), shamel ash (*Fraxinus uhdei*), Chinese elm (*Ulmus parvifolia*), jacaranda (*Jacaranda mimisifolia*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Mexican fan palm (*Washingtonia robusta*), and several species of eucalyptus trees (*Eucalyptus* sp.). Dominant native trees found in this subcategory include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and southern California black walnut (*Juglans californica*). There are large portions of the developed cover class throughout the Project Study Area.

Post Fire Shrub Regeneration and Undifferentiated Categories- Artificial cuts/Embankments, Exotic Vegetation, and Firebreaks

These designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Areas of undifferentiated vegetation will be further refined upon future analysis and field surveys prior to initiation of construction. The post fire shrub regeneration classification refers to areas that have experienced wildlife where shrub root bases survived the fire and resprouting has begun. Undifferentiated areas categorized as artificial cuts/embankments and firebreaks are subject to anthropogenic disturbance where vegetation is periodically altered through removal along roadways or firebreaks. Within these classifications, approximately 93 percent of acreage in the Project Study Area is within artificial cuts/embankments, 5 percent is undifferentiated exotic vegetation, 2 percent are within firebreaks, and less than 1 percent is post fire shrub regeneration. These categories occur throughout the RSA.

Ceanothus Chaparral

Ceanothus chaparral is characterized by a dominance of ceanothus (*Ceanothus* sp.). Laurel sumac (*Malosma laurina*) and toyon (*Heteromeles arbutifolia*) can also be present but at much lower cover. Other species typically found in the shrub layer of this community include chamise (*Adenostoma fasciculatum*), sugar bush (*Rhus ovata*), and black sage (*Salvia mellifera*) (NPS, 2006). The tree layer is emergent and open and may include coast live oak, California black walnut and/or California bay (*Umbellularia californica*) with low levels of canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes chilicothe (*Marah macrocarpa*), foxtail brome (*Bromus madritensis*), coast range melic (*Melica imperfecta*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), giant wild rye (*Elymus condensatus*) and black mustard (*Brassica nigra*) (NPS, 2006). Ceanothus chaparral occurs in the central and southern portions of the Project Study Area.

Laurel Sumac Shrubland

Laurel sumac shrubland occurs on gentle to very steep southeast- to northwest-facing slopes at low elevations between approximately 0 to 1,750 feet (NPS, 2006). Laurel sumac is primarily the dominant shrub species within this vegetation community (NPS, 2006). Codominant and co-occurring species include coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), Menzies' goldenbush (*Isocoma menziesii*), lemonade berry (*Rhus integrifolia*), sugar bush, greenbark ceanothus (*Ceanothus spinosus*), Mexican elderberry (*Sambucus mexicana*), hollyleaf cherry (*Prunus ilicifolia*), toyon, hollyleaf redberry (*Rhamnus ilicifolia*), scrub oak (*Quercus berberidifolia*), and mountain

mahogany (*Cercocarpus betuloides*). Non-native species such as tobacco tree (*Nicotiana glauca*), castor bean (*Ricinus communis*), and fountain grass (*Pennisetum setaceum*) are common in disturbed areas within this vegetation community. Laurel sumac scrub occurs on the southern end of the Project Study Area.

Agricultural Land

Agricultural land does not support native vegetation and can include actively cultivated land or land that supports nursery operations. Agricultural land occurs in the northern portion of the Project Study Area near the Sepulveda Basin Recreation Area. Some locations contain cover crops while others are fallow; condition of crops within each field are likely to change with season.

California Walnut Woodland

California walnut woodland is characterized by the dominance of California black walnut. Other species that can be co-dominate within the tree layer include white alder (*Alnus rhombifolia*), two-petaled ash (*Fraxinus dipetala*), toyon, coast live oak, valley oak (*Quercus lobata*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Mexican elderberry, and California bay (Sawyer et al., 2009). The shrub layer is sparse to intermittent, and the herbaceous layer is sparse or grassy (Sawyer et al., 2009). California walnut woodland occurs throughout the Project Study Area and is prevalent around Stone Canyon Reservoir.

California Annual Grassland

California annual grassland includes wild oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut brome, prickly lettuce (*Lactuca seriola*), black mustard, and the occasional mulefat (*Baccharis salicifolia*) and/or coyote brush. California annual grassland occurs in the northern and southern ends of the Project Study Area.

Black Sage Shrubland

Black sage shrubland occurs on moderate to very steep southeast- and southwest-facing slopes at low elevations between approximately 50 to 2,550 feet (NPS, 2006). Black sage is the dominant shrub within this community (NPS, 2006). Other species often included in the shrub layer include chaparral yucca (*Yucca whipplei*), chamise, and California sagebrush (*Artemisia californica*) (NPS, 2006). Trees often found within this community include California black walnut, coast live oak, and Peruvian pepper tree (*Schinus molle*) (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, tocalote, and black mustard (NPS, 2006). Other herbs present may include mustard (*Hirschfeldia incana*), giant wild rye, coast range melic, and foothill needle grass (*Stipa lepida*) (NPS, 2006). Black sage shrubland occurs on the southern end of the Project Study Area.

Coast Live Oak Woodland

Coast live oak woodland is an open to dense tree community with coast live oak as the dominant overstory species and Engelmann oak (*Quercus engelmannii*) as an occasional associate. The shrub understory of this community is well developed in undisturbed sites and may include Mexican elderberry, gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), and toyon (Beauchamp, 1986; Holland, 1986). An herbaceous stratum is usually present including miner's lettuce (*Claytonia perfoliata* var. *perfoliata*), chickweed (*Stellaria media*), and non-native grasses. Coast live oak woodland occurs in the central to southern parts of the Project Study Area.

Toyon Shrubland

Toyon shrubland is characterized by the dominance of toyon. Laurel sumac, hollyleaf cherry, and ceanothus can be codominant species within this vegetation community. Other species that may be present include Mexican elderberry, southern California black walnut, and coast live oak. Toyon shrubland occurs in the central portion of the Project Study Area.

Ruderal

The ruderal cover class consists of areas that are dominated by bare ground or invasive non-native forbs (herbaceous, non-grass species) that are adapted to a regime of frequent disturbances. Non-native annual grasses will occur in low abundance and typically contribute less than 50 percent to the entire herbaceous cover. Species typically found in this cover class include non-native grasses and forbs such as wild oats, bromes, mustards, thistles, tumbleweed (*Salsola* sp.), tobacco tree and castor bean. Ruderal land often contains trash and rubble, such as fragments of concrete or asphalt, and is dominated by invasive species. Ruderal areas occur throughout the Project Study Area and are often associated with roads.

Undifferentiated Categories- Riparian Vegetation and Chaparral Shrubland

Undifferentiated designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Undifferentiated riparian vegetation and chaparral shrubland communities have potential to be sensitive depending on species present within the community; these will be further refined during field surveys prior to initiation of construction. Undifferentiated riparian vegetation occurs in the northern end of the Project Study Area in the Sepulveda Basin. Undifferentiated chaparral shrubland is centrally located, adjacent to Stone Canyon Reservoir. For this analysis, Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping.

Coyote Brush Shrubland

This community is dominated by coyote brush with a codominant of mulefat. Coyote brush shrubland is found in native shrubland areas with a history of anthropogenic disturbance. This community occurs in the northern and central parts of the Project Study Area.

Chamise-Black Sage Shrubland

Chamise-black sage shrubland occurs on somewhat steep to steep southeast- to northwest-facing slopes at low elevations between approximately 350 to 1,650 feet (NPS, 2006). Chamise and black sage are dominant in the shrub layer. Other species often included in the shrub layer include chaparral yucca, California sagebrush, California buckwheat, and deerweed (*Acmispon glaber*) (NPS, 2006). The tree layer is emergent and open and may infrequently include coast live oak at low canopy cover (NPS, 2006). The herbaceous layer may sometimes include foothill needle grass, woolly bluecurls (*Trichostema lanatum*), tocalote, ripgut brome, island morning glory (*Calystegia macrostegia*), California dodder (*Cuscuta californica*), foxtail brome, and coast range melic (NPS, 2006). Chamise-black sage shrubland occurs in the central portion of the Project Study Area.

Scrub Oak Shrubland

Scrub oak shrubland occurs on gentle to very steep northwest- and northeast-facing slopes at low to middle elevations between approximately 400 to 2,550 feet (NPS, 2006). Scrub oak is dominant in the shrub layer with toyon often occurring as well. Other species that occasionally occur within the shrub layer of this community include chamise, sugar bush, purple sage (*Salvia leucophylla*), greenbark ceanothus, poison oak, and laurel sumac (NPS, 2006). The tree layer is open and emergent and

sometimes includes coast live oak, California black walnut, and valley oak (NPS, 2006). The herbaceous layer is diverse and sometimes includes tocalote, foxtail brome, black mustard, ripgut brome, chilicothe, clustered tarweed (*Hemizonia fasciculata*), coast range melic, and mustard (NPS, 2006). Scrub oak shrubland occurs in the central part of the Project Study Area.

Open Water

This community consists of any open body including lakes, reservoirs, bays, flowing water within a river channel, and small ponds along stream courses. Open water occurs on the northern and central parts of the Project Study Area, specifically within the Stone Canyon Reservoir and the Los Angeles River, creeks, and human-made lakes within the Sepulveda Basin.

California Buckwheat Shrubland

California buckwheat shrubland occurs on gentle to very steep slopes of variable aspect at low elevations between approximately 15 to 1,850 feet (NPS, 2006). California buckwheat is dominant in the shrub layer. Other species found in the shrub layer include deerweed, California sagebrush, and laurel sumac (NPS, 2006). The herbaceous layer is largely a sparse mix of non-native species and can include foxtail brome, ripgut brome, black mustard, and tocalote (NPS, 2006). The emergent tree layer is largely absent (NPS, 2006). California buckwheat shrubland occurs in the central and southern parts of the Project Study Area.

Bush Mallow Shrubland

Bush mallow shrubland occurs on gentle to steep southwest- and southeast-facing slopes at low elevations between approximately 0 to 1,575 feet (NPS, 2006). Bush mallow (*Malacothamnus fasciculatus*) is dominant in the shrub layer with black sage often present (NPS, 2006). Other species that occur within the shrub layer of this community include California sagebrush, laurel sumac, California encelia (*Encelia californica*), and big pod ceanothus (*Ceanothus megacarpus*) (NPS, 2006). The tree layer is emergent and open and infrequently includes coast live oak, California black walnut, and western sycamore at low canopy cover (NPS, 2006). The herbaceous layer may include tocalote, black mustard, ripgut brome, mustard, and clustered tarweed (NPS, 2006). Bush mallow shrubland occurs in the central part of the Project Study Area.

Sugar Bush Shrubland

Sugar bush shrubland occurs on somewhat steep to steep southwest- and northwest-facing slopes at low elevations between approximately 600 to 1,700 feet (NPS, 2006). The shrub layer is dominated by sugar bush (NPS, 2006). Other species that occur within this community include bush mallow, black sage, toyon, and laurel sumac (NPS, 2006). The herbaceous layer is generally open with a varying mixture of native and non-native species that can sometimes include black mustard, tocalote, mustard, and giant wild rye (NPS, 2006). The emergent tree layer includes coast live oak and California black walnut but is usually absent (NPS, 2006). Sugar bush shrubland occurs on the southern end of the Project Study Area.

Cleared Land

Cleared land has had native vegetation eliminated by grading, agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of another plant association. The vegetation is sparse, when present, and typically includes non-native weed species including mustard, Russian thistle, fountain grass, and horseweed (*Erigeron canadensis*), among others. Cleared land occurs in the central portion of the Project Study Area.

California Sagebrush Shrubland

California sagebrush shrubland occurs on gentle to steep slopes of variable aspect at low elevations between approximately 0 to 2,000 feet (NPS, 2006). California sagebrush is dominant in the shrub layer (NPS, 2006). Other species that can be found in the shrub layer of this community include laurel sumac, purple sage, coyote brush, and black sage (NPS, 2006). The tree layer is emergent and open and infrequently includes coast live oak, California black walnut, and Peruvian pepper tree at low canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, black mustard, tocalote, mustard, giant wild rye, and ripgut brome (NPS, 2006). California sagebrush shrubland occurs on the northern and central parts of the Project Study Area.

California Encelia Shrubland

California encelia shrubland occurs on gentle to steep southwest- and southeast-facing slopes at low elevations between approximately 0 to 1,650 feet (NPS, 2006). California encelia is dominant in the shrub layer (NPS, 2006). Other species that can be found in the shrub layer of this community include California sagebrush, laurel sumac, black sage, and chaparral yucca (NPS, 2006). The tree layer is emergent and open and may infrequently include coast live oak and California black walnut (NPS, 2006). The herbaceous layer is diverse and often includes black mustard (NPS, 2006). Other species sometimes present include foxtail brome, giant wild rye, and tocalote (NPS, 2006). California encelia shrubland occurs in the central portion of the Project Study Area.

California Sycamore Woodland

California sycamore woodland is characterized by the dominance of western sycamore. Coast live oak can sometimes be codominant within the tree layer. Other species that may be present within this community include white alder, California black walnut, Fremont cottonwood (*Populus fremontii*), valley oak, narrowleaf willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), red willow, arroyo willow, (*Salix lutea*), Peruvian pepper tree, and California bay. California sycamore woodland occurs in the central portion of the Project Study Area.

California Sagebrush-California Buckwheat Shrubland

California sagebrush-California buckwheat shrubland is characterized by the co-dominance of California sagebrush and California buckwheat. Other species that may be codominant within this community include purple sage, black sage, and annual grasses (NPS, 2006). California sagebrush-California buckwheat occurs in the central portion of the Project Study Area.

Mexican Elderberry Shrubland

Mexican elderberry shrubland is characterized by the dominance of Mexican elderberry. Species that can be codominant within this community include giant wild rye and toyon (NPS, 2006). Mexican elderberry shrubland occurs in the central portion of the Project Study Area.

Mountain Mahogany Shrubland

Mountain mahogany shrubland occurs on moderately steep to steep northeast- and northwest-facing slopes at low elevations between approximately 30 to 2,150 feet (NPS, 2006). Mountain mahogany is dominant in the shrub layer (NPS, 2006). Toyon may also be characteristic of this community but at a low cover (NPS, 2006). Other species that can be found in the shrub layer of this community include laurel sumac, greenbark ceanothus, and big pod ceanothus (NPS, 2006). The tree layer is emergent and open and may infrequently include coast live oak and California black walnut. The herbaceous layer is diverse and can include giant wild rye, coast range melica, chilicothe, phacelia (*Phacelia* sp.),

needlegrass (*Nassella* sp.), and ripgut brome (NPS, 2006). Mountain mahogany shrubland occurs on the southern end of the Project Study Area.

5.1.5.3 Trees within Project Study Area

Numerous trees occur within the Project Study Area, although field assessments were only conducted on trees within the combined Tree Survey Area for all alternatives. The northern and southern portions of the Project Study Area are highly urbanized and dominated by non-native, ornamental trees planted within residential, commercial, and roadside ornamental landscapes. Native trees, including coast live oak, western sycamore, and southern California black walnut, occur in smaller numbers in various locations throughout the northern and southern portions of the Tree Survey Area. In the central, less developed portion of the Tree Survey Area, native trees are more frequent, especially east and west of I-405 from Valley Vista Boulevard to Getty Center Drive and are dominant within Stone Canyon Reservoir. No impacts associated with the project will occur from the No Project Alternative. Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, contains the protected trees and shrubs that were mapped during spring 2023 and 2024 field surveys. Since tree and shrub inventories were not conducted for the Project Study Area but instead for each alternative's Tree Survey Area where direct impacts are anticipated, results in the Tree Inventory Report are presented per alternative.

Of the six local ordinances, plans, or policies with potential to protect trees or shrubs within combined Tree Survey Area (detailed in Sections 2.3.2, 2.3.5, 2.3.6, 2.3.8, 2.3.9, and 2.3.10), the Los Angeles County Oak Woodlands Conservation Management Plan does not have jurisdiction since inventoried trees did not meet the requirements (i.e., there were no native oak tree stands on unincorporated County land with current or historical canopy cover greater than 10 percent). Therefore, the County Plan will not be discussed further in this report.

Within SMMNRA, trees within the Tree Survey Area were located on lands owned or managed by the County of Los Angeles and the Mountains Recreation and Conservation Authority (MRCA) within the Sepulveda Pass Open Space, Mission Canyon Open Space, and the MRCA Mountaingate Conservation Easement.

5.1.5.4 Sensitive Natural Vegetation Communities

Based on a review of the CNDDB (CDFW, 2023a), 10 sensitive vegetative communities ranked S1 through S3 are known to occur within the Beverly Hills, Canoga Park, Van Nuys and the surrounding 11 quadrangles. Two of these (southern dune scrub and southern coastal salt marsh) do not occur within the Project Study Area as they are coastal or estuarine in nature and are found west of the Project Study Area. An additional inland waters vegetation community, Southern California Arroyo Chub/Santa Ana Sucker Stream, does have potential to occur within the Project Study Area but is not yet ranked by the state; this will be included as a sensitive community if identified within the Project Study Area, as it could be ranked as sensitive in the future, resulting in a total of 9 sensitive natural vegetation communities with potential to occur within the Project Study Area (CDFW, 2024d).

Two sensitive vegetation communities, California walnut woodland (S3) and sugar bush shrubland (S3) are present within the Project Study Area. An additional 12 identified communities and two undifferentiated categories have the potential to be considered sensitive depending on the associated plants present, i.e., associations (see Section 3.2.2 for additional details). For these communities, classification of vegetation associations is required to determine sensitivity since not all associations within the community are sensitive. Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping. These identified

communities include laurel sumac shrubland, black sage shrubland, toyon shrubland, coyote brush shrubland, chamise-black sage shrubland, scrub oak shrubland, California buckwheat shrubland, bush mallow shrubland, California sagebrush shrubland, California sagebrush-California buckwheat, California encelia shrubland, and California sycamore woodland. The two undifferentiated categories include riparian vegetation and chaparral shrubland. For the purposes of this analysis, these 14 communities will be marked as potentially sensitive and will be included in acreage calculations of impacts to sensitive communities. The majority of the Project Study Area is outside the area where vegetation mapping was conducted since vegetation mapping was focused on areas with potential direct or indirect biological impacts for each alternative. Therefore, it is possible additional sensitive vegetation communities may be present with the Project Study Area but outside of the assessment area for impacts.

5.1.5.5 Special-Status Plant Species

Forty-nine special-status plant species with either federal and/or State-listed status or with a CRPR of 1B and 2 (eligible candidates) were identified as having a potential to occur within the Project Study Area based on CNDDB, California Native Plant Society (CNPS), IPaC, and iNaturalist database searches (CDFW, 2023a; CNPS, 2024; USFWS, 2023a; iNaturalist, 2024p through 2024x). Table 5-3 includes these species and an assessment of their potential to occur within the Project Study Area.

Most special-status plant species identified through database searches have no potential to occur within the Project Study Area due to lack of suitable habitat, primarily from urban development. Species with no potential to occur within the Project Study Area are not discussed further herein. Native vegetation habitats located within the Santa Monica Mountains provide potentially suitable habitat for a few special-status plants within the Project Study Area. Of the 49 special-status plants identified during the database searches, one species, slender mariposa lily, has moderate potential to occur, one species, Sonoran maiden fern, has high potential, and six species are present within the Project Study Area, including Braunton's milk-vetch, Nevin's barberry, Davidson's bushmallow, chaparral nolina, Nuttall's scrub oak, and Sanford's arrowhead. These special-status plant species are discussed in further detail in Table 5-3. Within Table 5-3, rows discussing species that were determined to be present or to have a high potential to occur within the Project Study Area are highlighted blue.

Table 5-3. Special-Status Plant Species with Potential to Occur within Project Study Area

Scientific Name	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Arenaria paludicola	Marsh sandwort	FE/SE 1B.1	Marshes, swamps, and areas wet, year-round.	**No Potential.** No suitable habitat is present in the Project Study Area.
Astragalus brauntonii	Braunton's milk-vetch	FE 1B.1	Fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum),* yucca (*Yucca whipplei*), and the rare Tecate cypress (*Cupressus forbesii*).	**Present**. Suitable habitat occurs within the Project Study Area and recent observations of the species have been observed 0.25 mile east of I-405 in Bel Air Crest in 2022 and within Fossil Ridge Park approximately 1 mile south of US-101 in 2019 (iNaturalist, 2024o).
Astragalus pycnostachyus var. *lanosissimus*	Ventura Marsh milk-vetch	FE/SE 1B.1	Associated with well-drained soils in coastal shrublands, marshes, swamps, and coastal dune swales with a relatively high-water table near bodies of fresh or brackish water.	**No Potential**. No suitable habitat is present in the Project Study Area. Multiple historical records between 1880s and 1951 located the Project Study Area believed to be extirpated as of 1964 (CDFW, 2023a).
Astragalus tener var. *titi*	Coastal dunes milk-vetch	FE/SE 1B.1	Coastal dunes, bluffs, and coastal terrace grassland. There has not been a sighting or collection in San Diego County or Los Angeles County in over 50 years.	**No Potential**. No suitable habitat is present in the Project Study Area.
Atriplex coulteri	Coulter's saltbush	1B.2	Associated with areas of saline and alkaline soils, such as ocean bluffs.	**Low.** Suitable habitat is present in the Project Study Area. One historical record (1881) within 1 mile west of the Project Study Area and a second (1902) was approximately 10 miles south are presumed extirpated (CDFW, 2023a). One recent observation approximately 12 miles west of the Project Study Area was made in 2009 (CDFW, 2023a).
Atriplex pacifica	South coast saltscale	1B.2	Associated with areas of saline and alkaline soils on immediate coastline, such as ocean bluffs.	**No Potential.** No suitable habitat is present in the Project Study Area. One historical observation with occurred within the Project Study Area in the City of Santa Monica in the late 1800s and is now listed as possibly extirpated (CDFW, 2023a).
Atriplex parishii	Parish's brittlescale	1B.1	Typically found at the edges of dry lakes or vernal pools temporarily inundated with water in the wet season and have high concentrations of alkali salts.	**No Potential.** No suitable habitat is present in the Project Study Area.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	1B.1	Coastal bluff scrub, coastal scrub. Alkaline soil. Blooms from April to October at elevations ranging from 30 to 655 feet.	**Low.** Suitable habitat is present within the Project Study Area; however, no records of the species are found within the Project Study Area.

Scientific Name	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Baccharis malibuensis	Malibu baccharis	1B.1	Chaparral, coastal sage scrub, and oak woodlands.	**Low.** Suitable habitat is present in the Project Study Area in the Santa Monica Mountains; however, the closest records are approximately 10 miles west of the Project Study Area (CDFW, 2023a). The plant is only known from 10 occurrences (CNPS, 2024).
Berberis nevinii	Nevin's barberry	FE/SE 1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian scrub. Found in gravelly or sandy micro habitats. Blooms from February (March) - June at elevations ranging from 230 to 2,750 feet.	**Present**. Suitable habitat is present within the Project Study Area. One record from 2019 is inside the Project Study Area; it appears to be landscaping based on location inside a maintained yard. Two additional observations are within 1 mile of the Project Study Area, located to the east along the Los Angeles River (iNaturalist, 2024p).
Calochortus clavatus var. *gracilis*	Slender mariposa lily	1B.2	Chaparral, coastal scrub, and valley and foothill grasslands, on shaded foothill canyons within the Transverse Ranges and the San Gabriel Mountains. Occurs between 1,050 and 3,280 feet.	**Moderate**. Suitable habitat is present within the Project Study Area and records nearby of the species observed in Topanga Canyon in 2017, approximately 4 miles west of the Project Study Area (CDFW, 2023a) and in 2023 at the Hansen Dam Golf Course 2.5 miles north of the Project Study Area (iNaturalist, 2024q).
Calochortus fimbriatus	Late-flowered mariposa lily	1B.3	Chaparral of coastal mountain ranges from southern Monterey, San Luis Obispo, Santa Barbara, and northern Ventura counties.	**No Potential.** No suitable habitat is present in the Project Study Area.
Calystegia felix	Lucky morning glory	1B.1	Meadows and seeps, riparian scrub. Blooms from March – September at elevations ranging from 100 to 705 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Centromadia parryi ssp. *australis*	Southern tarplant	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Blooms from May to November at elevations ranging from 0 to 1,575 feet.	**Low.** Suitable habitat is present in the Project Study Area. One recent record from 2022 is located in Kenneth Hahn State Recreation Area, just over 3 miles southeast of the Project Study Area (iNaturalist, 2024r). One historical record from 1957 located on a brushy hill east of The Getty is within the Project Study Area (CDFW, 2023a).
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	1B.1	Coastal bluff scrub, coastal dunes. Prefers sandy sites. Blooms from January to August at elevations ranging from 6 to 262 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Chenopodium littoreum	Coastal goosefoot	1B.2	Coastal dunes. Generally, on sandy soils and on dunes. Blooms from May to October at elevations ranging from 10 to 120 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.

Scientific Name	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Chloropyron maritimum ssp. *maritimum*	Salt marsh bird's beak	FE/SE 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. Blooms from May to October at elevations ranging from 0 to 100 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	SE 1B.1	Sandy portions of coastal scrub, valley, and foothill grassland, between 490 and 4,005 feet. Blooms April to July.	**Low.** Suitable habitat is present within the Project Study Area, although the closest recent observation (2022) is more than 5 miles west of the Project Study Area (iNaturalist, 2024s). Multiple historical occurrences from the early 1900s are located within 2 miles of the Project Study Area to the north, east and south; these may all be possibly extirpated from urban development (CDFW, 2023a).
Deinandra minthornii	Santa Susana tarplant	SR 1B.2	Rocky outcroppings and in sandstone crevices, from 980 to 1,640 feet in elevation.	**No Potential.** No suitable habitat is present in the Project Study Area.
Dithyrea maritima	Beach spectaclepod	ST 1B.1	Coastal dunes, coastal scrub. Sea shores, sand dunes, and sandy places near the shore. Blooms from March to May at elevations ranging from 5 to 165 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Dodecahema leptoceras	Slender-horned spineflower	FE/SE 1B.1	Found in sandy sites within chaparral, cismontane woodland, or alluvial fans within coastal scrub. Occurs between 655 and 2,495 feet.	**Low.** Suitable habitat is present within the Project Study Area; however, there are no occurrences of the species recorded in the Project Study Area. Two recent sightings in 2022 (iNaturalist, 2024t) and one historical observation (1906) (CDFW, 2023a) are located approximately 1.75 miles east of the Project Study Area (iNaturalist, 2024t).
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	1B.1	Open, rocky slopes and on serpentine or clay-dominated soils, typically below an elevation of 1,475 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Dudleya cymosa ssp. *marcescens*	Marcescent dudleya	FT/SR 1B.2	Steep, shady hillsides of exposed volcanic rock, often associated with ferns, mosses and lichens.	**Low**. Suitable habitat is present in the Project Study Area; however, the plant is currently known from fewer than 10 populations in the Santa Monica Mountains. The nearest occurrence is approximately 12 miles west of the Project Study Area (CDFW, 2023a).

Scientific Name	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT 1B.1	Chaparral, coastal sage scrub, on shaded, rocky slopes.	**Low**. Suitable habitat is present in the Project Study Area, although the plant is only currently known from 10 total locations. The nearest location is 5 miles to the west in Topanga State Park, reported in 1987 and 2012 (CDFW, 2023a).
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE 1B.1	Annual/perennial herb. Mesic environments in coastal scrub, valley and foothill grassland, vernal pools. Blooms April to June. Occurs 65 to 2035 feet.	**No Potential.** No suitable habitat is present in the Project Study Area. Currently is found only on mesas near San Diego and Santa Rosa Plateau (Preston, 2023).
Horkelia cuneata var. *puberula*	Mesa horkelia	1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Blooms from February to July at elevations ranging from 225 to 2,655 feet.	**Low.** Suitable habitat is present in the Project Study Area; records exist within the search area but are all historical from 1895 to 1956 (CDFW, 2023a).
Isocoma menziesii var. *decumbens*	Decumbent goldenbush	1B.2	Sandy soil in chaparral and coastal sage scrub.	**No Potential.** No suitable habitat is present in the Project Study Area.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Blooms from February to June at elevations ranging from 0 to 4,005 feet.	**Low.** Suitable habitat is present in the Project Study Area; however, records nearby are from the early 1900s (CDFW, 2023a).
Lupinus paynei	Payne's bush lupine	1B.1	On sandy soils in coastal scrub, riparian scrub, and valley and foothill grasslands. Occurs 720 to 1,380 feet. Blooms March to April (May-July).	**No Potential.** No suitable habitat is present in the Project Study Area.
Malacothamnus davidsonii	Davidson's bushmallow	1B.2	On slopes of chaparral, oak woodland, and other habitats.	**Present**. Suitable habitat is present in the Project Study Area. A recent (2021) observation is located 0.25 mile west of the RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021).
Monardella hypoleuca ssp. *hypoleuca*	White-veined monardella	1B.3	Chaparral and cismontane woodlands. Known only from the Santa Monica, Santa Ynes, and Sierra Madre Mountains.	**Low.** Suitable habitat is present in the Project Study Area. The nearest observation is from 2008 and is approximately 3 miles west of the Project Study Area near the Santa Ynez Canyon Trailhead (CDFW, 2023a).
Nama stenocarpa	Mud nama	2B.2	Marshes and swamps. Blooms from January to July at elevations ranging from 15 to 164 feet.	**No Potential.** Suitable habitat is not present in the Project Study Area. The last known occurrence within the Project Study Area is from 1902 around the VA Hospital Site (CDFW, 2023a); the area is now highly developed.

Scientific Name	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Nasturtium gambellii	Gambel's water cress	FE/ST 1B.1	Marshes and swamps. Blooms from April to October at elevations ranging from 15 to 1,085 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Navarretia fossalis	Spreading navarretia	FT 1B.1	Freshwater marsh and vernal pools.	**No Potential.** No suitable habitat is present in the Project Study Area.
Navarretia ojaiensis	Ojai navarretia	1B.1	Open areas of chaparral, coastal sage scrub, and grasslands.	**No Potential.** No suitable habitat is present in the Project Study Area.
Navarretia prostrata	Prostrate vernal pool navarretia	1B.2	Coastal scrub, valley and foothill grassland, vernal pools, meadows, and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. Blooms from April to July at elevations ranging from 5 to 3,970 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Nolina cismontana	Chaparral nolina	1B.2	Coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone substrates.	**Present**. Suitable habitat is present, and species was detected in the Project Study Area in Deervale-Stone Canyon Park in 2020 (iNaturalist, 2024u).
Orcuttia californica	California Orcutt grass	FE/SE 1B.1	Freshwater wetlands.	**No Potential.** No suitable habitat is present in the Project Study Area.
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	2B.2	Wetlands, meadows, and seeps between 165 and 2,000 feet.	**High.** Suitable habitat is present in the Project Study Area. One 2010 observation of 6 plants in a rustic creek was within 1 mile of the Project Study Area (CDFW, 2023a).
Pentachaeta lyonii	Lyon's pentachaeta	FE/SE 1B.1	Chaparral, valley grasslands on rocky clay soils of volcanic origin.	**No Potential.** No suitable habitat is present in the Project Study Area.
Phacelia stellaris	Brand's star phacelia	1B.1	Coastal scrub, coastal dunes. Found in open areas. Blooms from March to June at elevations ranging from 9 to 1,213 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Potentilla multijuga	Ballona cinquefoil	1A	Found in brackish meadows and seeps. Blooms from June to August at elevations ranging from 0 to 6 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Pseudognaphalium leucocephalum	White rabbit-tobacco	2B.2	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Blooms from August (July) to November (December) at elevations ranging from 0 to 6,890 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.

Scientific Name	Common Name	Status	Habitat	Potential for Occurrence in Project Study Area
Quercus dumosa	Nuttall's scrub oak	1B.1	Generally found on sandy soils near the coast, often found in chaparral and coastal sage scrub communities between 50 and 1,300 feet.	**Present**. Suitable habitat is present in the Project Study Area and a recent observation from 2024 was made within the Project Study Area immediately east of UCLA's campus (iNaturalist, 2024v). Additional observations from 2009 are less than 2 miles south of the Project Study Area in Kenneth Hahn State Recreation Area (CDFW, 2023a).
Sagittaria sanfordii	Sanford's arrowhead	1B.2	Freshwater wetlands. Occurs between 0 and 2,135 feet. Blooms May to October (November).	**Present.** Suitable habitat is present in the Project Study Area. One recent observation (2021) from the Los Angeles River within the Sepulveda Basin Recreation Area (CDFW, 2023a) and another from 2022 in the southern portion of the Project Study Area adjacent to Holmby Park (iNaturalist, 2024w).
Sidalcea neomexicana	Salt spring checkerbloom	2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Blooms from March to June at elevations ranging from 50 to 5,020 feet.	**No Potential.** No suitable habitat is present in the Project Study Area.
Spermolepis lateriflora	Western bristly scaleseed	2A	Rocky or sandy sections within Sonoran Desert scrub between 1,200 and 2,200 feet. Blooms March to April.	**No Potential.** No suitable habitat is present in the Project Study Area.
Symphyotrichum defoliatum	San Bernardino aster	1B.2	Streambanks in coastal scrub, cismontane woodland, lower montane coniferous forest, meadows, marshes and swamps and vernally mesic grasslands. Occurs between 5 and 6,695 feet. Blooms between July and November.	**No Potential.** Suitable habitat is not present within the Project Study Area. Also, two historical records located 3 to 6 miles east of the project are presumed extirpated due to development since the observations around the early 1900s (CDFW, 2023a).
Symphyotrichum greatae	Greata's aster	1B.3	Within mesic microhabitats in chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Occurs between 985 and 6,595 feet. Blooms June to October.	**Low**. Suitable habitat is present in the Project Study Area and the species was observed in an undated historical sample from Benedict Canyon in the Project Study Area (precise location data not available) (CDFW, 2023a). The area is currently developed with private residences. Recent observations are in the San Gabriel Mountains, approximately 15 miles north and east of the Project Study Area (CDFW, 2023a; iNaturalist, 2024x).

Source: HTA, 2024

[a]Special-status plant species identified during reviews of the CNDDB (CDFW, 2023a), CNPS database (CNPS, 2024), and iNaturalist (iNaturalist, 2024p to 2024x) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; and a review of IPaC (USFWS, 2024a) for the project region.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened

State Status Designations:
SC = State Candidate Species for Listing
SE = State Endangered
SR = State Rare
ST = State Threatened

California Native Plant Society Ranks:
1A. — Presumed Extirpated in California and either rare or extinct elsewhere.
1B. – Rare or Endangered in California and elsewhere.
1B.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) and elsewhere.
1B.2 – Fairly endangered in California (20-80 percent occurrences threatened) but more common elsewhere.
2A. – Presumed extirpated in California but common elsewhere.
2B. – Rare, Threatened, or Endangered in California but more common elsewhere.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, CNPS, iNaturalist, or another database as occurring in the Project Study Area. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Project Study Area; however, no records occur directly with the Project Study Area. Species has been detected within 1 mile of the Project Study Area. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Project Study Area is of marginal quality. No records occur in Project Study Area, but the species has been documented over 1 mile from the Project Study Area.

Low = Suitable habitat within the Project Study Area is of low quality. There are no known recent occurrences within or near the Project Study Area.

No Potential = Suitable habitat is not present for the species.

Braunton's Milk-Vetch

Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb native to California that is known to occur within the Project Study Area. The species is CRPR 1B.1 (rare, threatened, or endangered in California and elsewhere) and is federally listed as endangered. Braunton's milk-vetch occurs in valleys and foothill grasslands, coastal scrub, and chaparral habitats and is often found in recent burns or disturbed areas. Most often it is found on sandstone soils with carbonate layers between elevations of 15 and 2,100 feet. The blooming period is January to August. Suitable habitat occurs within the Project Study Area and recent records of the species have been observed just east of I-405 in Bel Air Crest and in Fossil Ridge Park approximately 1.5 miles east of I-405 and 1 mile south of US-101 (iNaturalist, 2024o).

Nevin's Barberry

Nevin's barberry (*Berberis nevinii*) is a shrub endemic to California that is known to occur within the Project Study Area. This species is CRPR 1B.1 (rare, threatened, or endangered in California and elsewhere) that is federally and state endangered. It can occur on sandy or gravelly soils in multiple habitats (chaparral, cismontane woodland, coastal scrub, and riparian scrub) below 2,700 feet. It flowers between March and May. Planted and natural populations are confused since it is often used in restoration without adequate documentation and as landscaping. One record within the northern portion of the Project Study Area is likely ornamental due to its location in a landscaped yard (iNaturalist, 2024p). Two observations are present 0.75 mile east of the Project Study Area along the Los Angeles River (iNaturalist, 2024p).

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) is a perennial herb that is endemic to California and is a CRPR 1B.2. This species has moderate potential to occur within the Project Study Area. This species has moderate potential to occur within the RSA and grows in shaded foothill canyons in Southern California, primarily in the Transverse Range region. It tends to grow on rocky slopes and open areas at elevations from 0 to 5,900 feet and typically blooms from March to June. Suitable habitat is present within the Project Study Area and a 2023 detection is present approximately 2.5 miles northeast of the Project Study Area at the Hansen Dam Golf Course (iNaturalist, 2024q).

Sonoran Maiden Fern

Sonoran maiden fern (*Pelazoneuron puberulum* var. *sonorense*) is a perennial, rhizomatous fern with high potential to occur within the Project Study Area. In 2010, six plants were observed on wet, moderately deep soil on Rustic Creek It occurs in canyons, especially along seeps and streams, and in meadows in California, Arizona, and southern Mexico. This species can be found between 165 and 2,000 feet in elevation, sometimes on calcareous substrates. A 2010 observation of 6 plants in Rustic Creek in Will Rogers State Historic Park was approximately 0.5 mile west of the Project Study Area (CDFW, 2023a).

Davidson's Bushmallow

Davidson's bushmallow (*Malacothamnus davidsonii*), a CRPR 1B.2, is an endemic shrub to California that is known to occur in the Project Study Area. An observation from 2021 is located 0.25 mile west of the RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021). This species typically grows on slopes in chaparral, oak woodland, and other habitats and is known from three California regions: the southern San Francisco Bay Area, the Santa Lucia Mountains in Monterey County, and the Transverse Ranges in Los Angeles County, including the San Gabriel Mountains and the eastern San Fernando Valley (CNPS, 2024).

Chaparral Nolina

Chaparral nolina (*Nolina cismontana*) is a CRPR 1B.2 shrub native to California; it was observed within the Project Study Area in 2020 at Deervale-Stone Canyon (iNaturalist, 2024u). This species occurs in coastal sage scrub and open chaparral habitats in foothills from Ventura County south to San Diego County. This species typically blooms from May to June. Suitable habitat for chaparral nolina is present within the Project Study Area, mainly in the central portion of the Project Study Area within the Santa Monica Mountains.

Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 perennial evergreen shrub species native to the South Coast, Peninsular Ranges and San Jacinto Mountains of California. This species occurs in coastal sage scrub and chaparral habitats with sandy, clay or loam soils between 50 and 1,300 feet. Recent observations include one within the Project Study Area 0.5 mile east of UCLA's campus (iNaturalist, 2024v) and a second occurrence less than 2 miles southeast of the Project Study Area in Kenneth Hahn State Recreation Area (CDFW, 2023a). The former is likely to be a landscaped plant due to its location in a yard; the latter is described as a multi-stemmed, wind-cropped, very old individual with other chapparal relic species present.

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is a CRPR 1B.2 perennial rhizomatous herb that is an obligate wetland species endemic to California. This species inhabits ditches, ponds, marshes, and swamps with shallow freshwater and is found between 0 and 2,135 feet in elevation. Sanford's arrowhead blooms between March and October. Two recent occurrences are within the Project Study Area: in the Los Angeles River where it is free flowing within the Sepulveda Basin in the north (CDFW, 2023a) and within a private landowner property near Holmby Park in the south (east of UCLA campus) (iNaturalist, 2024w).

5.1.5.6 Jurisdictional Resources

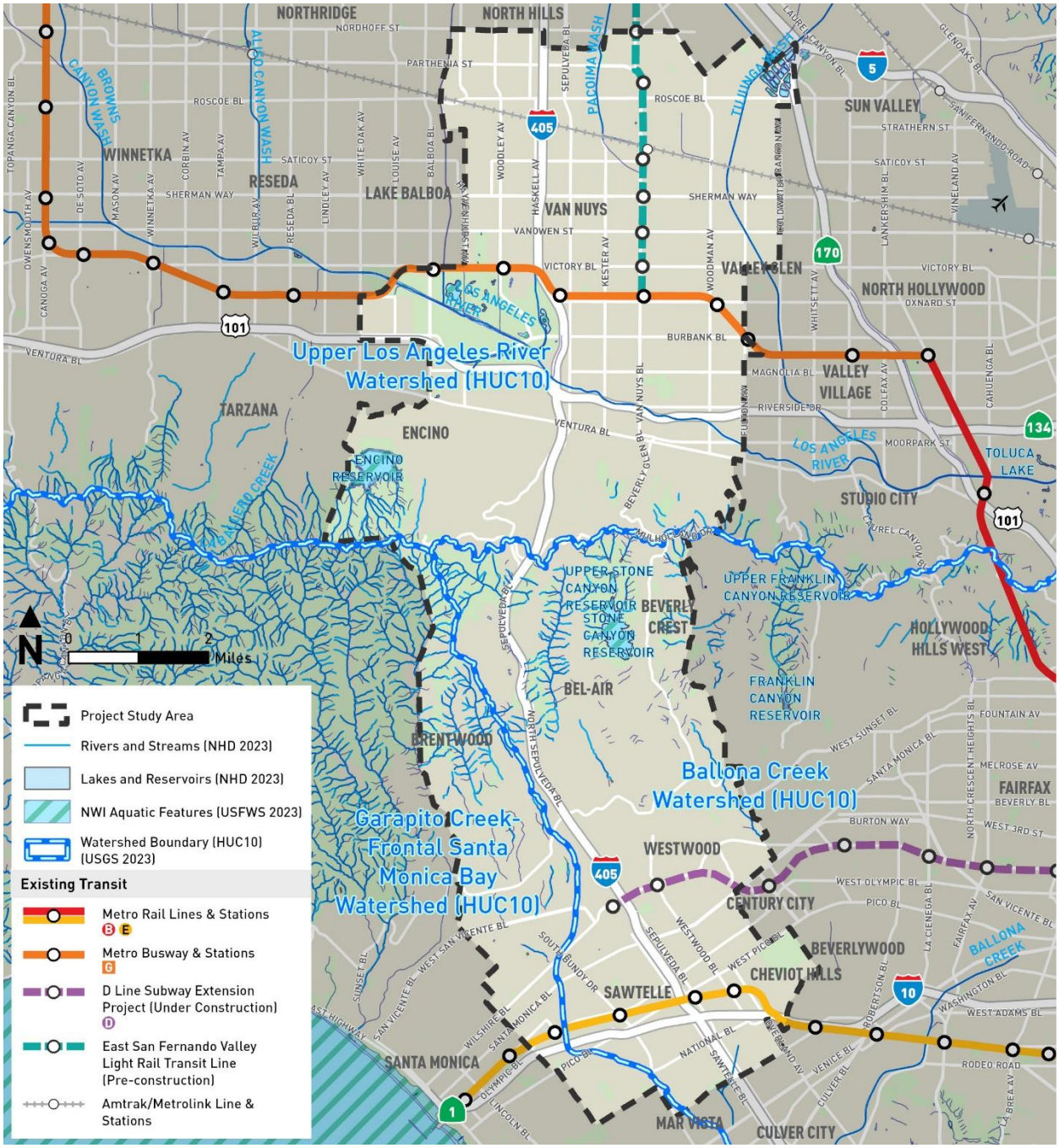
An online review of the National Hydrography Dataset (NHD) (USGS, 2023) and National Wetlands Inventory (NWI) (USFWS, 2023a) indicates the presence of mapped aquatic features within the Project Study Area. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels (Figure 5-3). Named aquatic resources within the Project Study Area include the Los Angeles River, Pacoima Wash, Encino Creek, and the Sepulveda Channel.

Upper Los Angeles River Watershed

The Upper Los Angeles River Watershed is located is the northwest portion of Los Angeles County and covers an area of over 613 square miles. This watershed includes the San Fernando Valley and portions of the San Gabriel and Santa Susana Mountains. The six major tributaries along the river include Tujunga Wash, Burbank Western Storm Drain, Verdugo Wash, Arroyo Secco, Rio Hondo, and Compton Creek. The primary source of input into the Los Angeles River watershed is wet weather runoff originating from direct precipitation, and dry weather inputs from urban runoff, and groundwater upwelling (LADPW, 2022).

Ground elevations range from 10,000 feet in the San Gabriel Mountains approximately 15 miles east of the RSA, to mean sea level at the mouth of the Los Angeles River approximately 22 miles south of the RSA. The majority of the coastal plain is less than 1,000 feet in elevation (GLAC, 2014), while the upper portion of the watershed is covered by forest and open space. The majority of land in the Upper Los Angeles River Watershed is developed with urban uses, including the portion of the river that traverses the RSA (LA County, 2023b).

Figure 5-3. National Hydrography Dataset and National Wetlands Inventory Aquatic Features



Source: USFWS, 2023a, 2023e

The northern portion of the Project Study Area crosses the Los Angeles River in Reach 5, where the river flows west to east, at the base of the Santa Monica Mountains in the San Fernando Valley. Reach 5 of the Los Angeles River runs through low density residential neighborhoods, the Sepulveda Basin, other commercial developed areas, and under I-405, Sepulveda Boulevard, and Van Nuys Boulevard.

Topography throughout the coastal plain area of Upper Los Angeles River Watershed is generally defined by gradually sloping land from the foothills of the San Gabriel Mountains to the Pacific Ocean.

Ballona Creek Watershed

Ballona Creek consists of a 9-mile-long flood protection channel that drains the Los Angeles Basin south of the Project Study Area. The Ballona Creek Watershed covers approximately 130 square miles located in the western portion of the Los Angeles Basin and is made up by the Culver City, Wilshire, and Hollywood sub-watersheds. The headwaters of the watershed are located in the Santa Monica Mountains, including a portion in the Project Study Area, and Baldwin Hills to the southeast of the Project Study Area. Most of the Ballona Creek drainage network consists of storm drains, underground culverts, and open concrete channels. However, Ballona Creek does not traverse the Project Study Area. Ballona Creek is an open channel between Venice Boulevard and Pickford Street and its confluence with Santa Monica Bay (a length of approximately 9 miles) is approximately 4 miles south of the Project Study Area. A few natural channels remain in the Santa Monica Mountains and Baldwin Hills. The Sepulveda Channel, which is mostly channelized and underground within the Project Study Area, runs along I-405 and continues to the south outside of the Project Study Area, is a major tributary to the Ballona Creek Watershed.

Riparian Habitats

Although not mapped in the NWI, riparian habitats may be present along many of the jurisdictional features identified in the NWI database. Riparian habitats fall under CDFW jurisdiction, which generally extends to the outer limits of riparian habitats occurring around aquatic features. Such habitats provide valuable buffers around aquatic features and specific habitat requirements for many plant and wildlife species, including many of the special-status species identified above.

5.1.5.7 Other Protected or Managed Biological Resources

This section provides an overview of other protected or managed biological resources that may occur within the Project Study Area.

USFWS Critical Habitat

Critical habitat is designated by USFWS for threatened or endangered species listed under the ESA; these areas are considered essential for species conservation (USFWS, 2024b). Critical habitat provides protection to locations necessary for life processes and reproduction where individuals and populations can thrive in habitat that is protected from disturbances. Specifically, it provides cover, shelter, food, water, light, minerals, and other nutritional or physiological requirements for survival of the species, along with sites for breeding and rearing offspring (USFWS, 2024b). Areas currently unoccupied may be included in critical habitat boundaries if it would be needed for species recovery (USFWS, 2024b).

No USFWS-designated critical habitat coincides with the Project Study Area. The nearest critical habitat for plant species listed under the federal ESA is for Braunton's milk-vetch; this unit is located approximately 4 miles west of the Project Study Area in Topanga State Park. The nearest critical habitat for wildlife includes: western snowy plover (*Charadrius nivosus nivosus*) located approximately 3 miles west of the Project Study Area along the coastline in the City of Santa Monica, southwestern willow flycatcher (*Empidonax extimus*) located approximately 5 miles northeast of the Project Study Area near

Hansen Dam in the Valley, Santa Ana sucker (*Catostomus santaanae*) located approximately 5 miles northeast of the Project Study Area near Hansen Dam in the Valley, and tidewater goby (*Eucyclogobius newberryi*) located approximately 7 miles west of the Project Study Area along Topanga Creek in the Santa Monica Mountains.

Santa Monica Mountains National Recreation Area

The majority of SMMNRA is located in large core areas west of the Project Study Area, which has large tracts of connected habitat. SMMNRA land is patchy within the eastern end of the Santa Monica Mountains, where the Project is located. West of I-405, within the Project Study Area, SMMNRA includes conserved lands (Mission Canyon Open Space, Hilton Open Space) and Mountaingate Conservation Easement. East of the I-405 within the Project Study Area, SMMNRA consists of a corridor along Mulholland Drive (Mullholland Scenic Parkway and Corridor) including Fossil Ridge Park. Spatial representation of SMMNRA with the Project Study Area is presented in the No Project Alternative, Figure 4-4. The SMMNRA intersects the middle of the Project Study Area before continuing eastward along the Mulholland Scenic Parkway and Corridor (Figure 5-4). Within the Project Study Area, SMMNRA constitutes 3,500 acres, of which approximately 82 percent (2862.1 acres) are non-developed areas (i.e., not urban) which would have native vegetation present and could constitute natural areas. Resources provided by SMMNRA within these 3,500 acres include scenic vistas such as Johnson Overlook and Stone Canyon Overlook, nature and wildlife viewing throughout the Project Study Area, patches of wilderness used by wildlife, and hiking trails including Getty View Trail, Tiger Tail Trail, and Rioridan Trail west of I-405 and Davana Road Lookout Trail to the east.

Significant Ecological Areas

One Los Angeles County-designated SEA, the Santa Monica Mountains SEA, intercepts 761.1 acres of the Project Study Area in the central part along the western boundary (Figure 5-4); the SEA falls mostly within the larger SMMNRA. The overlap with the Project Study Area is approximately 1.5 miles in length from north to south and 1 mile wide from west to east and includes the Encino Reservoir.

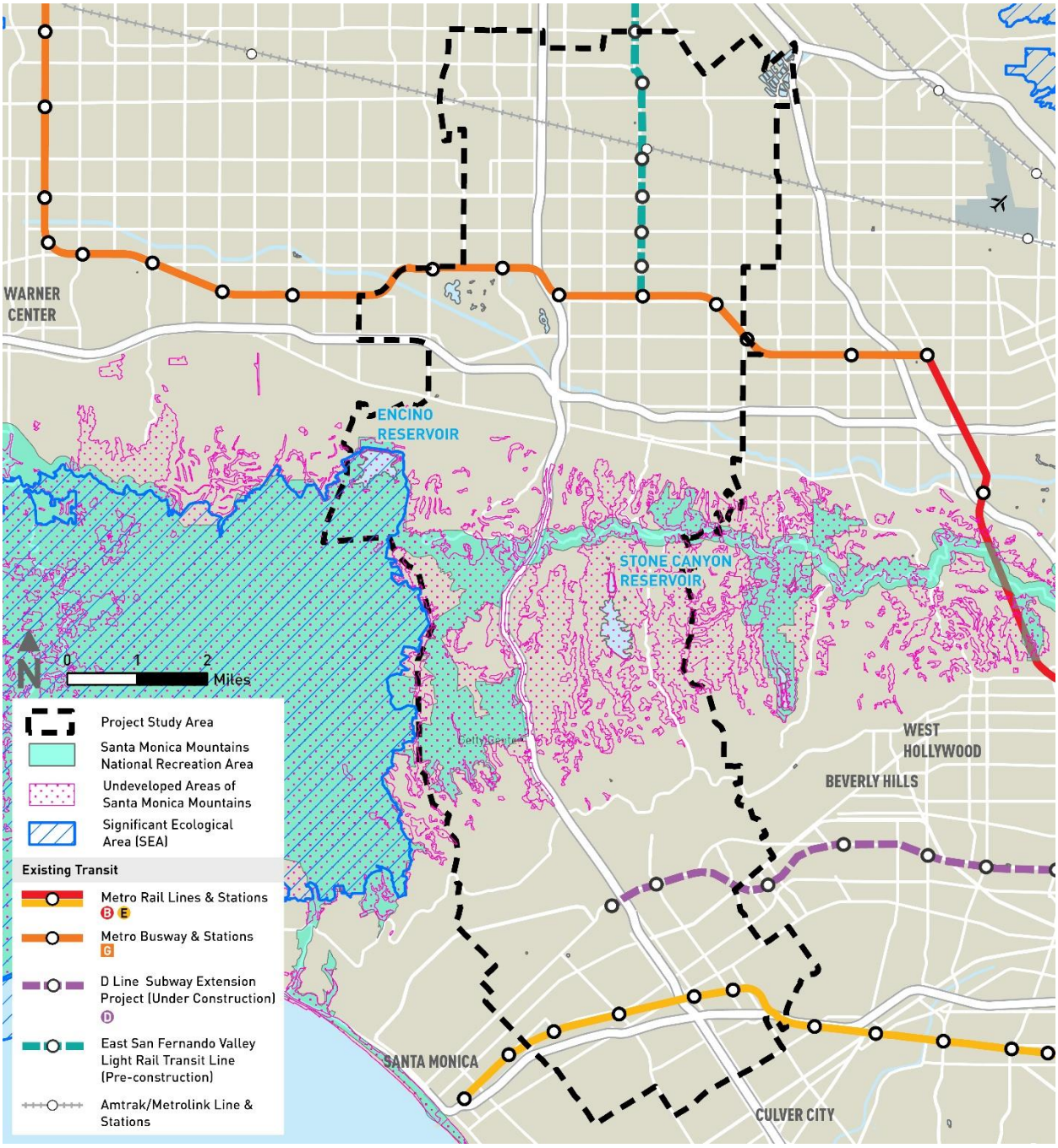
The SEA is approximately 99,431 acres and covers most of the Santa Monica Range to the west. This area is ecologically important for wildlife movement between Malibu Creek State Park to Simi Hills, Topanga State Park, and Mugu State Park. The SEA is home to numerous special-status species including but not limited to Braunton's milk-vetch, Santa Monica dudleya, Southern California steelhead trout, tidewater goby, western yellow-billed cuckoo, and bald eagle. The Santa Monica Mountains SEA meets the criterion for designation including providing core habitat for federally endangered plants and animals. Several regions which are particularly diverse (Upper La Sierra Canyon, Malibu Lagoon and Malibu Canyon), provide a vital migratory bird refuge (Malibu Lagoon), or act as a major drainage and support a wealthy riparian community (Zuma Canyon) are present within the SEA outside of the Project Study Area (LA County Planning, 2000). When the area was evaluated in 2000 for inclusion in the SEA program, the habitat surrounding the Encino Reservoir was considered to be the best undisturbed stand of inland chaparral remaining on the inland slope of the Santa Monica Mountains.

The No Project alternative does not include work activities; therefore, there are no anticipated direct or indirect impacts to the portion of the Project Study Area that is within the Santa Monica Mountains SEA.

Natural Community Conservation Plan/Habitat Conservation Plan Areas

The Project Study Area is not located within the boundary of an adopted HCP, NCCP, or other approved local, regional, or state HCP. Therefore, there is no further discussion of NCCPs or HCPs in this document.

Figure 5-4. Los Angeles County Significant Ecological Areas, Undeveloped Areas within the Santa Monica Mountains, and Santa Monica Mountains National Recreation Area



Source: LA County Planning, 2009; NPF, 2021

5.2 Impact Evaluation

5.2.1 Impact BIO-1: Would the project 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 US Fish and Wildlife Service?

5.2.1.1 Operational Impacts

Operational impacts from the Project would not occur under the No Project Alternative since the Project alternatives would not be constructed.

Within the Project Study Area, the only foreseeable transit improvement under the No Project Alternative would include changes to Metro Line 761. Although the route would continue to operate on existing streets and highways, special-status birds (including those protected by the MBTA) and special-status bats listed in Table 4-2 could potentially be impacted during operations of the improved Metro Line 761 when trees and/or shrubs located along the route would require routine maintenance trimming. Maintenance activities to vegetation on streets along the bus route is not under the purview of Metro. Maintenance at the stations, which is Metro's responsibility, would primarily occur within developed or paved areas. Therefore, operation of the improved Metro Line 761 is anticipated to result in less than significant impacts to special-status species from tree trimming. No other special-status species are anticipated to have operational impacts with changes to the route for Metro Line 761. Operational impacts to special-status species associated with Metro Line 761 would be addressed in project-specific environmental documentation.

5.2.1.2 Construction Impacts

Construction impacts from the Project would not occur under the No Project Alternative. Changes to the Metro Line 761 would require minimal or no construction activities, as the existing Metro bus line would simply be rerouted to between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station. These potential termini already include transit infrastructure supporting bus feeder lines and would not require construction of new facilities to support the rerouted bus service. Minor bus stop modifications along the Metro Line 761 may be required; however, construction activities associated with these improvements would consist of minimal or no ground disturbance within existing sidewalks and street ROW. It is not anticipated that special-status species within the Project Study Area would be impacted since construction activities would be confined to areas of existing pavement. Impacts to special-status species associated with No Project Alternative are anticipated to be less than significant during construction.

5.2.2 Impact BIO-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, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

5.2.2.1 Operational Impacts

Operational impacts from the Project would not occur under the No Project Alternative since the project alternatives would not be constructed.

Within the Project Study Area, the only foreseeable transit improvement under the No Project Alternative would include changes to the Metro Line 761. Changes to the bus route would have no potential to affect riparian habitat or sensitive natural communities as the improved route would continue to operate on existing streets and highways. The No Project Alternative would have no operational impacts to riparian or sensitive natural communities.

5.2.2.2 Construction Impacts

Construction impacts from the Project would not occur under the No Project Alternative. Changes to the Metro Line 761 would require minimal or no construction activities, as the existing Metro bus line would simply be rerouted to between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station. These potential termini already include transit infrastructure supporting bus feeder lines and would not require construction of new facilities to support the rerouted bus service. Minor bus stop modifications along the Metro Line 761 may be required; however, construction activities associated with these improvements would consist of minimal or no ground disturbance within existing sidewalks and street ROW. It is not anticipated that riparian or sensitive natural communities within the Project Study Area would be impacted by such construction activities. Impacts to riparian or sensitive natural communities associated with No Project Alternative would be less than significant during construction.

5.2.3 Impact BIO-3: Would the project 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?

5.2.3.1 Operational Impacts

Operational impacts from the Project would not occur under the No Project Alternative since the project alternatives would not be constructed.

Within the Project Study Area, the only foreseeable transit improvement under the No Project Alternative would include changes to the Metro Line 761. Changes to the bus route would have no potential to affect state or federally protected wetlands as the improved route would continue to operate on existing streets and highways. The No Project Alternative would have no operational impacts to state or federally protected wetlands. Similarly, no operational impacts to non-wetland waters under the jurisdiction of the Regional Water Quality Control Board (RWQCB) or CDFW would occur under the No Project Alternative.

5.2.3.2 Construction Impacts

Construction impacts from the Project would not occur under the No Project Alternative. Changes to the Metro Line 761 would require minimal or no construction activities, as the existing Metro bus line would simply be rerouted to between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station. These potential termini already include transit infrastructure supporting bus feeder lines and would not require construction of new facilities to support the rerouted bus service. Minor bus stop modifications along the Metro Line 761 may be required; however, construction activities associated with these improvements would consist of minimal or no ground disturbance within existing sidewalks and street ROW. It is not anticipated that state or federally protected wetlands or non-wetland waters under the jurisdictional of RWQCB or CDFW within the Project Study Area would be impacted by such construction activities. Impacts to state or federally protected wetlands associated with No Project Alternative would be less than significant during construction.

5.2.4 Impact BIO-4: Would the project 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?

Within the Project Study Area, the Santa Monica Mountains including SMMNRA represent a regional connectivity corridor with respect to habitat patches. Local wildlife movement is facilitated through use of development and infrastructure (including city streets, abandoned lots, and private backyards in highly urbanized areas), remnants of riparian habitat, underpasses, and patches of habitat. Habitat for nesting and roosting bats and birds is present in the form of natural vegetation such as trees and infrastructure such as buildings and bridges.

5.2.4.1 Operational Impacts

Operational impacts from the Project would not occur under the No Project Alternative since the project alternatives would not be constructed.

Within the Project Study Area, the only foreseeable transit improvement under the No Project Alternative would include changes to Metro Line 761. Since the route would continue to operate on existing streets and highways already in use with vehicular traffic, no impacts are anticipated to regional wildlife movement corridors or wildlife nursery sites; changes to the bus route are anticipated to less than significantly impact local wildlife movement corridors. Operational impacts to wildlife movement corridors and nursery sites associated with No Project Alternative would be addressed in project-specific environmental documentation.

5.2.4.2 Construction Impacts

Construction impacts from the Project would not occur under the No Project Alternative since no alternatives would be built. Changes to the Metro Line 761 would require minimal or no construction activities, as the existing Metro bus line would simply be rerouted to between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station. These potential termini already include transit infrastructure supporting bus feeder lines and would not require construction of new facilities to support the rerouted bus service. Minor bus stop modifications along the Metro Line 761 may be required; however, construction activities associated with these improvements would consist of minimal or no ground disturbance within existing sidewalks and street ROW. It is not anticipated that wildlife movement corridors or nursery sites within the Project Study Area would be impacted since construction activities would be limited to individual bus stops, i.e., discrete locations with small footprints. Impacts to wildlife movement corridors and nursery sites associated with No Project Alternative would be less than significant during construction.

5.2.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

5.2.5.1 Operational Impacts

Operations-related impacts from the Project would not occur under the No Project Alternative. Within the Project Study Area, the only foreseeable transit improvement under the No Project Alternative would include changes to Metro Line 761. Although the route would continue to operate on existing streets and highways, operation of the improved Metro Line 761 has potential to impact trees protected under tree preservation policies or ordinances when routine maintenance requires trimming of trees or other vegetation. Permitting requirements for protected trees and shrubs vary by location depending on land jurisdiction/ownership, tree/shrub species and size requirements of applicable ordinances or

policies. Operational impacts to protected trees and shrubs associated with changes to Metro Line 761 would be addressed in project-specific environmental documentation.

5.2.5.2 Construction Impacts

Construction impacts from the Project would not occur under the No Project Alternative. Changes to the Metro Line 761 would require minimal to no construction activities as the existing Metro bus line would simply be rerouted along existing streets and highways between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station. These potential termini already include transit infrastructure supporting bus feeder lines and would not require construction of new facilities to support the rerouted bus service. Minor bus stop modifications along the Metro Line 761 may be required; however, construction activities associated with these improvements would consist of minimal or no ground disturbance within existing sidewalks and street ROW. It is not anticipated that protected trees and shrubs within the Project Study Area would be impacted since construction activities would be confined to areas of existing pavement. Impacts to protected trees and shrubs associated of No Project Alternative would be less than significant during construction.

5.2.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.2.6.1 Operational Impacts

Operational impacts from the Project would not occur under the No Project Alternative since the project alternatives would not be constructed.

Within the Project Study Area, the only foreseeable transit improvement under the No Project Alternative would include changes to the Metro Line 761. Operation of the improved Metro Line 761 bus route will not conflict with the provisions of an adopted HCP, or natural community conservation plan, or other approved local, regional, or state conservation plans because currently no such plans exist within the Project Study Area.

5.2.6.2 Construction Impacts

Construction impacts from the Project would not occur under the No Project Alternative. Construction activities associated with changes to the Metro Line 761 will not conflict with the provisions of an adopted HCP, or natural community conservation plan, or other approved local, regional, or state conservation plans because currently no such plans exist within the Project Study Area.

5.3 Mitigation Measures

There are no mitigation measures proposed for the No Project Alternative.

5.3.1 Operational Impacts

No operational mitigation measures are proposed for No Project Alternative.

5.3.2 Construction Impacts

Construction impacts to biological resources are not anticipated from improvements to the Metro Line 761. Construction mitigation measures are not proposed for the No Project Alternative.

5.3.3 Impacts After Mitigation

Impacts to biological resources impacts related to the No Project Alternative are considered less than significant; no mitigation measures are proposed.

6 ALTERNATIVE 1

6.1 Alternative Description

Alternative 1 is an entirely aerial monorail alignment that would run along the Interstate 405 (I-405) corridor and would include eight aerial monorail transit (MRT) stations and a new electric bus route from the Los Angeles County Metropolitan Transportation Authority's (Metro) D Line Westwood/VA Hospital Station to the University of California, Los Angeles (UCLA) Gateway Plaza via Wilshire Boulevard and Westwood Boulevard. This alternative would provide transfers to five high-frequency fixed guideway transit and commuter rail lines, including the Metro E, Metro D, and Metro G Lines, the East San Fernando Valley Light Rail Transit Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 15.1 miles. The length of the bus route would be 1.5 miles.

The eight aerial MRT stations and three bus stops would be as follows:

1. Metro E Line Expo/Sepulveda Station (aerial)
2. Santa Monica Boulevard Station (aerial)
3. Wilshire Boulevard/Metro D Line Station (aerial)
    a. Wilshire Boulevard/VA Medical Center bus stop
    b. Westwood Village bus stop
    c. UCLA Gateway Plaza bus stop
4. Getty Center Station (aerial)
5. Ventura Boulevard/Sepulveda Boulevard Station (aerial)
6. Metro G Line Sepulveda Station (aerial)
7. Sherman Way Station (aerial)
8. Van Nuys Metrolink Station (aerial)

6.1.1 Operating Characteristics

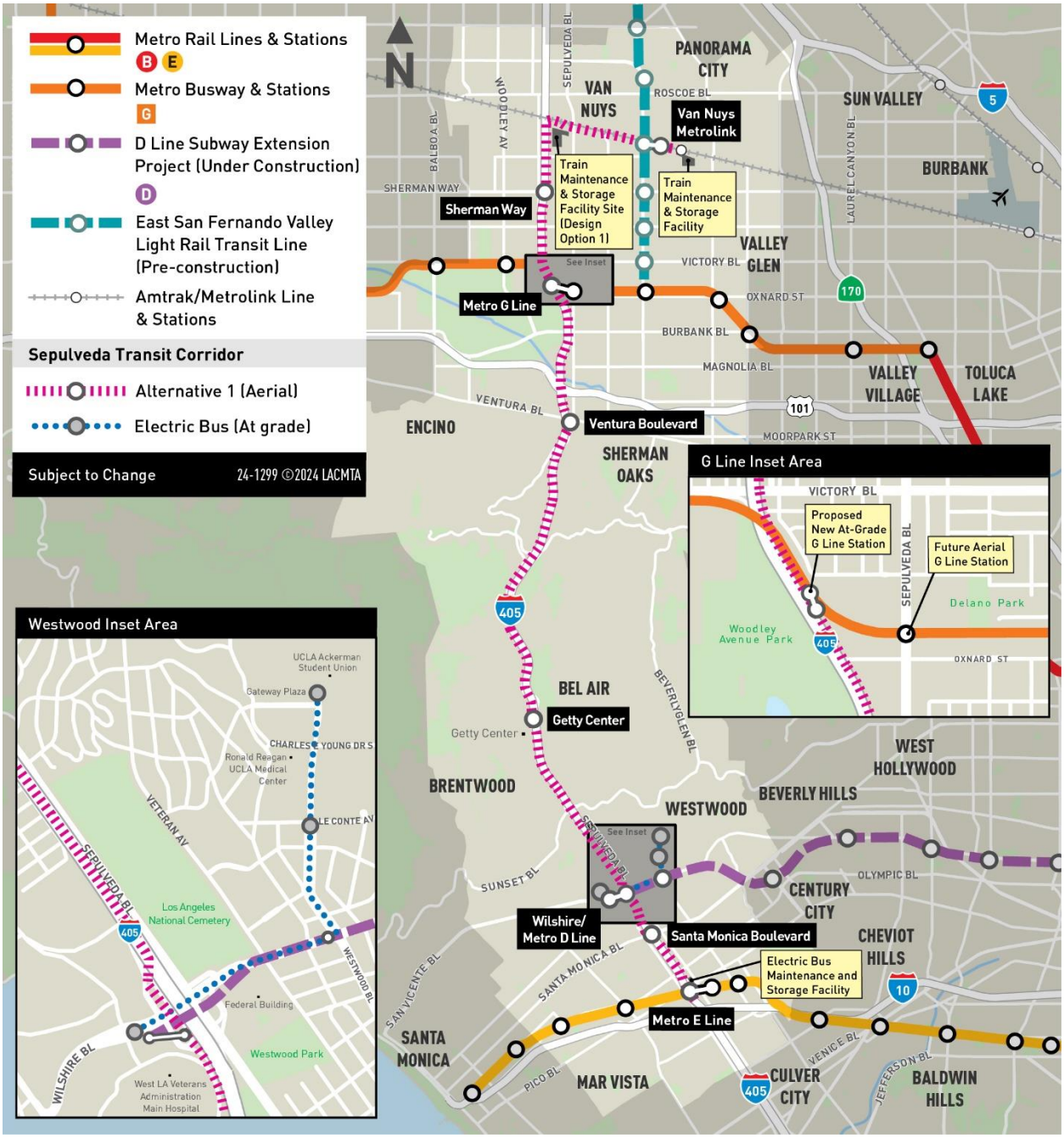
6.1.1.1 Alignment

As shown on Figure 6-1, from its southern terminus at the Metro E Line Expo/Sepulveda Station, the alignment of Alternative 1 would generally follow I-405 to the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor near the alignment's northern terminus at the Van Nuys Metrolink Station. At several points, the alignment would transition from one side of the freeway to the other or to the median. North of US-101, the alignment would be on the east side of the I-405 right-of-way and would then curve eastward along the south side of the LOSSAN rail corridor to Van Nuys Boulevard.

The proposed southern terminus station would be located west of the existing Metro E Line Expo/Sepulveda Station and east of I-405 between Pico Boulevard and Exposition Boulevard. Tail tracks would extend just south of the station adjacent to the eastbound Interstate 10 to northbound I-405 connector over Exposition Boulevard. North of the Metro E Line Expo/Sepulveda Station, a storage track would be located off the main alignment north of Pico Boulevard between I-405 and Cotner Avenue. The alignment would continue north along the east side of I-405 until just south of Santa Monica Boulevard, where a proposed station would be located between the I-405 northbound travel lanes and Cotner Avenue. The alignment would cross over the northbound and southbound freeway lanes north of Santa Monica Boulevard and travel along the west side of I-405, before reaching a proposed station within the

I-405 southbound-to-eastbound loop off-ramp to Wilshire Boulevard, near the Metro D Line Westwood/VA Hospital Station.

Figure 6-1. Alternative 1: Alignment



Source: LASRE, 2024; HTA, 2024

An electric bus would serve as a shuttle between the Wilshire Boulevard/Metro D Line Station and UCLA Gateway Plaza. From the Wilshire Boulevard/Metro D Line Station, the bus would travel east on Wilshire Boulevard and turn north on Westwood Boulevard to UCLA Gateway Plaza and make an intermediate stop in Westwood Village near the intersection of Le Conte Avenue and Westwood Boulevard.

North of Wilshire Boulevard, the monorail alignment would transition over the southbound I-405 freeway lanes to the freeway median, where it would continue north over the Sunset Boulevard overcrossing. The alignment would remain in the median to Getty Center Drive, where it would cross over the southbound freeway lanes to the west side of I-405, just north of the Getty Center Drive undercrossing, to the proposed Getty Center Station located north of the Getty Center tram station. The alignment would return to the median for a short distance before curving back to the west side of I-405, south of the Sepulveda Boulevard undercrossing north of the Getty Center Drive interchange. After crossing over Bel Air Crest Road and Skirball Center Drive, the alignment would return to the median and run under the Mulholland Drive Bridge, then continue north within the I-405 median to descend into the San Fernando Valley (Valley).

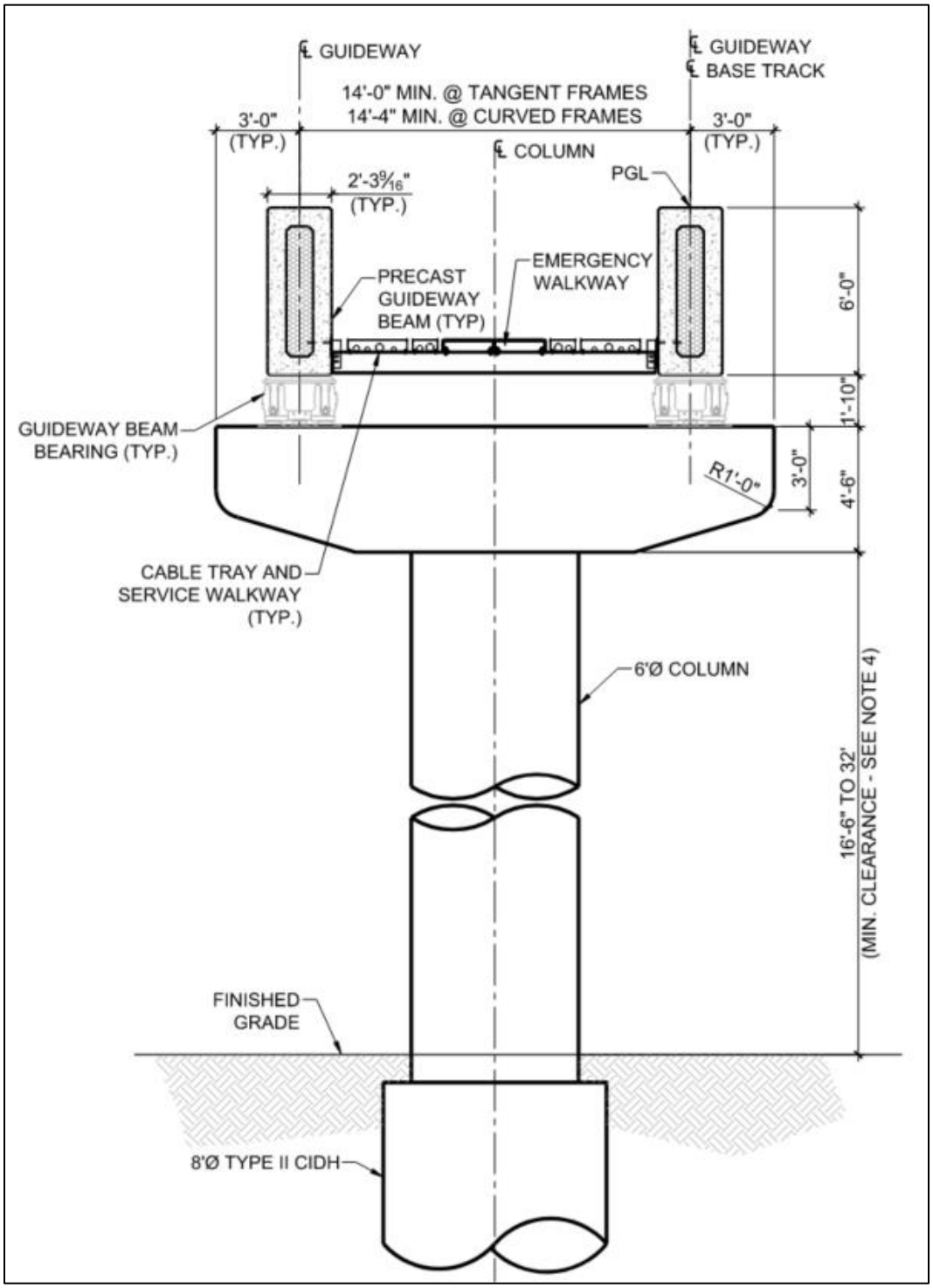
Near Greenleaf Street, the alignment would cross over the northbound freeway lanes and northbound on-ramps toward the proposed Ventura Boulevard Station on the east side of I-405. This station would be located above a transit plaza and would replace an existing segment of Dickens Street adjacent to I-405, just south of Ventura Boulevard. Immediately north of the Ventura Boulevard Station, the alignment would cross over northbound I-405 to the US-101 connector and continue north between the connector and the I-405 northbound travel lanes. The alignment would continue north along the east side of I-405—crossing over US-101 and the Los Angeles River—to a proposed station on the east side of I-405 near the Metro G Line Busway. A new at-grade station on the Metro G Line would be constructed for Alternative 1 adjacent to the proposed monorail station. These proposed stations are shown on the Metro G Line inset area on Figure 6-1.

The alignment would then continue north along the east side of I-405 to the proposed Sherman Way Station. The station would be located inside the I-405 northbound loop off-ramp to Sherman Way. North of the station, the alignment would continue along the eastern edge of I-405, then curve to the southeast parallel to the LOSSAN rail corridor. The alignment would remain aerial along Raymer Street east of Sepulveda Boulevard and cross over Van Nuys Boulevard to the proposed terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. Overhead utilities along Raymer Street would be undergrounded where they would conflict with the guideway or its supporting columns. Tail tracks would be located southeast of this terminus station.

6.1.1.2 Guideway Characteristics

The monorail alignment of Alternative 1 would be entirely aerial, utilizing straddle-beam monorail technology, which allows the monorail vehicle to straddle a guide beam that both supports and guides the vehicle. Northbound and southbound trains would travel on parallel beams supported by either a single-column or a straddle-bent structure. Figure 6-2 shows a typical cross-section of the aerial monorail guideway.

Figure 6-2. Typical Monorail Guideway Cross-Section



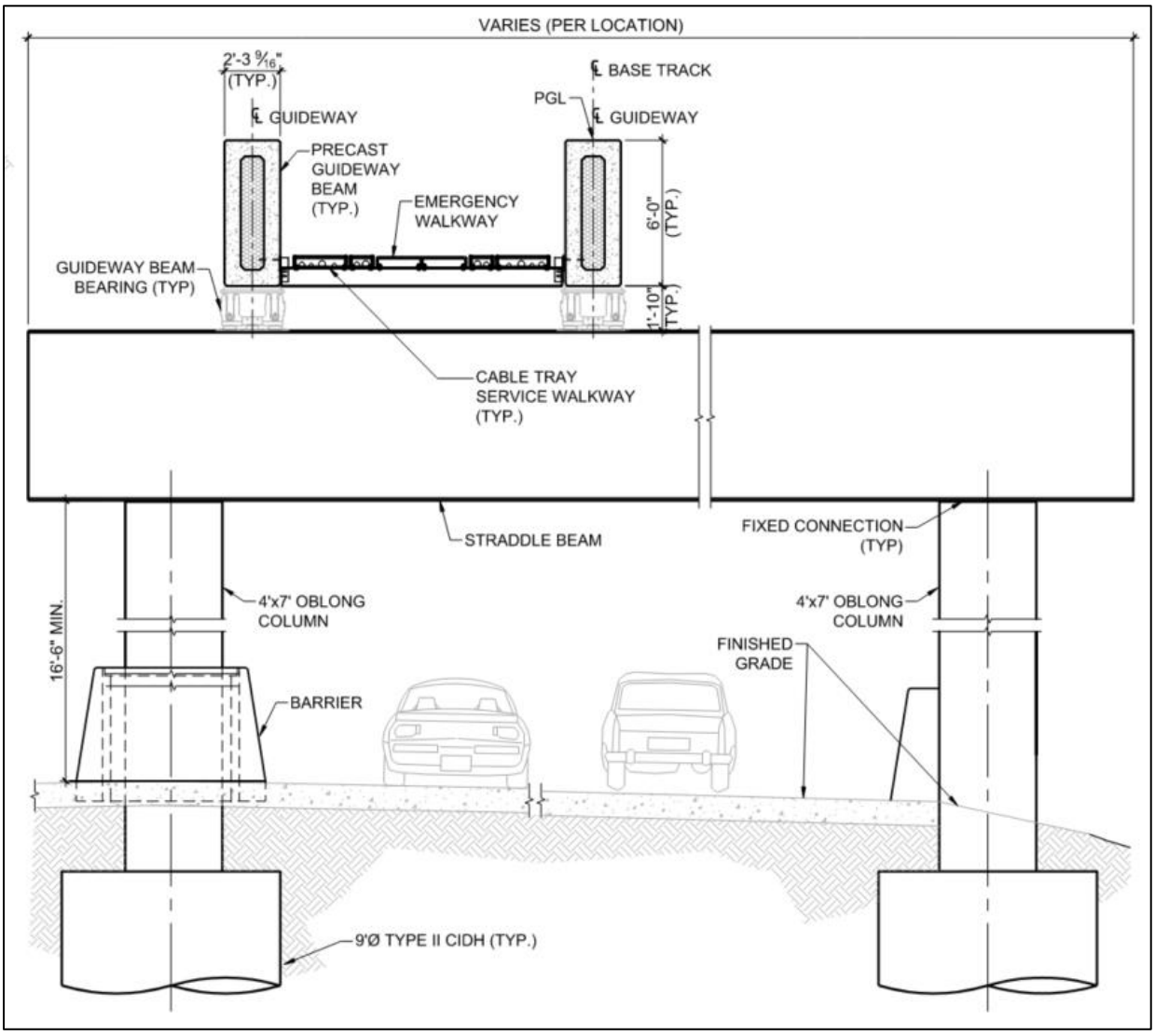
Source: LASRE, 2024

On a typical guideway section (i.e., not at a station), guide beams would rest on 20-foot-wide column caps (i.e., the structure connecting the columns and the guide beams), with typical spans (i.e., the

distance between columns) ranging from 70 to 190 feet. The bottom of the column caps would typically be between 16.5 feet and 32 feet above ground level.

Over certain segments of roadway and freeway facilities, a straddle-bent configuration, as shown on Figure 6-3, consisting of two concrete columns constructed outside of the underlying roadway would be used to support the guide beams and column cap. Typical spans for these structures would range between 65 and 70 feet. A minimum 16.5-foot clearance would be maintained between the underlying roadway and the bottom of the column caps.

Figure 6-3. Typical Monorail Straddle-Bent Cross-Section



Source: LASRE, 2024

Structural support columns would vary in size and arrangement by alignment location. Columns would be 6 feet in diameter along main alignment segments adjacent to I-405 and be 4 feet wide by 6 feet long in the I-405 median. Straddle-bent columns would be 4 feet wide by 7 feet long. At stations, six rows of dual 5-foot by- 8-foot columns would support the aerial guideway. Beam switch locations and long-span structures would also utilize different sized columns, with dual 5-foot columns supporting switch

locations and 9-foot- or 10-foot-diameter columns supporting long-span structures. Crash protection barriers would be used to protect the columns. Columns would have a cast-in-drilled-hole (CIDH) pile foundation extending 1 foot in diameter beyond the column width with varying depths for appropriate geotechnical considerations and structural support.

6.1.1.3 Vehicle Technology

Alternative 1 would utilize straddle-beam monorail technology, which allows the monorail vehicle to straddle a guide beam that both supports and guides the vehicle. Rubber tires would sit both atop and on each side of the guide beam to provide traction and guide the train. Trains would be automated and powered by power rails mounted to the guide beam, with planned peak-period headways of 166 seconds and off-peak-period headways of 5 minutes. Monorail trains could consist of up to eight cars. Alternative 1 would have a maximum operating speed of 56 miles per hour; actual operating speeds would depend on the design of the guideway and distance between stations.

Monorail train cars would be 10.5 feet wide, with two double doors on each side. End cars would be 46.1 feet long with a design capacity of 97 passengers, and intermediate cars would be 35.8 feet long and have a design capacity of 90 passengers.

The electric bus connecting the Wilshire Boulevard/Metro D Line Station, Westwood Village, and UCLA Gateway Plaza would be a battery electric, low-floor transit bus, either 40 or 60 feet in length. The buses would run with headways of 2 minutes during peak periods. The electric bus service would operate in existing mixed-flow travel lanes.

6.1.1.4 Stations

Alternative 1 would include eight aerial MRT stations with platforms approximately 320 feet long, elevated 50 feet to 75 feet above the existing ground level. The Metro E Line Expo/Sepulveda, Santa Monica Boulevard, Ventura Boulevard/Sepulveda Boulevard, Sherman Way, and Van Nuys Metrolink Stations would be center-platform stations where passengers would travel up to a shared platform that would serve both directions of travel. The Wilshire Boulevard/Metro D Line, Getty Center, and Metro G Line Sepulveda Stations would be side-platform stations where passengers would select and travel up to one of two station platforms, depending on their direction of travel. Each station, regardless of whether it has side or center platforms, would include a concourse level prior to reaching the train platforms. Each station would have a minimum of two elevators, two escalators, and one stairway from ground level to the concourse.

Station platforms would be approximately 320 feet long and would be supported by six rows of dual 5-foot by 8-foot columns. Station platforms would be covered, but not enclosed. Side-platform stations would be 61.5 feet wide to accommodate two 13-foot-wide station platforms with a 35.5-foot-wide intermediate gap for side-by-side trains. Center-platform stations would be 49 feet wide, with a 25-foot-wide center platform.

Monorail stations would include automatic, bi-parting fixed doors along the edges of station platforms. These doors would be integrated into the automatic train control system and would not open unless a train is stopped at the platform.

The following information describes each station, with relevant entrance, walkway, and transfer information. Bicycle parking would be provided at each station.

Metro E Line Expo/Sepulveda Station

- This aerial station would be located near the existing Metro E Line Expo/Sepulveda Station, just east of I-405 between Pico Boulevard and Exposition Boulevard.
- A transit plaza and station entrance would be located on the east side of the station.
- An off-street passenger pick-up/drop-off loop would be located south of Pico Boulevard west of Cotner Avenue.
- An elevated pedestrian walkway would connect the concourse level of the proposed station to the Metro E Line Expo/Sepulveda Station within the fare paid zone.
- Passengers would be able to park at the existing Metro E Line Expo/Sepulveda Station parking facility, which provides 260 parking spaces. No additional automobile parking would be provided at the proposed station.

Santa Monica Boulevard Station

- This aerial station would be located just south of Santa Monica Boulevard, between the I-405 northbound travel lanes and Cotner Avenue.
- Station entrances would be located on the southeast and southwest corners of Santa Monica Boulevard and Cotner Avenue. The entrance on the southeast corner of the intersection would be connected to the station concourse level via an elevated pedestrian walkway spanning Cotner Avenue.
- No dedicated station parking would be provided at this station.

Wilshire Boulevard/Metro D Line Station

- This aerial station would be located west of I-405 and south of Wilshire Boulevard within the southbound I-405 loop off-ramp to eastbound Wilshire Boulevard.
- An elevated pedestrian walkway spanning the adjacent I-405 ramps would connect the concourse level of the proposed station to a station plaza adjacent to the Metro D Line Westwood/VA Hospital Station within the fare paid zone. The station plaza would be the only entrance to the proposed station.
- The station plaza would include an electric bus stop and provide access to the Metro D Line Station via a new station entrance and concourse constructed using a knock-out panel provided in the Metro D Line Station.
- The passenger pick-up/drop-off facility at the Metro D Line Station would be reconfigured, maintaining the original capacity.
- No dedicated station parking would be provided at this station.

Getty Center Station

- This aerial station would be located on the west side of I-405 near the Getty Center, approximately 1,000 feet north of the Getty Center tram station.
- An elevated pedestrian walkway would connect the concourse level of the proposed station to the Getty Center tram station. The proposed connection would occur outside the fare paid zone.
- The pedestrian walkway would provide the only entrance to the proposed station.

- No dedicated station parking would be provided at this station.

Ventura Boulevard/Sepulveda Boulevard Station

- This aerial station would be located east of I-405, just south of Ventura Boulevard.
- A transit plaza, including two station entrances, would be located on the east side of the station. The plaza would require the closure of a 0.1-mile segment of Dickens Street between Sepulveda Boulevard and Ventura Boulevard, with a passenger pick-up/drop-off loop and bus stops provided south of the station, off Sepulveda Boulevard.
- No dedicated station parking would be provided at this station.

Metro G Line Sepulveda Station

- This aerial station would be located near the Metro G Line Sepulveda Station, between I-405 and the Metro G Line Busway.
- Entrances to the MRT station would be located on both sides of a proposed new Metro G Line bus rapid transit (BRT) station.
- An elevated pedestrian walkway would connect the concourse level of the proposed station to the proposed new Metro G Line BRT station outside of the fare paid zone.
- Passengers would be able to park at the existing Metro G Line Sepulveda Station parking facility, which has a capacity of 1,205 parking spaces. Currently, only 260 parking spaces are used for transit parking. No additional automobile parking would be provided at the proposed station.

Sherman Way Station

- This aerial station would be located inside the I-405 northbound loop off-ramp to Sherman Way.
- A station entrance would be located on the north side of Sherman Way.
- An on-street passenger pick-up/drop-off area would be provided on the north side of Sherman Way west of Firmament Avenue.
- No dedicated station parking would be provided at this station.

Van Nuys Metrolink Station

- This aerial station would be located on the east side of Van Nuys Boulevard, just south of the LOSSAN rail corridor, incorporating the site of the current Amtrak ticket office.
- A station entrance would be located on the east side of Van Nuys Boulevard just south of the LOSSAN rail corridor. A second entrance would be located north of the LOSSAN rail corridor with an elevated pedestrian walkway connecting to both the concourse level of the proposed station and the platform of the Van Nuys Metrolink/Amtrak Station.
- Existing Metrolink station parking would be reconfigured, maintaining approximately the same number of spaces, but 180 parking spaces would be relocated north of the LOSSAN rail corridor. Metrolink parking would not be available to Metro transit riders.

6.1.1.5 Station-to-Station Travel Times

Table 6-1 presents the station-to-station distance and travel times for Alternative 1. The travel times include both run time and dwell time. Dwell time is 30 seconds per station. Northbound and

southbound travel times vary slightly because of grade differentials and operational considerations at end-of-line stations.

Table 6-1. Alternative 1: Station-to-Station Travel Times and Station Dwell Times

From Station	To Station	Distance (miles)	Northbound Station-to-Station Travel Time (seconds)	Southbound Station-to-Station Travel Time (seconds)	Dwell Time (seconds)
Metro E Line Station					*30*
Metro E Line	Santa Monica Boulevard	0.9	122	98	—
Santa Monica Boulevard Station					*30*
Santa Monica Boulevard	Wilshire/Metro D Line	0.7	99	104	—
Wilshire/Metro D Line Station					*30*
Wilshire/Metro D Line	Getty Center	2.9	263	266	—
Getty Center Station					*30*
Getty Center	Ventura Boulevard	4.7	419	418	—
Ventura Boulevard Station					*30*
Ventura Boulevard	Metro G Line	2.0	177	184	—
Metro G Line Station					*30*
Metro G Line	Sherman Way	1.5	135	134	—
Sherman Way Station					*30*
Sherman Way	Van Nuys Metrolink	2.4	284	284	—
Van Nuys Metrolink Station					*30*

Source: LASRE, 2024

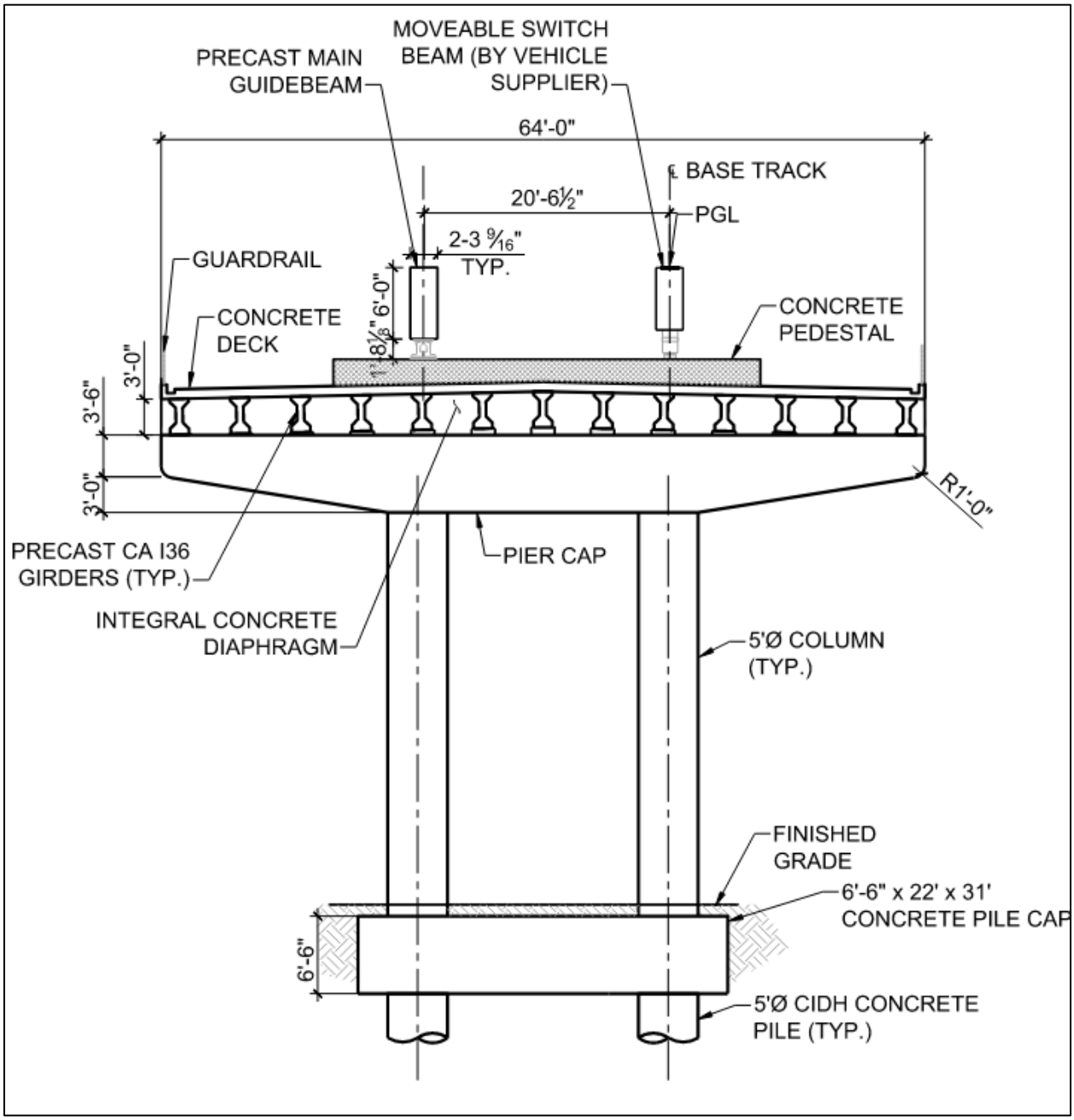
— = no data

6.1.1.6 Special Trackwork

Alternative 1 would include five pairs of beam switches to enable trains to cross over to the opposite beam. From south to north, the first pair of beam switches would be located just north of the Metro E Line Expo/Sepulveda Station. The second pair of beam switches would be located near the Wilshire Boulevard/Metro D Line Station on the north side of Wilshire Boulevard, within the Wilshire Boulevard westbound to I-405 southbound loop on-ramp. A third pair of beam switches would be located in the Sepulveda Pass just south of Mountaingate Drive and Sepulveda Boulevard. A fourth pair of beam switches would be located south of the Metro G Line Station between the I-405 northbound lanes and the Metro G Line Busway. The final pair would be located near the Van Nuys Metrolink Station.

At beam switch locations, the typical cross-section of the guideway would increase in column and column cap width. The column cap at these locations would be 64 feet wide, with dual 5-foot-diameter columns. Underground pile caps for additional structural support would also be required at beam switch locations. Figure 6-4 shows a typical cross-section of the monorail beam switch.

Figure 6-4. Typical Monorail Beam Switch Cross-Section



Source: LASRE, 2024

6.1.1.7 Monorail Maintenance and Storage Facility

MSF Base Design

In the maintenance and storage facility (MSF) Base Design for Alternative 1, the MSF would be located on City of Los Angeles Department of Water and Power (LADWP) property east of the Van Nuys Metrolink Station. The MSF Base Design site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. The site would be bounded by the LOSSAN rail corridor

to the north, Saticoy Street to the south, and property lines extending north of Tyrone and Hazeltine Avenues to the east and west, respectively.

Monorail trains would access the site from the main alignment's northern tail tracks at the northwest corner of the site. Trains would travel parallel to the LOSSAN rail corridor before curving southeast to maintenance facilities and storage tracks. The guideway would remain in an aerial configuration within the MSF Base Design, including within maintenance facilities.

The site would include the following facilities:

- Primary entrance with guard shack
- Primary maintenance building that would include administrative offices, an operations control center, and a maintenance shop and office
- Train car wash building
- Emergency generator
- Traction power substation (TPSS)
- Maintenance-of-way (MOW) building
- Parking area for employees

MSF Design Option 1

In the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the LOSSAN rail corridor. The MSF Design Option 1 site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. The site would be bounded by I-405 to the west, Stagg Street to the south, the LOSSAN rail corridor to the north, and Orion Avenue and Raymer Street to the east. The monorail guideway would travel along the northern edge of the site.

Monorail trains would access the site from the monorail guideway east of Sepulveda Boulevard, requiring additional property east of Sepulveda Boulevard and north of Raymer Street. From the northeast corner of the site, trains would travel parallel to the LOSSAN rail corridor before turning south to maintenance facilities and storage tracks parallel to I-405. The guideway would remain in an aerial configuration within the MSF Design Option 1, including within maintenance facilities.

The site would include the following facilities:

- Primary entrance with guard shack
- Primary maintenance building that would include administrative offices, an operations control center, and a maintenance shop and office
- Train car wash building
- Emergency generator
- TPSS
- MOW building
- Parking area for employees

Figure 6-5 shows the locations of the MSF Base Design and MSF Design Option 1 for Alternative 1.

Figure 6-5. Alternative 1: Maintenance and Storage Facility Options

Source: LASRE, 2024; HTA, 2024

6.1.1.8 Electric Bus Maintenance and Storage Facility

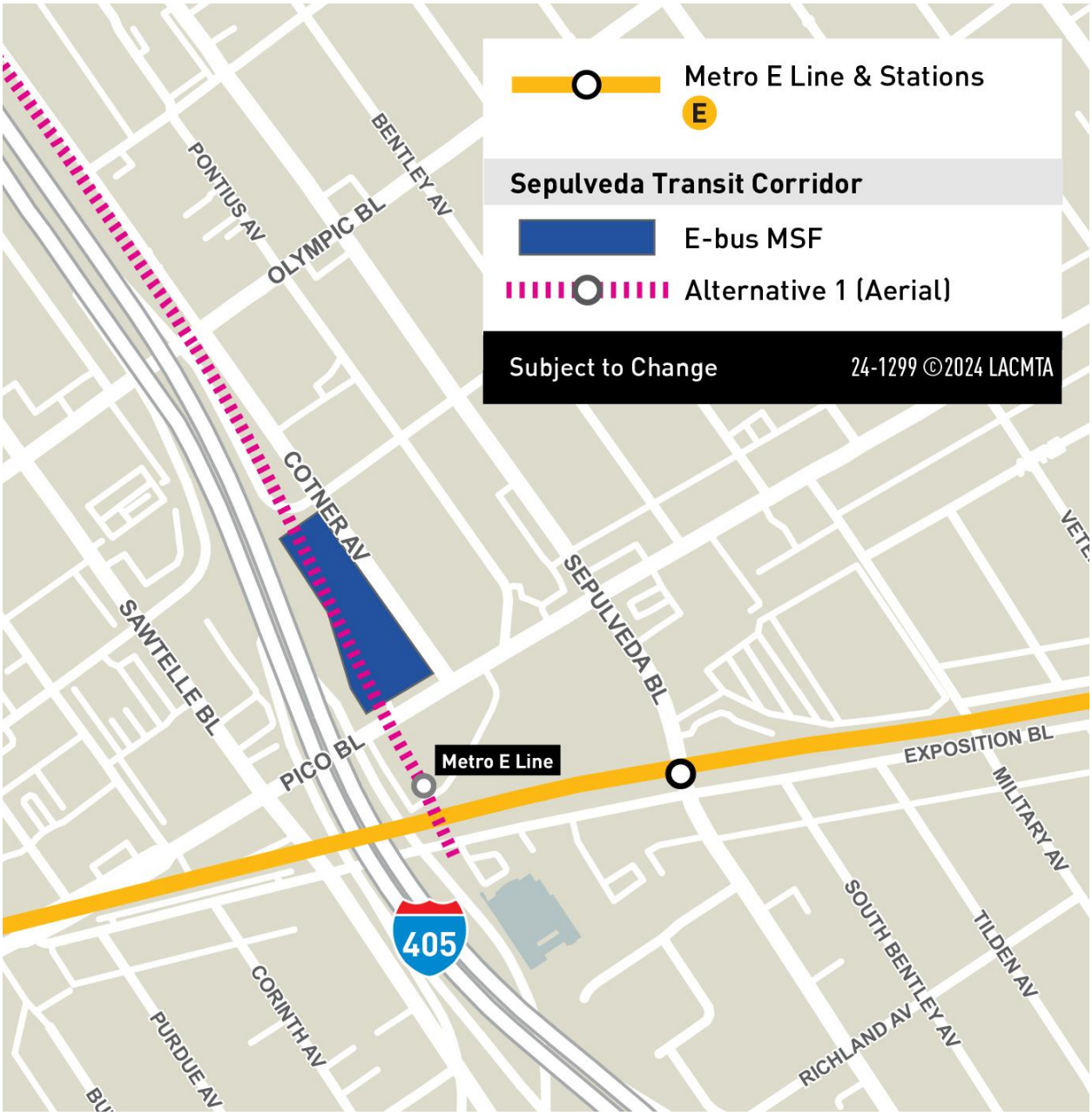
An electric bus MSF would be located on the northwest corner of Pico Boulevard and Cotner Avenue and would be designed to accommodate 14 electric buses. The site would be approximately 2 acres and would comprise six parcels bounded by Cotner Avenue to the east, I-405 to the west, Pico Boulevard to the south, and the I-405 northbound on-ramp to the north.

The site would include approximately 45,000 square feet of buildings and include the following facilities:

- Maintenance shop and bay
- Maintenance office
- Operations center
- Bus charging equipment
- Parts storeroom with service areas
- Parking area for employees

Figure 6-6 shows the location of the proposed electric bus MSF.

Figure 6-6. Alternative 1: Electric Bus Maintenance and Storage Facility



Source: LASRE, 2024; HTA, 2024

6.1.1.9 Traction Power Substations

TPSSs transform and convert high voltage alternating current supplied from power utility feeders into direct current suitable for transit operation. A TPSS on a site of approximately 8,000 square feet would be located approximately every 1 mile along the alignment. Table 6-2 lists the TPSS locations proposed for Alternative 1.

Figure 6-7 shows the TPSS locations along the Alternative 1 alignment.

Table 6-2. Alternative 1: Traction Power Substation Locations

TPSS No.	TPSS Location Description	Configuration
1	TPSS 1 would be located east of I-405, just south of Exposition Boulevard and the monorail guideway tail tracks.	At-grade
2	TPSS 2 would be located west of I-405, just north of Wilshire Boulevard, inside the Westbound Wilshire Boulevard to I-405 Southbound Loop On-Ramp.	At-grade
3	TPSS 3 would be located west of I-405, just north of Sunset Boulevard, inside the Church Lane to I-405 Southbound Loop On-Ramp.	At-grade
4	TPSS 4 would be located east of I-405 and Sepulveda Boulevard, just north of the Getty Center Station.	At-grade
5	TPSS 5 would be located west of I-405, just east of the intersection between Promontory Road and Sepulveda Boulevard.	At-grade
6	TPSS 6 would be located between I-405 and Sepulveda Boulevard, just north of the Skirball Center Drive Overpass.	At-grade
7	TPSS 7 would be located east of I-405, just south of Ventura Boulevard Station, between Sepulveda Boulevard and Dickens Street.	At-grade
8	TPSS 8 would be located east of I-405, just south of the Metro G Line Sepulveda Station.	At-grade
9	TPSS 9 would be located east of I-405, just east of the Sherman Way Station, inside the I-405 Northbound Loop Off-Ramp to Sherman Way westbound.	At-grade
10	TPSS 10 would be located east of I-405, at the southeast quadrant of the I-405 overcrossing with the LOSSAN rail corridor.	At-grade
11	TPSS 11 would be located east of I-405, at the southeast quadrant of the I-405 overcrossing with the LOSSAN rail corridor.	At-grade (within MSF Design Option)
12	TPSS 12 would be located between Van Nuys Boulevard and Raymer Street, south of the LOSSAN rail corridor.	At-grade
13	TPSS 13 would be located south of the LOSSAN rail corridor, between Tyrone Avenue and Hazeltine Avenue.	At-grade (within MSF Base Design)

Source: LASRE, 2024; HTA, 2024

Figure 6-7. Alternative 1: Traction Power Substation Locations

Source: LASRE, 2024; HTA, 2024

6.1.1.10 Roadway Configuration Changes

Table 6-3 lists the roadway changes necessary to accommodate the guideway of Alternative 1. Figure 6-8 shows the location of these roadway changes in the Sepulveda Transit Corridor Project (Project) Study Area, except for I-405 configuration changes, which would occur throughout the corridor.

Table 6-3. Alternative 1: Roadway Changes

Location	From	To	Description of Change
Cotner Avenue	Nebraska Avenue	Santa Monica Boulevard	Roadway realignment to accommodate aerial guideway columns and station access
Beloit Avenue	Massachusetts Avenue	Ohio Avenue	Roadway narrowing to accommodate aerial guideway columns
I-405 Southbound On-Ramp, Southbound Off-Ramp, and Northbound On-Ramp at Wilshire Boulevard	Wilshire Boulevard	I-405	Ramp realignment to accommodate aerial guideway columns and I-405 widening
Sunset Boulevard	Gunston Drive	I-405 Northbound Off-Ramp at Sunset Boulevard	Removal of direct eastbound to southbound on-ramp to accommodate aerial guideway columns and I-405 widening. Widening of Sunset Boulevard bridge with additional westbound lane
I-405 Southbound On-Ramp and Off-Ramp at Sunset Boulevard and North Church Lane	Sunset Boulevard	Not Applicable	Ramp realignment to accommodate aerial guideway columns and I-405 widening
I-405 Northbound On-Ramp and Off-Ramp at Sepulveda Boulevard near I-405 Exit 59	Sepulveda Boulevard near I-405 Northbound Exit 59	Sepulveda Boulevard / I-405 Undercrossing (near Getty Center)	Ramp realignment to accommodate aerial guideway columns and I-405 widening
Sepulveda Boulevard	I-405 Southbound Skirball Center Drive Ramps (north of Mountaingate Drive)	Skirball Center Drive	Roadway realignment into existing hillside to accommodate aerial guideway columns and I-405 widening
I-405 Northbound On-Ramp at Mulholland Drive	Mulholland Drive	Not Applicable	Roadway realignment into the existing hillside between the Mulholland Drive Bridge pier and abutment to accommodate aerial guideway columns and I-405 widening
Dickens Street	Sepulveda Boulevard	Ventura Boulevard	Vacation and permanent removal of street for Ventura Boulevard Station construction. Pick-up/drop-off area would be provided along Sepulveda Boulevard at the truncated Dickens Street
Sherman Way	Haskell Avenue	Firmament Avenue	Median improvements, passenger drop-off and pick-up areas, and bus pads within existing travel lanes
Raymer Street	Sepulveda Boulevard	Van Nuys Boulevard	Curb extensions and narrowing of roadway width to accommodate aerial guideway columns
I-405	Sunset Boulevard	Bel Terrace	I-405 widening to accommodate aerial guideway columns in the median

Location	From	To	Description of Change
I-405	Sepulveda Boulevard Northbound Off-Ramp (Getty Center Drive interchange)	Sepulveda Boulevard Northbound On-Ramp (Getty Center Drive interchange)	I-405 widening to accommodate aerial guideway columns in the median
I-405	Skirball Center Drive	I-405 Northbound On-Ramp at Mulholland Drive	I-405 widening to accommodate aerial guideway columns in the median

Source: LASRE, 2024; HTA, 2024

Figure 6-8. Alternative 1: Roadway Changes

Source: LASRE, 2024; HTA, 2024

In addition to the changes made to accommodate the guideway, as listed in Table 6-3, roadways and sidewalks near stations would be reconstructed, which would result in modifications to curb ramps and driveways.

6.1.1.11 Fire/Life Safety – Emergency Egress

Continuous emergency evacuation walkways would be provided along the guideway. The walkways would typically consist of structural steel frames anchored to the guideway beams to support non-slip

walkway panels. The walkways would be located between the two guideway beams for most of the alignment; however, where the beams split apart, such as entering center-platform stations, short portions of the walkway would be located on the outside of the beams.

6.1.2 Construction Activities

Construction activities for Alternative 1 would include constructing the aerial guideway and stations, widening I-405, and constructing ancillary facilities. Construction of the transit through substantial completion is expected to have a duration of 6½ years. Early works, such as site preparation, demolition, and utility relocation, could start in advance of construction of the transit facilities.

Aerial guideway construction would begin at the southern and northern ends of the alignment and connect in the middle. Constructing the guideway would require a combination of freeway and local street lane closures throughout the work limits to provide sufficient work area. The first stage of I-405 widening would include a narrowing of adjacent freeway lanes to a minimum width of 11 feet (which would eliminate shoulders) and placing K-rail on the outside edge of the travel lanes to create outside work areas. Within these outside work zones, retaining walls, drainage infrastructure, and outer pavement widenings would be constructed to allow for I-405 widening. The reconstruction of on- and off-ramps would be the final stage of I-405 widening.

A median work zone along I-405 for the length of the alignment would be required for erection of the guideway structure. In the median work zone, demolition of the existing median and drainage infrastructure would be followed by the installation of new K-rail and installation of guideway structural components, which would include full directional freeway closures when guideway beams must be transported into the median work areas during late-night hours. Additional night and weekend directional closures would be required for installation of long-span structures over I-405 travel lanes where the guideway would transition from the median.

Aerial station construction is anticipated to last the duration of construction activities for Alternative 1 and would include the following general sequence of construction:

- Site clearing
- Utility relocation
- Construction fencing and rough grading
- CIDH pile drilling and installation
- Elevator pit excavation
- Soil and material removal
- Pile cap and pier column construction
- Concourse level and platform level falsework for cast-in-place structural concrete
- Guideway beam installation
- Elevator and escalator installation
- Completion of remaining concrete elements such as pedestrian bridges
- Architectural finishes and mechanical, electrical, and plumbing installation

Alternative 1 would require construction of a concrete casting facility for columns and beams associated with the elevated guideway. A specific site has not been identified; however, it is expected that the facility would be located on industrially zoned land adjacent to a truck route in either the Antelope Valley or Riverside County. When a site is identified, the contractor would obtain all permits and approvals necessary from the relevant jurisdiction, the appropriate air quality management entity, and other regulatory entities.

TPSS construction would require additional lane closures. Large equipment including transformers, rectifiers, and switchgears would be delivered and installed through prefabricated modules where possible in at-grade TPSSs. The installation of transformers would require temporary lane closures on Exposition Boulevard, Beloit Avenue, Sepulveda Boulevard just north of Cashmere Street, and the I-405 northbound on-ramp at Burbank Boulevard.

Table 6-4 and Figure 6-9 show the potential construction staging areas for Alternative 1. Staging areas would provide the necessary space for the following activities:

- Contractors' equipment
- Receiving deliveries
- Storing materials
- Site offices
- Work zone for excavation
- Other construction activities (including parking and change facilities for workers, location of construction office trailers, storage, staging and delivery of construction materials and permanent plant equipment, and maintenance of construction equipment)

Table 6-4. Alternative 1: Construction Staging Locations

No.	Location Description
1	Public Storage between Pico Boulevard and Exposition Boulevard, east of I-405
2	South of Dowlen Drive and east of Greater LA Fisher House
3	At 1400 N Sepulveda Boulevard
4	At 1760 N Sepulveda Boulevard
5	East of I-405 and north of Mulholland Drive Bridge
6	Inside of I-405 Northbound to US-101 Northbound Loop Connector, south of US-101
7	ElectroRent Building south of Metro G Line Busway, east of I-405
8	Inside the I-405 Northbound Loop Off-Ramp at Victory Boulevard
9	Along Cabrito Road east of Van Nuys Boulevard

Source: LASRE, 2024; HTA, 2024

Figure 6-9. Alternative 1: Construction Staging Locations

Source: LASRE, 2024; HTA, 2024

6.2 Existing Conditions

6.2.1 General Characterization of the Resource Study Area

The northern and southern portions of the Resource Study Area (RSA) are comprised of highly developed and urbanized neighborhoods. An overview of the RSA is provided on Figure 6-10; detailed mapping of the RSA is shown in the vegetation community figures (Figure 6-13 through Figure 6-26). These urbanized areas contain limited biological resources generally restricted to parks and other undeveloped areas that contain predominantly non-native landscape vegetation; occasional patches of native vegetation are present, typically as plantings rather than naturally occurring vegetation. Habitat provided under these conditions is primarily suitable for species that can tolerate at least some level of urbanization and are acclimated to human influence including numerous bird species protected under the Migratory Bird Treaty Act (MBTA) and wildlife (e.g., raccoon, striped skunk, Virginia opossum, coyote). The Los Angeles River flows west to east through the Alternative 1 RSA within a concrete box channel that lacks riparian vegetation (Figure 6-18 and Appendix A).

I-405 is a major arterial freeway running north-south through the middle of the Project Study Area, connecting communities in the San Fernando Valley with the Los Angeles Basin through the Sepulveda Pass in the Santa Monica Mountains. The freeway serves as a barrier for wildlife movement within the Santa Monica Mountains, as roads in urban areas threaten wildlife by acting as barriers to movement through increased mortality, reduced habitat quality and connectivity, changes in behavior, and restrictions to genetic flow (Riley et al., 2014; Coffin, 2007; Riley et. Al, 2006).

The middle portion of the RSA includes the Santa Monica Mountains, which run east-west through the RSA. This area is less developed with steep slopes that are covered by remnant native chaparral habitats and non-native grasslands. Native habitat is interspersed with upscale single-family residences along the north-south–oriented roadways atop ridge lines and through canyons and valleys. Portions of the Santa Monica Mountains National Recreation Area (SMMNRA) are within the Santa Monica Mountains in the Alternative 1 RSA; the SMMNRA consists of consists of approximately 150,000 acres and provides habitats to more than 1,000 different plant and 500 wildlife species (National Park Conservation Association, 2023). For Alternative 1, 32.0 acres of the SMMNRA are within the RSA (Figure 6-28).

6.2.2 Elevations and Topography

Elevations ranges within the RSA from approximately 800 feet above mean sea level (amsl) at the northern end to 1,600 feet amsl in the middle, and approximately 160 feet amsl at the southern end of the RSA. The general topography of the RSA includes several, parallel, north-to-south–oriented inland valleys that run through the Santa Monica Mountains. The Santa Monica Mountains, including the Sepulveda Pass, are composed of rugged steep mountain terrain with narrow canyons that are located between two flat urbanized valleys.

Figure 6-10. Alternative 1: Resource Study Area

Source: HTA, 2024

6.2.3 Climate

Precipitation in Los Angeles County is derived from frontal low-pressure systems that originate over the Pacific Ocean and generally travel southeast into southern California. Precipitation normally occurs during the cooler months of the year from November through March and is infrequent during the summer months. As throughout southern California, rainfall in the Los Angeles River Watershed and the Ballona Creek Watershed alternates between wet and dry periods. The average annual precipitation in the RSA is approximately 13 to 18 inches. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the region. The RSA is located within a Mediterranean climate zone, characterized by dry, warm summers and mild, wet winters. The mean temperature range for the months of November through April is 41 degrees Fahrenheit (°F) to 73°F. The mean temperature range for the months of May through October is 58°F to 79°F.

During the 2023 water year (October 2022 through September 2023), approximately 26.46 inches of precipitation was recorded at Los Angeles International Airport (LAX) approximately 6 miles south of the RSA; 88 percent of the precipitation occurred between November and March. Compared to the 30-year average for this location, the 2023 water year was 206 percent above normal (NOAA, 2023), indicating the 2023 biological and wetlands and waters surveys were conducted during an above-average rainfall season.

6.2.4 Soils

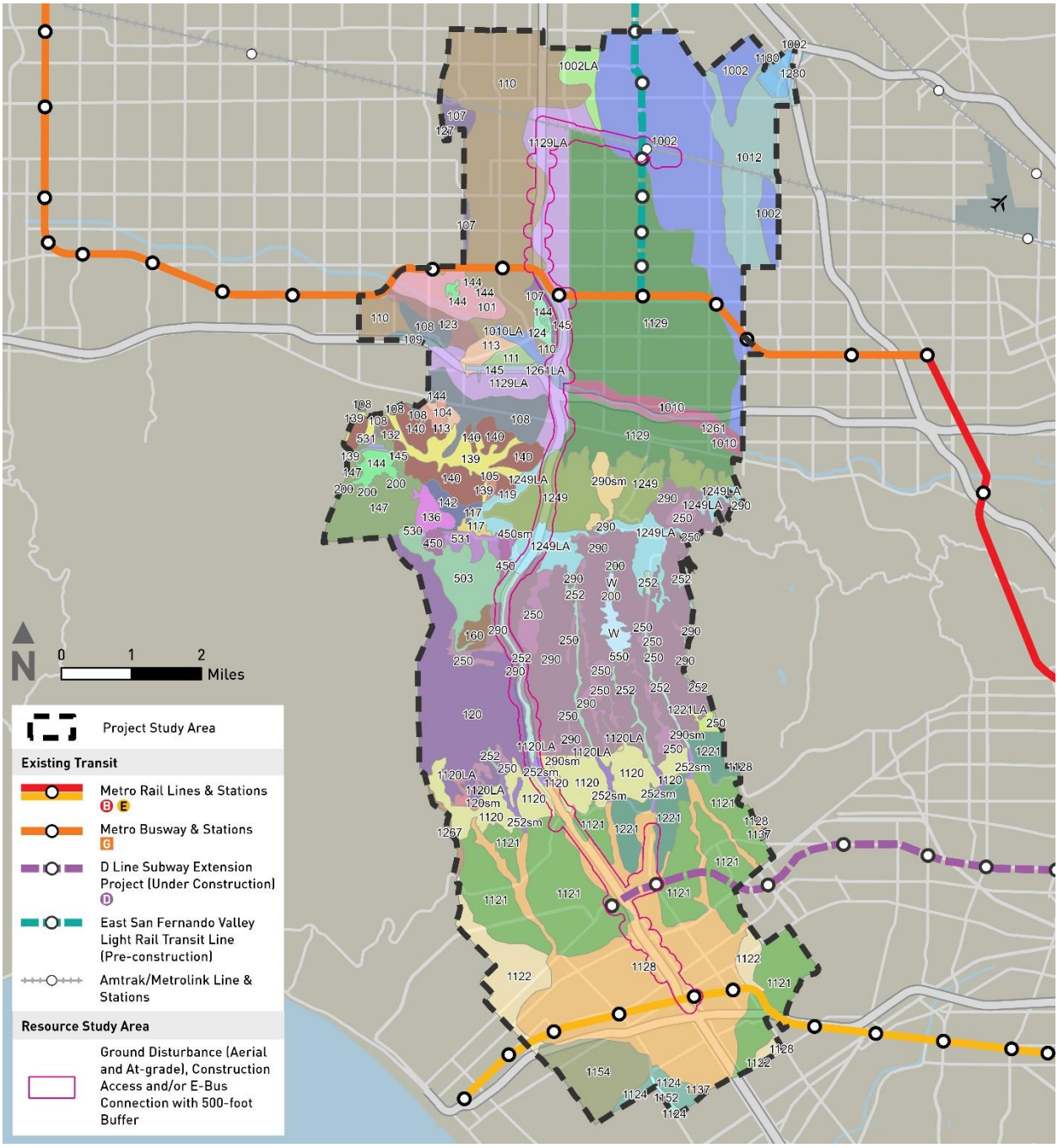
The RSA comprises several soil types that serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. Soil analysis was included in the Aquatic Resources Delineation (Appendix A) to evaluate for presence or absence of hydric soils that would form under anerobic conditions, such as those that occur in wetlands. An in-depth detailed analysis of subsurface components including soils is presented in the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* (Metro, 2025a). According to the United States Department of Agriculture, Natural Resources Conservation Service *Soils Report* for Los Angeles County, California, part of the RSA falls in the Los Angeles County, California, Southeastern soil survey area, as well as the West San Fernando Valley soil survey area and the SMMNRA soil survey area (USDA-NRCS, 2023a, 2023b). Soil types within these soil survey areas are fine-loamy smectite alluvial fan soils in the northern portion of the alignment, loamy-mixed mountains and hillslopes in the middle, and fine loamy-mixed soils in the southern portion of the alignment. Soil types are shown on Figure 6-11 with the figure legend on Figure 6-12.

6.2.5 Biological Resources within the Resource Study Area

This section describes biological resources known or with potential to occur within the RSA associated with Alternative 1. The search area for biological resources with potential to occur was defined as all U.S. Geological Survey (USGS) 7.5-minute quadrangles that co-occur with the Alternative 1 RSA, and all adjacent quadrangles when the Alternative 1 RSA was within 2 miles of the boundary. For Alternative 1, database searches were conducted within four quads: Beverly Hills and Van Nuys where the RSA is located and Topanga and Canoga Park due to the RSA's proximity to the quadrangle boundary.

Wildlife, vegetation communities, plant species, and jurisdictional aquatic features within this area are described below.

Figure 6-11. Alternative 1: Soils Map



Source: USDA-NRCS, 2023a

Figure 6-12. Alternative 1: Soils Map Legend

Source: USDA-NRCS, 2023a

6.2.5.1 Wildlife

Most wildlife expected in the urbanized areas of the RSA such as the San Fernando Valley to the north and westside communities of Los Angeles to the south are regionally common species adapted to human disturbances. These common species include birds (most of which are protected by the MBTA), reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, bats), and larger mammals such as coyotes.

One of the primary indicators of wildlife distribution within the RSA is the location of permanent and ephemeral water sources. Overall, there are few water sources within the RSA, thereby limiting the diversity of species. Water is present in the Los Angeles River within a concrete-lined drainage. Additional water is located adjacent to the RSA within the Sepulveda Basin in Haskell, Woodley and Bull Creeks and human-made lakes including Lake Balboa, Wildlife Lake and several smaller ponds. These water bodies provide foraging, breeding, migrating, and wintering habitat for a variety of wildlife species such as amphibians, birds, bats, and others.

The middle portion of the RSA coincides with the Santa Monica Mountains that have greater wildlife diversity than the developed urban areas of the RSA. Native habitat present in larger tracts of undeveloped land provides suitable conditions for additional local, native species compared to urban environments, as well as potential for less common local, native species to exist. Approximately 450 wildlife species occur across the Santa Monica Mountains (NPS, 2019a), although not all species are expected to occur within the RSA. The Santa Monica Mountains provide important core habitat for wildlife species to reproduce and connect to other open space areas essential for wildlife dispersal. Additionally, avian species migrate into the Santa Monica Mountains during the summer for breeding, and during the fall to overwinter in a warm climate where food will be more readily available than locations with harsher winters. A list of wildlife species detected during the spring 2023 field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across project alternatives because general wildlife observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Special-Status Wildlife Species

Of the 66 special-status wildlife species identified with potential to occur in the Project Study Area, 25 were identified as having potential to occur within the Alternative 1 RSA based on database searches of California Natural Diversity Database (CNDDB), Information for Planning and Consultation (IPaC), iNaturalist, and eBird (CDFW, 2023a; USFWS, 2024a; iNaturalist, 2024a to 2024n; iNaturalist, 2024y to 2024aa; eBird, 2024a through 2024k). These species are listed in Table 6-5 with an assessment of their potential to occur within the RSA.

Twenty-four of the wildlife species were concluded to be known or have potential to occur within the Alternative 1 RSA (Table 6-5); the remaining one was determined to have no potential to occur and is not discussed further for Alternative 1. The six species with low potential to occur are considered unlikely to be detected within the Alternative 1 RSA or impacted by Alternative 1 due to the lack of known recent occurrences and suitable habitat within the Alternative 1 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 6-5. Within Table 6-5, rows discussing species that were determined to be present or to have a high potential to occur within the Alternative 1 RSA are highlighted blue.

Table 6-5. Alternative 1: Special-Status Wildlife Species Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC	Occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Is a dietary generalist but often prefers to forage in grasslands and shrublands with abundant milkweeds, wild buckwheat, dusty maidens, lupines, medics, and sages.	**Present**. Suitable habitat and one recent 2023 observation occur within the Alternative 1 RSA. Additionally, observations from 2023 are present within 0.5 mile of the RSA in the northern portion (iNaturalist, 2024a) and several historical observations within 1 mile of the RSA from the mid-1900s (CDFW, 2023a).
Danaus plexippus	Monarch	FC	Two subpopulations within the United States; within California, monarchs are considered *Danaus plexippus* pop 1, California overwintering population (CDFW, 2023a). Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress; occasionally western sycamore and coast live oak) with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico; small aggregations also observed inland in Inyo and Kern Counties. Typically within 1.5 miles of the Pacific Ocean.	**Low**. Suitable habitat such as eucalyptus tree groves occur within the Alternative 1 RSA; however, the species normally overwinters in dense eucalyptus tree groves along the coastal plain near the Pacific Ocean. There are no known overwintering locations within the Alternative 1 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Fish				
Catostomus santaanae	Santa Ana sucker	FT	Endemic to Southern California and only found within the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. This species was once historically present throughout the Los Angeles and Santa Ana basins in southern California but is now restricted to three geographically separate populations. Specifically, within the Los Angeles River Watershed, known populations occur at Big Tujunga Creek in the Hansen Reach, two tributaries in the Hansen Reach, and one tributary in either the Big Tujunga Reach or Los Angeles Reach (potentially including but not limited to Fall Creek, Mill Creek, Arroyo Seco Creek, and Bell Creek) (USFWS, 2017).	**Low.** The Alternative 1 RSA falls within the geographic range for Santa Ana sucker and suitable habitat in the form of the Los Angeles River is present. However, the portion of this body of water that occurs within the Alternative 1 RSA demonstrates common habitat degradation symptoms characteristic of urban areas, including degraded water quality and hydrological modifications. Within the Alternative 1 RSA, the river is a concrete-lined channelized river and therefore does not provide the habitat characteristics preferred by this species (i.e., substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of algae) (USFWS, 2010). The combination of limited known population extent, poor habitat quality, and presence of movement barriers within the Alternative 1 RSA greatly limit potential for this species to occur.
Gila orcuttii	Arroyo chub	SSC	Prefers slow-moving sections of permanent, small to moderate-sized streams with sand or mud substrate with more than half of the habitat as runs and pools ~ 10 cm deep and reaches of permanent water more than 2 km long.	**No Potential.** No suitable habitat is present in the Alternative 1 RSA.
Reptiles				
Actinemys pallida	Southwestern pond turtle	FP/SSC	Found in marshes, rivers, streams, ponds, and similar water sources, usually with aquatic vegetation.	**Present.** Suitable habitat within the Alternative 1 RSA is small and limited in size. Recent observations from 2018 are present within the RSA on UCLA's campus and in 2021 along I-405 in the south (iNaturalist, 2024b).
Anniella stebbinsi	Southern California legless lizard	SSC	Habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. May occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Lives mostly underground, burrowing in loose sandy soil.	**Moderate**. Suitable habitat within the Alternative 1 RSA is of marginal quality. Recent observations include a 2024 detection located 1.5 miles south of the southern terminus of the RSA and a 2016 observation approximately 4 miles south of the RSA in Kenneth Hahn State Recreation Area (iNaturalist, 2024c).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC	A variety of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	**Present**. Suitable habitat is present. Recent observations include a 2016 detection within the Alternative 1 RSA and a 2007 California Natural Diversity Data Base (CNDDB) occurrence that places two adults within 0.5 mile west of I-405 (iNaturalist, 2024d; CDFW, 2023a).
Phrynosoma blainvillii	Coast horned lizard	SSC	Occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation throughout the central and Southern California coast. Ants are the main food source but also spiders, beetles, and termites. Forages on the ground in open areas, usually between shrubs and often near ant nests.	**Present**. Suitable habitat is present, and several recent observations exist within the Alternative 1 RSA, predominantly along I-405 in the Sepulveda Pass (iNaturalist, 2024e). Additionally, one historical CNDDB occurrence (1947) is located within 1 mile of the northern boundary (CDFW, 2023a).
Thamnophis hammondii	Two-striped garter snake	SSC	Ranges from near Salinas in Monterey County south along the coast, mostly west of the Southern Coast Ranges, to southern California where it ranges east through the Transverse Ranges and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather.	**Moderate.** Suitable habitat is present within the Alternative 1 RSA. There are recent sightings from 2017 and 2020 within 2 miles of the Alternative 1 RSA (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence with an obscured location present over 1 mile west of I-405 in the Alternative 1 RSA (CDFW, 2023a).
Birds				
Agelaius tricolor	Tricolored blackbird	ST/SS	Historically breeds in freshwater marshes with cattails and other emergent vegetation; increasingly breeds in agricultural fields when traditional wetlands are not present. Forages in wetlands, cultivated fields, grasslands, and at dairies and feedlots.	**High.** Suitable breeding habitat is not present within the Alternative 1 RSA; foraging habitat is present within Sepulveda Basin. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 1 RSA (iNaturalist, 2024g; eBird, 2024b).
Aquila chrysaetos	Golden eagle	CFP	Nests on cliff ledges and trees on steep slopes. Hunting grounds include nearby grasslands, sage scrub, or broken chaparral. Require very large territories.	**Low**. Suitable nesting habitat is not present in the Alternative 1 RSA. However, this species has potential to fly over or forage locally while in transit to preferred habitat and/or during migration in the isolated grasslands 9or sparsely vegetated hillsides within the Alternative 1 RSA. There are no historical records of this species within the vicinity (iNaturalist, 2024y; CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Athene cunicularia	Burrowing owl	SC, SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows.	**High**. Isolated patches of suitable habitat are present within the Alternative 1 RSA. This species has been recently observed within 0.15 mile west of the Alternative 1 RSA in the northern (2016), middle (2019), and southern (2021) portions of the RSA (iNaturalist, 2024z); observations were documented during the non-breeding season.
Buteo swainsoni	Swainson's hawk	ST	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**Present**. Suitable migration habitat is present within the Alternative 1 RSA; suitable breeding habitat is not present. The species may transit through during migration; migrating individuals have been recently observed within the Alternative 1 RSA along I-405 near the Getty Museum (iNaturalist, 2024aa; eBird 2024d).
Circus hudsonius	Northern harrier	SSC	Breeds predominantly in wetland habitats but will also use upland habitats. Prefers grasslands and agricultural fields during migration and in winter. The species occurs year-round in Los Angeles County.	**High**. Suitable migration habitat is present within the Alternative 1 RSA; suitable breeding habitat is not present. The species has potential to transit through the Alternative 1 RSA during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed 0.25 mile west of the RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).
Contopus cooperi	Olive-sided flycatcher	SSC	Breeds in coniferous forests throughout California from sea level to high mountain elevations.	**Present.** Suitable migration habitat is present within the Alternative 1 RSA; breeding habitat is not present. This species can briefly use areas in the RSA as stopover habitat during migration. Individuals have been observed within the RSA in 2016 at the West Los Angeles VA Medical Center and 0.25 mile from the RSA in 2013, 2018 and 2021 (iNaturalist, 2024i).
Haliaeetus leucocephalus	Bald eagle	SE/CFP	Nests in old growth trees near the coast or other bodies of water where fish or other prey sources are available.	**High**. No suitable breeding habitat is present, although potential to fly over the Alternative 1 RSA exists. This species is known to occur adjacent to the Alternative 1 RSA with observations in 2021 and 2023 within 0.25 mile of the RSA within Sepulveda Basin (eBird, 2024g). The closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Lanius ludovicianus	Loggerhead shrike	SSC	Uncommon year-round resident of southern California. Found in grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for concealing and protecting nests.	**High.** Suitable habitat is present within the Alternative 1 RSA. This species is known to occur nearby, with 2022 observations in Sepulveda Basin Wildlife Reserve, 0.25 mile of the RSA (eBird, 2024h).
Polioptila californica	Coastal California gnatcatcher	FT/SSC	Prefers Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). Generally avoids steep slopes above 25% and dense, tall vegetation.	**Low**. While the Alternative 1 RSA is located within the species range, suitable breeding habitat is generally absent. Low quality chaparral habitat is present in small patches in the Alternative 1 RSA and may be used for dispersal. There are species records as recent as 2023 over 3 miles south of the Alternative 1 RSA in the Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve (eBird, 2024i). Since the species is a short distance disperser and suitable habitat is lacking north of the RSA, individuals are unlikely to occur within the RSA. Furthermore, the species appears to be rare within the Santa Monica Mountains with few recent records, all located over 5 miles away (CDFW, 2023a; iNaturalist, 2024j; eBird, 2024i).
Pyrocephalus obscurus	Vermilion flycatcher	SSC	Inhabits a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, parks, and cemeteries.	**Present.** Suitable habitat is present within the Alternative 1 RSA. This species is known to occur within the RSA as recently as 2024 at the Los Angeles National Cemetery (eBird, 2024j).
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Migrate into California in late March/early April and depart for their winter grounds in September. Nest in low, dense riparian thickets along water or along intermittent streams. Forages in riparian and adjacent shrubland in the nesting season.	**Present**. This species has been documented in 2015 and 2022 along I-405 within the Sepulveda Pass within the Alternative 1 RSA; precise locations are obscured (iNaturalist, 2024k). Occupied nesting and foraging habitat are present adjacent to the Alternative 1 RSA within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek; species observations are as close as 0.25 mile west of the RSA (iNaturalist, 2024k).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Mammals				
Euderma maculatum	Spotted bat	SSC/WBWG – High Priority	Occurs in foothills, mountains, grasslands, and deserts in Southern California. Requires large, isolated cliffs for roosting (Luce and Keinath 2007). Distribution is patchy, likely due to roosting habitat requirements.	**No Potential**. No suitable habitat is present in the Alternative 1 RSA.
Eumops perotis californicus	Western mastiff bat	SSC/WBWG – High Priority	Open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**Low**. Suitable habitat is present in the Alternative 1 RSA. One recent observation from 2021 is located approximately 4 miles east of the RSA (iNaturalist, 2024l) and two historical records (1921 and 1925) without precise locations exist within approximately 2 miles of the RSA (CDFW, 2023a).
Lasionycteris noctivagans	Silver-haired bat	WBWG – Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Present**. Suitable foraging and roosting habitat are present in the Alternative 1 RSA. Two observations from 1985 are within or adjacent to the Alternative 1 RSA (CDFW, 2023a).
Lasiurus frantzii	Western red bat	SSC/WBWG – High Priority	Generally associated with stands of riparian habitat consisting of mature sycamores and cottonwoods. Forages over grasslands, shrublands, open woodlands, forests, croplands, and occasionally urban settings. Roosts primarily in trees.	**Low**. Suitable habitat is present in the Alternative 1 RSA. One recent observation from 2019 was made 7 miles east of the Alternative 1 RSA (iNaturalist, 2024m) and a second from 2007 was made approximately 10 miles west of the Alternative 1 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 1 RSA[b]
Lasiurus cinereus	Hoary bat	WBWG – Medium Priority	Most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. Prefers open habitats or habitat mosaics; requires water. Spends winter months in warmer habitats such as Southern California, Mexico, and Central America while summer is typically spent in the northern portions of California and north into Canada (Bolster, 1998). Roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat with large mature trees.	**High.** Portions of the Alternative 1 RSA provide suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. Two observations are adjacent to the RSA: the first from 2022 is near Sherman Oaks in the Santa Monica Mountains (iNaturalist, 2024n) and the second from 1986 is in Van Nuys (CDFW, 2023a).
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Sparsely vegetated areas with alluvial deposits of sandy soils.	**Low**. Suitable habitat is present in the Alternative 1 RSA; however, the species has only been found historically in the San Fernando Valley which is now highly urbanized. One historical observation from 1903 of a collected male specimen was located approximately 2.5 miles east of the Alternative 1 RSA (CDFW, 2023a).
Puma concolor	Mountain lion	SC	Generally found throughout California in temperate coniferous/deciduous forest, coastal chaparral, foothills, and mountains. Often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Within the Santa Monica Mountains, mule deer make up the bulk of mountain lions' diet (87% of 700 kills analyzed by NPS), although smaller prey can supplement when opportunity arises, preferentially coyotes then raccoons (NPS, 2023).	**Present.** Mountain lions are known to occur within the Alternative 1 RSA, specifically in the Santa Monica Mountains where an estimated population of 10 to 15 adult individuals has been well documented by the National Park Service (NPS, 2023). Several GPS-collared mountain lions have been tracked within the Alternative 1 RSA, predominantly west of I-405 throughout the Sepulveda Pass (NPS, 2023). Lion movement is hindered by I-405 and mortality has been documented on the freeway (NPS, 2023). In July 2019, NPS documented one collared mountain lion (P-61) successfully crossed I-405 in the Sepulveda Pass area for the first time in the 17 years of study (NPS, 2019b); he was struck and killed on I-405 two months later (NPS, 2022). An uncollared mountain lion was found deceased on northbound I-405 near The Getty Museum on July 4, 2024 (Darling, 2024).

Source: HTA, 2024

[a]Special-status wildlife species identified during reviews of the CNDDB (CDFW, 2023a), IPaC (USFWS, 2024a), eBird, and iNaturalist for the Beverly Hills, Van Nuys, Canoga Park, and Topanga quadrangles.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened
FP = Federally Proposed

State Status Designations:
CFP = CDFW Fully Protected
SC = State Candidate Species for Listing
SE = State Endangered
SSC = Species of Special Concern designated by CDFW
ST = State Threatened

Western Bat Working Group (WBWG) Priority Levels:

WBWG-High = Designated by the WBWG as High Priority - species that are imperiled or are at high risk of imperilment.

WBWG-Medium = Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, eBird, iNaturalist, or another database as occurring in the RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the RSA; however, no records occur directly within the RSA. Species has been detected within 1 mile of the RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the RSA is of marginal quality. No records occur within RSA, but the species has been documented over 1 mile from the RSA.

Low = Suitable habitat within the RSA is of low quality. There are no known recent within or near the RSA.

No Potential = Suitable habitat is not present for the species.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate species that is known to occur within Alternative 1 RSA. This species of bumble bee occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Crotch's bumble bee is found in a wide variety of natural and disturbed habitat types; they are dietary generalists and are often found foraging in grasslands and shrublands on a wide variety of plant species with strong preferences for native sage species, milkweed, and species within the pea family (*Fababcea*) including lupines, vetches, and deerweed. On June 12, 2019, the California Fish and Game Commission voted to add Crotch's bumble bee as a Candidate Endangered species under the California Endangered Species Act (CESA) (Hatfield and Jepsen, 2021). Suitable habitat including chaparral is found in the middle of the Alternative 1 RSA in the Santa Monica Mountains. One recent observation from 2023 is within the Alternative 1 RSA (iNaturalist, 2024a). Additionally, observations from 2023 are present within 0.5 mile of the Alternative 1 RSA in the northern portion (iNaturalist, 2024a) and several historical observations within 1 mile of the Alternative 1 RSA from the mid-1900s (CDFW, 2023a).

Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys pallida*) is listed as a CDFW SSC and is known to occur within the Alternative 1 RSA. In October 2023, this species was proposed for listing as Federally Threatened by the USFWS. While proposed species are not protected from take prohibitions under ESA until the rule to list is finalized, consultation with USFWS is required under Section 7 if actions will risk the continued existence of a proposed species. As of 2014, western pond turtle (*Actinemys marmorata*) was recognized as two distinct species—northwestern (which remained *A. marmorata*) and southwestern pond turtle (*A. pallida*) based on geographic range. The range of the southwestern pond turtle extends from central and southern California south into Baja California, Mexico. This includes areas of the central Coast Range from near northern Monterey County, California, portions of the Transverse Range into the Mojave River watershed, and areas south into Baja California, Mexico (50 CFR Part 17; Federal Register / Vol. 88, No. 190 / Tuesday, October 3, 2023 / Proposed Rules). This species occurs in ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, basking sites, and suitable upland habitat for egg-laying. The southwestern pond turtle's population is in decline due to disease, habitat destruction and alteration, and the introduction of predators such as the American bullfrog (*Lithobates catesbeianus*) and striped bass (*Morone saxatilis*) (USFWS, 2024c). Suitable habitat for the species occurs within the Alternative 1 RSA. Records for either *A. marmorata* or *A. pallida* were included in database searches as records of the former would be misidentifications of the latter based on geographic range for each species. The species has been observed found on UCLA's campus within (2018) or adjacent (2018 and 2021) to the Alternative 1 RSA at the Mildred E. Mathias Botanical Garden located 0.72 mile east of RSA. Additional observations adjacent to the Alternative 1 RSA include at the Sepulveda Basin Wildlife Reserve in 2021 (0.24 mile to the west of the RSA), the Sepulveda Pass in 2021 (0.23 mile to the west of the RSA), and the Getty Center in 2021 (500 feet to the west of the RSA) (iNaturalist, 2024b).

Southern California Legless Lizard

The southern California legless lizard is a CDFW SSC and has a moderate potential to occur within the Alternative 1 RSA. It is a fossorial lizard potentially present in suitable habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. The Southern California legless lizard may occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Marginally suitable habitat for the species occurs along the Sepulveda Pass within the Alternative 1 RSA, where a mixture of chaparral and coastal scrub habitat types were observed during the field survey. The

species has been detected in the Kenneth Hahn State Recreation Area to the southeast of the Alternative 1 RSA (approximately 3.5 miles), and approximately 1.5 miles south of the southern terminus in Culver City in 2024 (iNaturalist, 2024c).

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFW SSC and is known to occur within the Alternative 1 RSA. This subspecies occurs in Southern California and as far south as Baja California and is often observed in a variety of habitats including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats. Suitable habitat including chaparral and coastal sage scrub is present within the Alternative 1 RSA, and there are recent observations of the species throughout the Sepulveda Pass in the Santa Monica Mountains. In 2018, an individual was observed 1,000 feet east of I-405 (iNaturalist, 2024d), and in 2007, two adults were observed 0.5 mile west of I-405 (CDFW, 2023a).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvilli*) is a CDFW SSC and is known to occur within the Alternative 1 RSA. This species occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation. It occurs throughout the central and southern California coast. The coast horned lizard's main food source consists of ants, but also includes spiders, beetles, and termites. It forages on the ground in open areas, usually between shrubs and often near ant nests. Suitable habitat for the species occurs in the Santa Monica Mountains specifically in the Sepulveda Pass in the form of chaparral and coastal sage scrub. The CNDDB occurrences are historical 1916 and 1947 (CDFW, 2023a); however, there have been several recent observations of the species within and adjacent to the Alternative 1 RSA in the Sepulveda Pass (observed in the years 2015, 2016, 2019, 2020, iNaturalist, 2024e); therefore, the species is assumed extant in the Alternative 1 RSA.

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW SSC and has a high potential to occur within the Alternative 1 RSA. The two-striped garter snake ranges from near Salinas in Monterey County south along the coast mostly west of the south Coast Ranges, to southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather. The loss of wetland habitats has contributed to a reduction in the range of this snake (California Herps, 2023) and declines in population of the species have been attributed to human impacts, including urban development and flood control in the southern part of its range, as well as habitat modification by livestock, drought, loss of native prey, and predation by invasive species in its northern range (Jennings and Hayes, 1994). Suitable habitat for the species occurs within the Alternative 1 RSA and recent sightings of the species to the west of the Alternative 1 RSA near Will Rogers State Historic Park and to the east in Beverly Glen near Stone Canyon Reservoir have been recorded (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence of two-striped garter snake within 1 mile of I-405, west of the Alternative 1 RSA, in a flood control debris basin (CDFW, 2023a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as state threatened and CDFW SSC that has high potential to occur within the Alternative 1 RSA. A resident songbird of California that shares its limited range with Washington, Oregon, and a short distance into Baja California, Mexico. Populations are in decline mainly due to the loss of preferred breeding habitats consisting of native wetlands and marshes where it can form nesting colonies that include thousands of breeding individuals. It feeds on available insects, snails, grains, and a variety of other locally abundant resources. Suitable foraging habitat is present within the

Alternative 1 RSA; breeding habitat is not. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 1 RSA (iNaturalist, 2024g; eBird, 2024b). This species also has potential to forage in the grassland parcels to the northwest of the Alternative 1 RSA.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is CDFW SSC that has high potential to occur within the Alternative 1 RSA. In addition, this species was petitioned for protection as threatened or endangered under CESA in March 2024 (CBD et al., 2024); in August 2024, CDFW's evaluation report determined that there was sufficient evidence to indicate listing of burrowing owl may be warranted (CDFW, 2024e). On October 10, 2024, the Fish and Game Commission approved the petition and the western burrowing owl became a candidate for listing as threatened under CESA (CDFW, 2024f). As a candidate species, burrowing owl will receive protections under CESA while a full status review occurs over a 12- to 18-month-long review period. It is a semi-colonial owl found in open grasslands, prairies, farmlands, deserts, scrubland, and other disturbed areas with low-growing vegetation. In coastal southern California, burrowing owl is found mainly in grassland and open scrub from the coast to the foothills and is strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows. It has been nearly extirpated as a breeding species from coastal San Luis Obispo, Santa Barbara, Ventura, Los Angeles, and Orange counties (Shuford and Gardali, 2008). Isolated areas of suitable habitat are present within the Alternative 1 RSA. Burrowing owl has been recorded within 0.15 mile west of the Alternative 1 RSA in the northern (2016), middle (2019), and southern (2021) portions of the Alternative 1 RSA (iNaturalist, 2024z); however, observations were from the late fall and winter season, outside of the breeding season.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state threatened and is known to occur as a migrant within the Alternative 1 RSA. Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Swainson's hawk breed in stands with few trees within grasslands, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands in the Central Valley. This species requires suitable foraging areas adjacent to breeding habitat which includes grasslands, grain or alfalfa fields, or livestock pastures that support rodent populations. Along with rodents, they feed on amphibians, reptiles, and large arthropods. Suitable breeding habitat for this species is not present within the Alternative 1 RSA as it falls outside of the breeding range typical for Swainson's hawk. However, this species may transit through during migration and migrating individuals have been recently observed within the Alternative 1 RSA along I-405 near the Getty Museum (iNaturalist, 2024aa; eBird 2024d).

Northern Harrier

Northern harrier (*Circus hudsonius*) is a CDFW SSC (when nesting) has high potential to occur as a migrant within the Alternative 1 RSA. Los Angeles lies at the southwestern vicinity of the species breeding range in the United States. This species is low-flying and typically prefers grasslands, weedy agricultural fields, marshes, and other flat areas with large tracts of dense, low-growing vegetation, preferably undisturbed. As a ground-nesting species, northern harriers prefer to nest in tall, dense vegetation along the coastal slope and in inland valleys. In Los Angeles County, this species is found year-round but is more common as a winter visitor than as a resident breeder per records research in CNDDB (CDFW, 2023a), eBird (eBird, 2024e), and iNaturalist (iNaturalist, 2024h). There is no suitable breeding habitat within the Alternative 1 RSA but the species has potential to transit during migration

and forage over grasslands and lightly vegetated hillsides. Individuals have been observed within 0.25 mile west of the Alternative 1 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is a CDFW SSC that is known to occur as a migrant within the Alternative 1 RSA. Olive-sided flycatcher is found in coniferous forests throughout California from sea level to high mountain elevations. This species breeds in coniferous forests and uses meadows and open areas adjacent to forests to forage. Olive-sided flycatchers feed on a variety of insects, most of which are caught in flight. Suitable breeding habitat for this species is not present within the Alternative 1 RSA; however, this species may briefly use areas in the Alternative 1 RSA as stopover habitat during migration. Individuals have been observed within the Alternative 1 RSA in 2016 at the West Los Angeles VA Medical Center and 0.25 mile from the Alternative 1 RSA in 2013, 2018 and 2021 (iNaturalist, 2024i).

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is state endangered and CDFW Fully Protected (CFP) that has high potential to occur within the Alternative 1 RSA. It ranges throughout North America and inhabits forests and open grasslands nearby to a water source to forage. The eagle's main source of prey is fish, although they will forage on a variety of prey that may include reptiles, mammals, amphibians, and carrion. The population was once in serious decline due to hunting and pesticides; however, with protections put in place, this species has successfully rebounded with a continually increasing population evidenced in databases searches. This species is known to occur as recently as 2024 adjacent (within 0.25 mile) to the Alternative 1 RSA at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024g). However bald eagles do not breed within the vicinity of the Alternative 1 RSA; the closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC (when nesting) that has high potential to occur within the Alternative 1 RSA. This songbird ranges throughout North America, inhabiting open country with short vegetation and lower sized shrubs and trees sparsely spaced throughout the landscape. Loggerhead shrikes are found throughout deserts, agriculture lands, grasslands, cemeteries, and golf courses. While they eat a variety of prey items similar to a raptor including insects, amphibians, reptiles, small mammals, and other songbirds, they lack the talons of a raptor. Instead, shrikes impale and/or wedge prey items on shrubs, trees, cacti, barbed wire fencing, and other similar features for caching and consumption. Suitable habitat is present within the Alternative 1 RSA. This species is known to occur nearby with observations from 2022 in Sepulveda Basin Wildlife Reserve located 0.25 miles of the Alternative 1 RSA (eBird, 2024h).

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus obscurus*) is a CDFW SSC (when nesting) that is known to occur within the Alternative 1 RSA. The species is a small songbird found within the tyrant flycatcher family, named for the adult males' bright vermilion red and contrasting black coloration. The southwestern United States is the northern extent of its typical range, which extends up from Central and South America. Vermilion flycatchers are found within a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, golf courses, parks, and cemeteries. Suitable habitat is present within the Alternative 1 RSA; this species is known to occur within the Alternative 1 RSA as recently as 2024 and breeding was confirmed with dependent fledglings observed at Los Angeles National Cemetery in 2023 (eBird, 2024j).

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is federally and state endangered and is known to occur within the Alternative 1 RSA. Least Bell's vireo occurs as summer breeders within southern California; they migrate into California in late March/early April and depart for their winter grounds in September. This species builds nests in low, dense riparian thickets along water or along intermittent streams and during the nesting season, they forage in riparian and adjacent shrubland habitats. Suitable nesting and foraging habitat are present adjacent to the Alternative 1 RSA within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek; observations within this area are present as close as 0.25 mile of the Alternative 1 RSA (iNaturalist, 2024k). Individuals have also been detected within the Alternative 1 RSA in 2015 and 2022 along I-405 within the Sepulveda Pass; precise locations are obscured (iNaturalist, 2024k).

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a WBWG Medium Priority Species that is known to occur within the Alternative 1 RSA. This species occurs throughout much of North America into northern Mexico primarily in coastal and montane forests, especially within old growth forests. Roosts are located in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. While preferring to roost in old growth forest, they forage over disturbed areas, clearings, roadways, forested riparian areas along rivers and streams, and various other water sources. Suitable foraging and roosting habitat are present in the Alternative 1 RSA. Two observations from 1985 are within or adjacent to the Alternative 1 RSA (CDFW, 2023a).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a WBWG Medium Priority Species with high potential to occur in the Alternative 1 RSA. This species is the most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. This species spends winter months in warmer winter habitats such as Southern California, Mexico, and Central America and summer is typically spent, in the northern portions of California and north into Canada (Bolster, 1998), concealed in the foliage of deciduous and coniferous trees, typically neat the edge of a clearing. Roosting habitat consists of dense foliage associated with medium to large trees situated in open or mosaic habitat; roosting habitat is present within the Alternative 1 RSA in areas with large mature trees, specifically along the Sepulveda Pass and the Sepulveda Basin Wildlife Preserve. Portions of the Alternative 1 RSA provide suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. There is a CNDDB occurrence from 1986 (CDFW, 2023a), where a female hoary bat was collected in Van Nuys approximately 1 mile to the east of the Alternative 1 RSA. In 2022, an observation was made in the Santa Monica Mountains near Sherman Oaks, 300 feet east of the Alternative 1 RSA (iNaturalist, 2024n).

Mountain Lion

The mountain lion (*Puma concolor*) is a "specially protected" species in California following the passage of the California Wildlife Protection Act of 1990 (Proposition 117), which makes it illegal to possess transport, sell, and hunt the species (CDFW, 2023d). The mountain lion was also recently proposed for state listing under CESA within a proposed evolutionary significant unit (ESU) located in Southern California and the central coast (CDFW, 2023d). In April 2020, CDFW accepted this ESU as a candidate for state listing as threatened or endangered. Under CESA, species classified as a candidate species are afforded the same protection as listed species while they undergo a review process (CDFW, 2023d). Mountain lions are generally found throughout the state where suitable habitat such as temperate

coniferous/deciduous forest, coastal chaparral, foothills and mountains occur. They are often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Mountain lions are known to occur within the Alternative 1 RSA, specifically in the Santa Monica Mountains (NPS, 2023). There is high potential for the species to occur within the Alternative 1 RSA due to the potential habitat and recent sightings (NPS, 2023). Mountain lions are well documented throughout the Sepulveda Pass, in the Santa Monica Mountains by the NPS, and their population is estimated at around 10 to 15 adult individuals (NPS, 2023). Several GPS-collared mountain lions have been tracked to occur within the Alternative 1 RSA throughout the Sepulveda Pass, east of the I-405 freeway (NPS, 2023).

Bats

There are 24 species of bats found in Los Angeles County, 18 of which are considered rare or sensitive by a variety of entities (NHMLA, 2023). In particular, the WBWG identifies several species as Medium or High Priority for consideration of conservation measures. Bat species found in Los Angeles County are known to have behavioral and ecological interactions with transportation structures, especially those involving bridges. Bat species responses to anthropogenic disturbances differ, with some responding positively and some negatively. Anthropogenic disturbances that affect bats include the following (Caltrans, 2019):

- Habitat loss, fragmentation, and degradation of habitat
- Chemical pollution to drinking water from construction waste and to air from construction vehicle emissions
- Light pollution resulting from artificial lighting
- Noise pollution from construction activities
- Increased predation
- Introduced diseases, such as white-nose syndrome
- Climate change
- Vehicular collisions

The RSA provides habitat for day and night roosting for bats such as trees, bridges, culverts, buildings, and other structures. The tree-lined streets found throughout the Alternative 1 RSA could potentially support roosting bats, such as the hoary bat and western mastiff bat. Large bridges spanning the Los Angeles River may provide suitable bat roosting habitat and foraging habitat for species such as Mexican free-tailed bat and Myotis species. However, no signs of bats, including individuals, guano (i.e., scat), staining on walls from urine, or vocalizations, were detected during the spring 2023 reconnaissance-level field surveys.

Wildlife Corridors

Within the heavily urbanized areas that comprise the northern and southern portions of Alternative 1, opportunities for wildlife movement are limited. No landscape habitat linkages were identified within the Alternative 1 RSA by the SCW; the City of Los Angeles has identified a regional wildlife movement pathway through the central portion of the RSA in the Santa Monica Mountains. Within this highly urbanized area, animal movement will be facilitated by remnant riparian habitat, underpasses, culverts and stretches of contiguous or semi-contiguous habitat. Ornamental vegetation may provide some opportunities for cover, resting, foraging, and nesting to localized bird and wildlife populations; however, such areas do not function as major wildlife movement corridors. Evaluation of wildlife movement for species with large home size ranges, like the mountain lion, are more appropriate for a

larger scale than the Alternative 1 RSA to better inform existing patterns for these species. Discussions at both the RSA and a larger scale are included herein.

The Santa Monica Mountains traverse the middle of the Alternative 1 RSA and serve as both a regional and local wildlife movement corridor. While they lack connection with other mountain ranges in the area, largely due to urbanization, the Santa Monica Mountains retain open areas and native habitats that provide east-west movement opportunities within the range and historically to adjacent ranges; to the west are large undeveloped areas of natural vegetation and to the east are the Verdugo Mountains and the San Gabriel Mountains. Wildlife movement within the Santa Monica Mountains is through a combination of natural, open spaces interspersed with development and human activity. While the majority of the Santa Monica Mountain range within the Project Study Area contains scattered residential development, 44 percent of the Santa Monica Mountain range is considered non-developed (as defined by removing "urban" classified categories from the SMMNRA vegetation mapping, see Section 3.3.1 for details; Figure 6-28). Habitat fragmentation poses a threat to species due to lack of space and movement (i.e., habitat to travel between) and threatens wildlife survival from increased risk of inbreeding and loss of genetic diversity.

Mammals such as mule deer (*Odocoileus hemionus*), mountain lions (*Puma concolor*), and bobcats (*Lynx rufous*) can have large territorial ranges that span many miles; these species are documented in the Santa Monica Mountains. In their current state, I-405 and other major roads in the Alternative 1 RSA act as a functional barrier to wildlife movement for most terrestrial wildlife. If wildlife is able to successfully cross I-405, small-scale refugia are present east of the freeway and outside the Alternative 1 RSA within Stone Canyon Reservoir (750 acres) and Franklin Canyon Park (Mountains Recreation and Conservation Authority, 605 acres) or Griffith Park (4,210 acres). Within the Alternative 1 RSA, east-west wildlife movement is aided by native habitat on both sides of I-405, providing shelter and cover to approach and exit the freeway corridor. However, there are limited opportunities for north-south movement due to urban landscape surrounding the mountains in both directions. Currently, the permeability of I-405 and other major roads in the Alternative 1 RSA is limited for most terrestrial wildlife, contributing to habitat fragmentation and restricted breeding and hunting opportunities, especially for large mammals. Impacts to gene flow resulting from movement barriers and subsequent signs of inbreeding depression have been observed in Southern California mountain lions (Huffmeyer et al., 2022), decreasing overall population health.

The Santa Monica Mountain Conservancy's (SMMC) Eastern Santa Monica Natural Resource Protection Plan states habitat connectivity, particularly leading up to and east of I-405, is in danger (ESMM-NRPP, 2021). The SMMC has published a habitat linkage map indicating presence of four wildlife corridors that cross I-405 in the Santa Monica Mountains: Mulholland Drive bridge, Skirball Center bridge, Bel Air Crest Drive underpass, and Sepulveda Boulevard underpass by the Getty Center (SMMC, 2021); they are also identified as wildlife movement pathways by the City of Los Angeles (DCP, 2021). NPS research before, during, and after the I-405 Freeway Widening Project studied the use of these potential corridors and found that while wildlife used all four during the preconstruction and early construction phases, fewer individual animals and species used them post-construction (NPS, 2024a). Species that were observed most during construction included raccoon, Virginia opossum, coyote, mule deer, and fox squirrel. Cameras placed in the vicinity of the crossings showed that the species who were no longer observed crossing were still present in the area; this includes mountain lions, although none were observed at any of the crossings during the study. On January 22, 2025, a wildfire began east of I-405, adjacent to the Sepulveda Boulevard underpass and burned through adjacent vegetation, reducing cover for wildlife

attempting to cross here. It is likely that wildlife movement in this area will be temporarily altered until the habitat recovers.

Historically, mountain lions utilized the Santa Monica Mountains as a major linkage corridor between the surrounding mountain ranges in Southern California. Freeways, roads, buildings, and fencing have created barriers to mountain lion, along with other wildlife movement, resulting in the remaining undeveloped land becoming highly fragmented habitat (CLAW, 2023). The major causes of death among mountain lions are vehicle collisions, rodenticide poisoning, depredation permits, and mountain lions killing other mountain lions.

I-405 creates a major barrier to mountain lion movement. At present time, I-405 is generally considered impermeable to mountain lions inhabiting land east of I-405, preventing their movement to the western portion of the Santa Monica Mountains (NPS, 2023). However, a few mountain lions have made it across I-405 successfully. Examples of mountain lions crossing I-405 include mountain lions P-22, P-61, and P-97 (NPS, 2022). P-22 was born in the Santa Monica Mountains and was determined to have crossed both the I-405 and US-101 freeways to make his way to Griffith Park; he was not collared at the time of his crossing (NPS, 2019b). The National Park Service has also documented one collared mountain lion (P-61) crossing I-405 in the Sepulveda Pass successfully on July 19, 2019. However, these examples are few and far between since many mountain lions who attempt to cross I-405 are unsuccessful, such as P-97 who was struck and killed on I-405 in the Sepulveda Pass near Getty Center Drive in 2022. As of December 2022, at least 32 mountain lions have been documented as struck and killed by vehicles in the SMMNRA in the last 20 years (NPS, 2023). Mountain lions have been documented traveling up to the edge of I-405 and not crossing (NPS, 2019b), further indicating freeways and other physical barriers are affecting wildlife behavior. Mountain lions in the Santa Monica Mountains are experiencing exacerbated impacts of edge effects and limited habitat and are suffering from territorial fighting, low genetic diversity, and low prey populations. Furthermore, escape routes during wildfires may be blocked and migration into previously burned areas may be restricted due to roads and other urban development. A study conducted by University of California (UC) Davis and partners concluded that the Santa Monica Mountains lion population is at risk of becoming locally extinct within the next 50 years. The study recommended increases in landscape connectivity to maintain healthy lion populations in the greater Los Angeles metropolitan area (Benson et al., 2019).

In general, wildlife species are likely to use habitat within the Alternative 1 RSA for local movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover) versus regional movements due to the highly urbanized nature of most of Alternative 1 and the barrier created by I-405. Based on the Alternative 1 RSA running north-south and including both urban and native vegetation, it is likely to be part of the home range of many species, which may use it at different times of the year depending on available resources.

Within the Alternative 1 RSA, water is present in the Los Angeles River in a concrete-lined channel. Adjacent to the Alternative 1 RSA, water is present in a human-made stream within the Mathias Botanical Garden on UCLA's campus and in several large waterbodies (creeks, human-made lakes, and the Los Angeles River) are located immediately west of the Alternative 1 RSA in the Sepulveda Basin. Where present, waterbodies provide resting, foraging, and nesting opportunities for wildlife species and collectively they provide some habitat for wildlife species to move through the Los Angeles Basin and San Fernando Valley. Furthermore, several species of warblers, sparrows, and raptors that breed in northern latitude, spend the winter months in the Alternative 1 RSA or immediate RSA vicinity. This includes species protected under the MBTA such as the yellow-rumped warbler (*Setophaga coronata*),

white-crowned (*Zonotrichia leucophrys*) and golden-crowned sparrows (*Zonotrichia atricapilla*), and several raptor species.

The RSA occurs along the Pacific Flyway, a major north-south flyway for migratory birds moving between breeding grounds and overwintering sites or following food sources. Potential stopover locations for migratory birds are often correlated with vegetation cover and adjacent water and are particularly important for migrating waterfowl. Within the Alternative 1 RSA, one potential location is present at the Sepulveda Basin Recreation Area. Within the Sepulveda Basin, the Los Angeles flows west to east through the Alternative 1 RSA; while the majority of the river within Los Angeles is a concrete-lined channelized river, portions within the Sepulveda Basin are earthen and vegetated. The narrow riparian corridor along the Los Angeles River includes a variety of plant and habitat layers (i.e., mature trees, shrubs, and herbaceous vegetation) that facilitate bird movement along the river. While only the eastern edge of the Sepulveda Basin Wildlife Preserve is within the Alternative 1 RSA, Lake Balboa, Woodley Creek, Haskell Creek, Japanese Garden Lake, and Wildlife Lake all occur within the Sepulveda Basin and provide, resting, foraging, and nesting opportunities that support wildlife movement through the Alternative 1 RSA.

6.2.5.2 Plants

Vegetation Communities

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Alternative 1 RSA are generally absent and consist mainly of the land cover class developed. Developed, ruderal, and cleared land classifications are generally considered to provide lower quality habitat due to absent or sparse vegetation, limited plant diversity, and regular disturbance associated with human activities. Special-status wildlife species may use these areas for activities such as foraging or while in transit and special-status plants could be present, but they are more likely to be found in vegetated habitats subject to less disturbance.

Vegetation communities in the Santa Monica Mountains, which run east-west through the middle of RSA, include ceanothus chaparral, laurel sumac shrubland, toyon shrubland, and various other native vegetation communities. Within a mapped vegetation group, patches of differing communities may be present in smaller sizes than the minimum mapping unit (0.5 hectare) (NPS, 2004-2019). Where present, these areas would be refined in the future during field surveys after a preferred alternative is selected.

Vegetation communities listed below are presented in descending order of abundance within the Alternative 1 RSA, acreages per vegetation community within the Alternative 1 RSA are presented in Table 6-6, and spatial representations of their locations are shown on Figure 6-13 through Figure 6-26. A list of plant species observed during field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across project alternatives because general plant observations were collected for the combined Ground Disturbance Area of each project alternative. Species lists per project alternative are not available.

Table 6-6. Alternative 1: Vegetation Community Acreage for Resource Study Area (Ground Disturbance Area and 500-Foot Buffer)

Vegetation Community/Land Cover Type[a]	Sensitive Natural Vegetation Community (Authority)	Acres[b]	Percent of Total Vegetation
Developed	Not applicable	2,384.1	82.6
Post Fire Shrub Regeneration and Undifferentiated Categories including Artificial Cuts/Embankments and Exotic Vegetation	Not applicable	284.4	9.9
Ceanothus Chaparral	Not applicable	87.9	3.0
Laurel Sumac Shrubland	Potentially depending on codominant species (CDFW)	55.8	1.9
Toyon Shrubland	Potentially depending on codominant species (CDFW)	16.6	0.6
California Walnut Woodland	Yes (CDFW)	9.9	0.3
California Annual Grassland	Not applicable	8.1	0.3
Coast Live Oak Woodland	Not applicable	7.2	0.2
Scrub Oak Shrubland	Potentially depending on codominant species (CDFW)	5.5	0.2
Cleared Land	Not applicable	4.0	0.1
Sugar Bush Shrubland	Yes (CDFW)	4.0	0.1
California Sagebrush Shrubland	Potentially depending on codominant species (CDFW)	3.2	0.1
Black Sage Shrubland	Potentially depending on codominant species (CDFW)	3.2	0.1
Ruderal	Not applicable	3.1	0.1
California Sycamore Woodland	Potentially depending on codominant species (CDFW)	2.5	0.1
Open Water	Not applicable	1.8	0.1
California Buckwheat Shrubland	Potentially depending on codominant species (CDFW)	1.5	0.1
Coyote Brush Shrubland	Potentially depending on codominant species (CDFW)	1.1	<0.1
Undifferentiated Riparian Vegetation	Potentially depending on species composition (CDFW)	1.1	<0.1
Mexican Elderberry Shrubland	Not applicable	0.9	0.1
Total		**2,885.8**	**100.0**

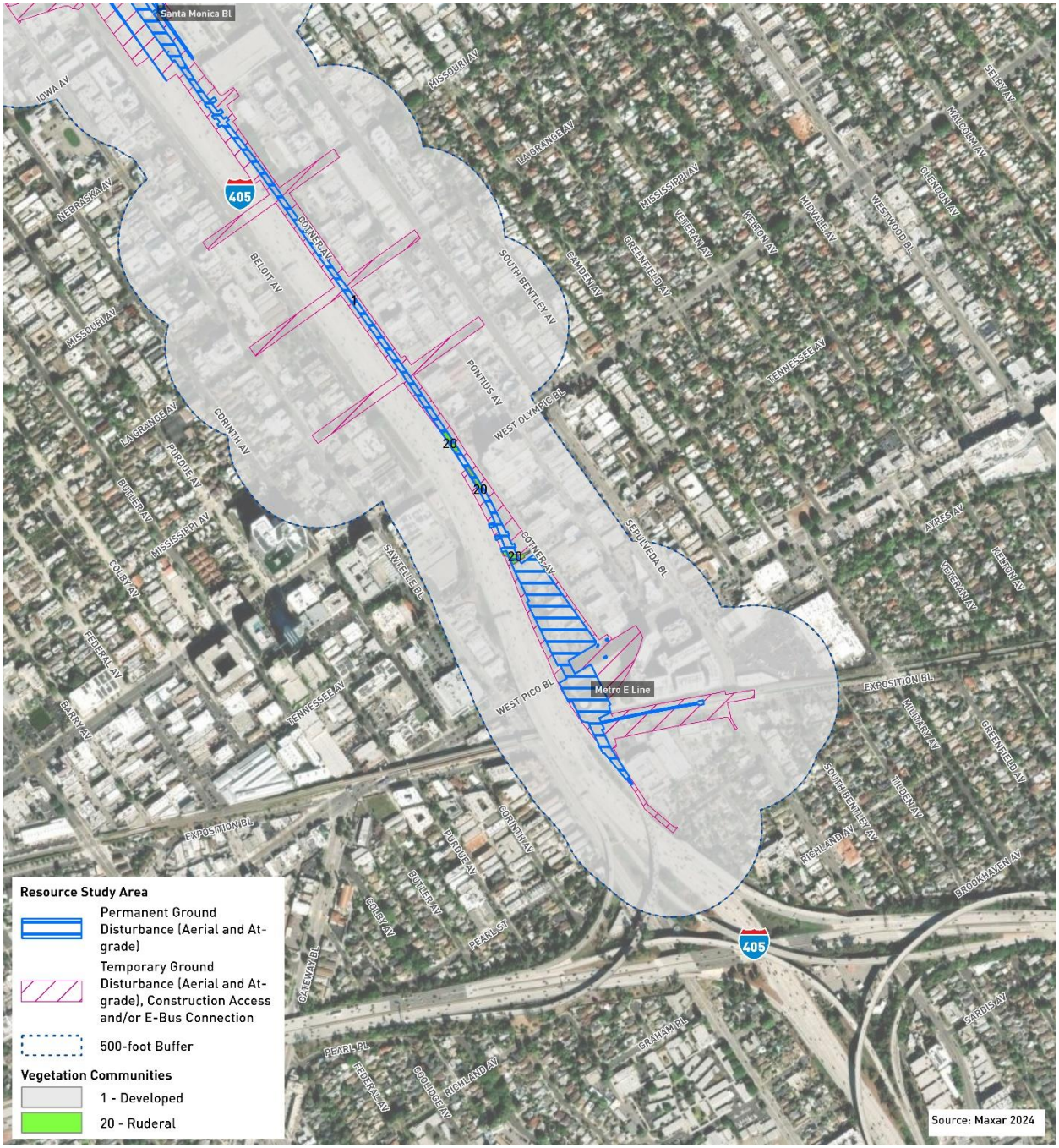
Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in total calculation due to rounding errors.

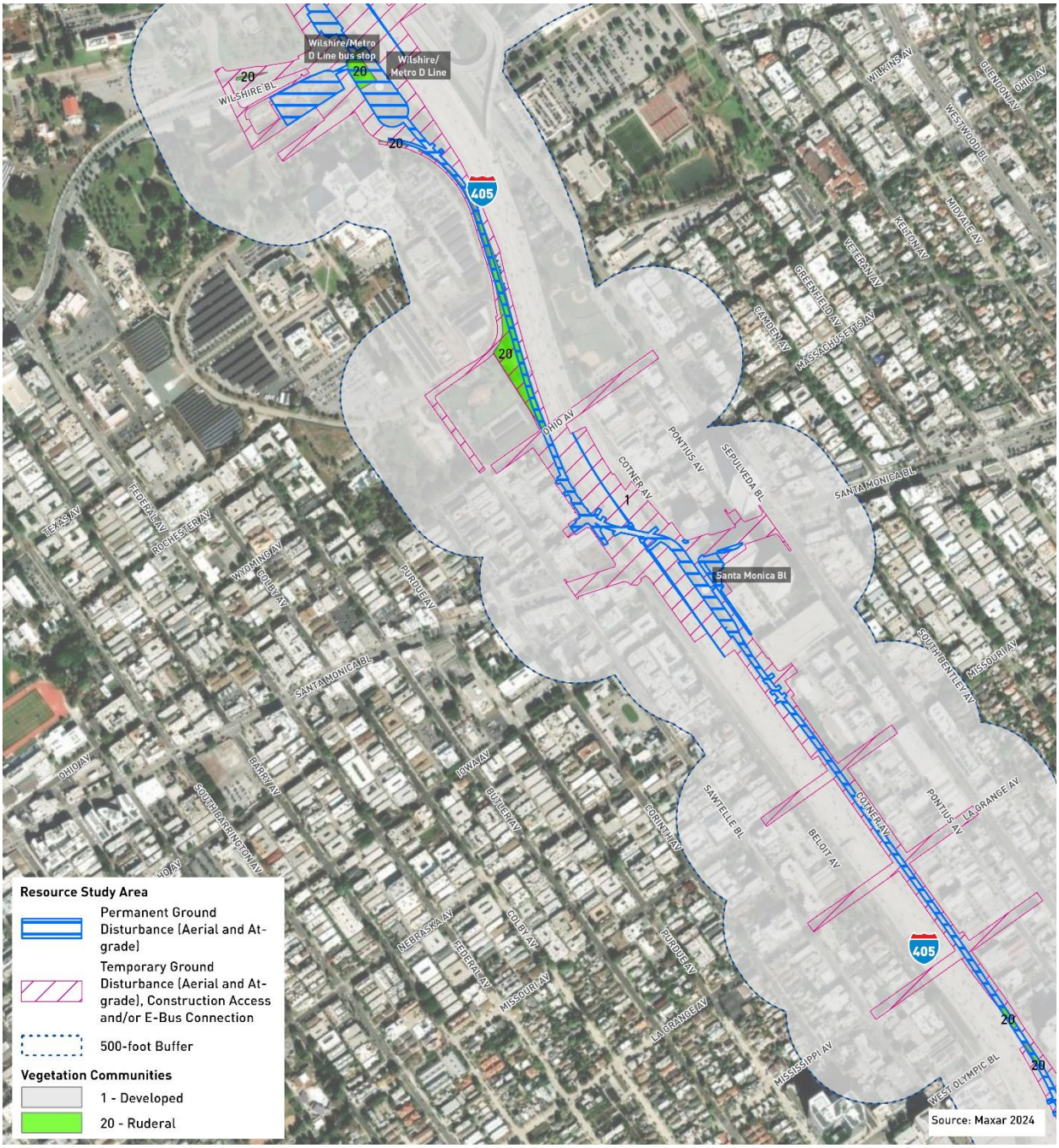
CDFW = California Department of Fish and Wildlife

Figure 6-13. Alternative 1: Vegetation Communities, Map 1 of 14



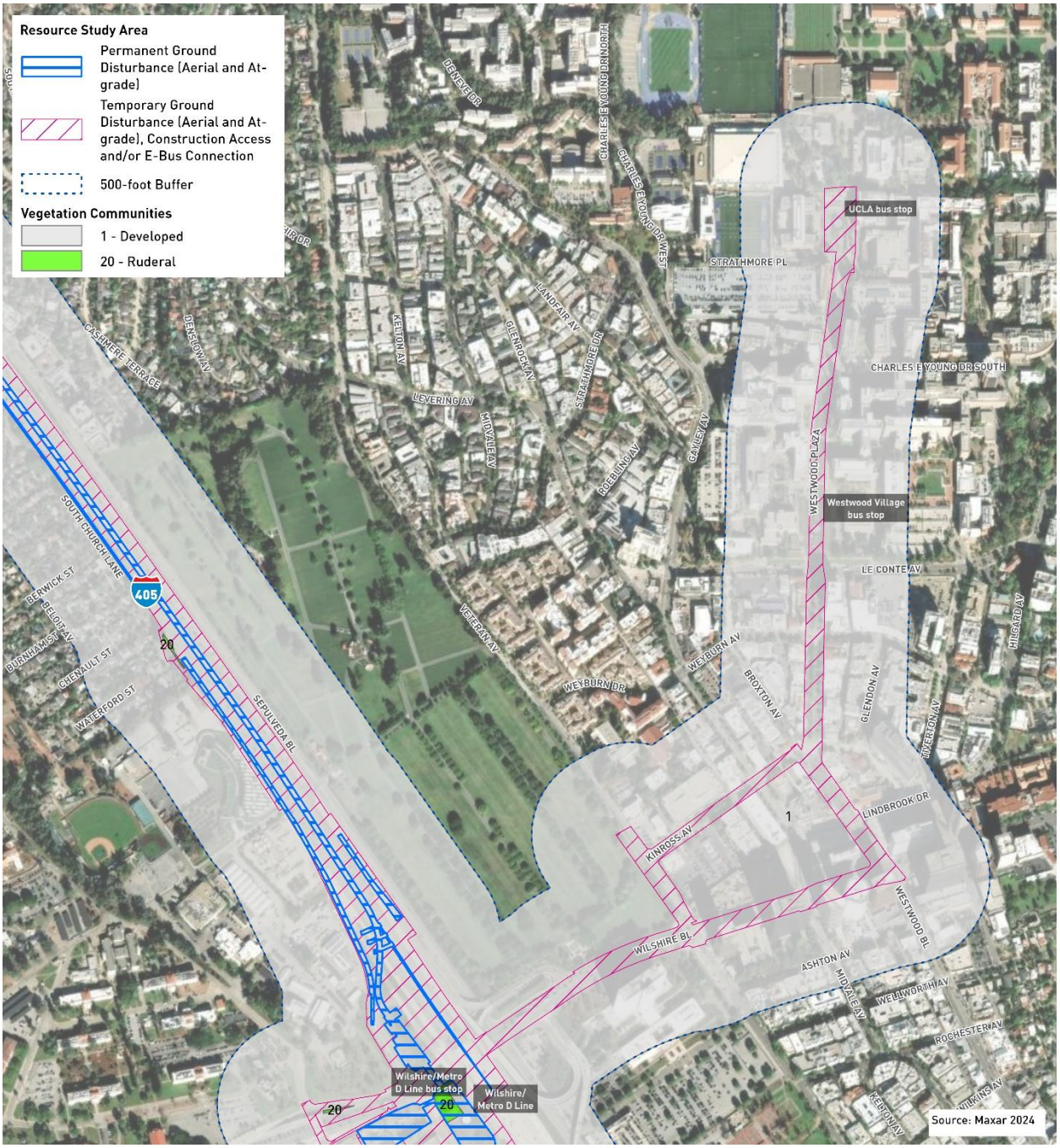
Source: HTA, 2024

Figure 6-14. Alternative 1: Vegetation Communities, Map 2 of 14



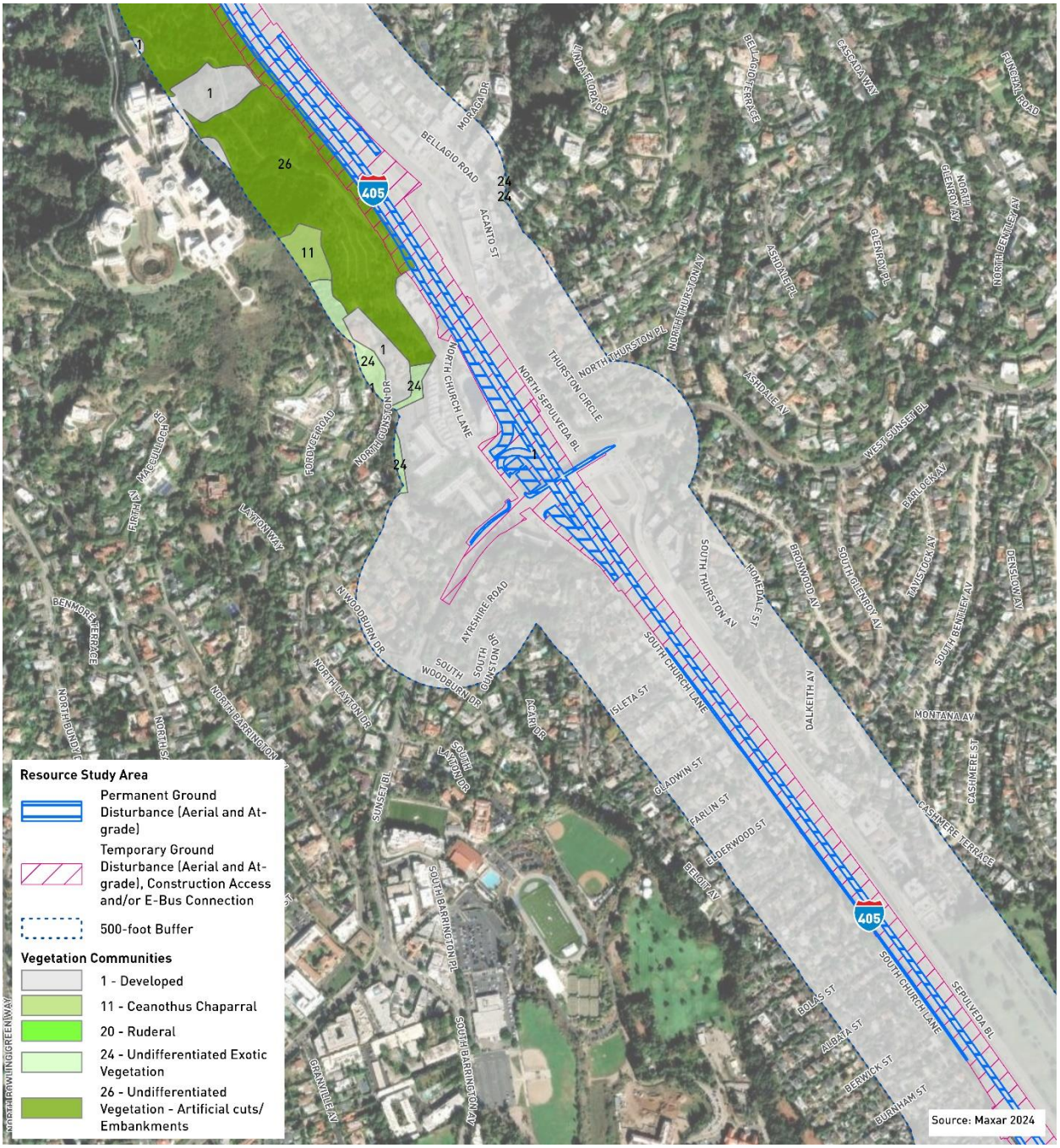
Source: HTA, 2024

Figure 6-15. Alternative 1: Vegetation Communities, Map 3 of 14



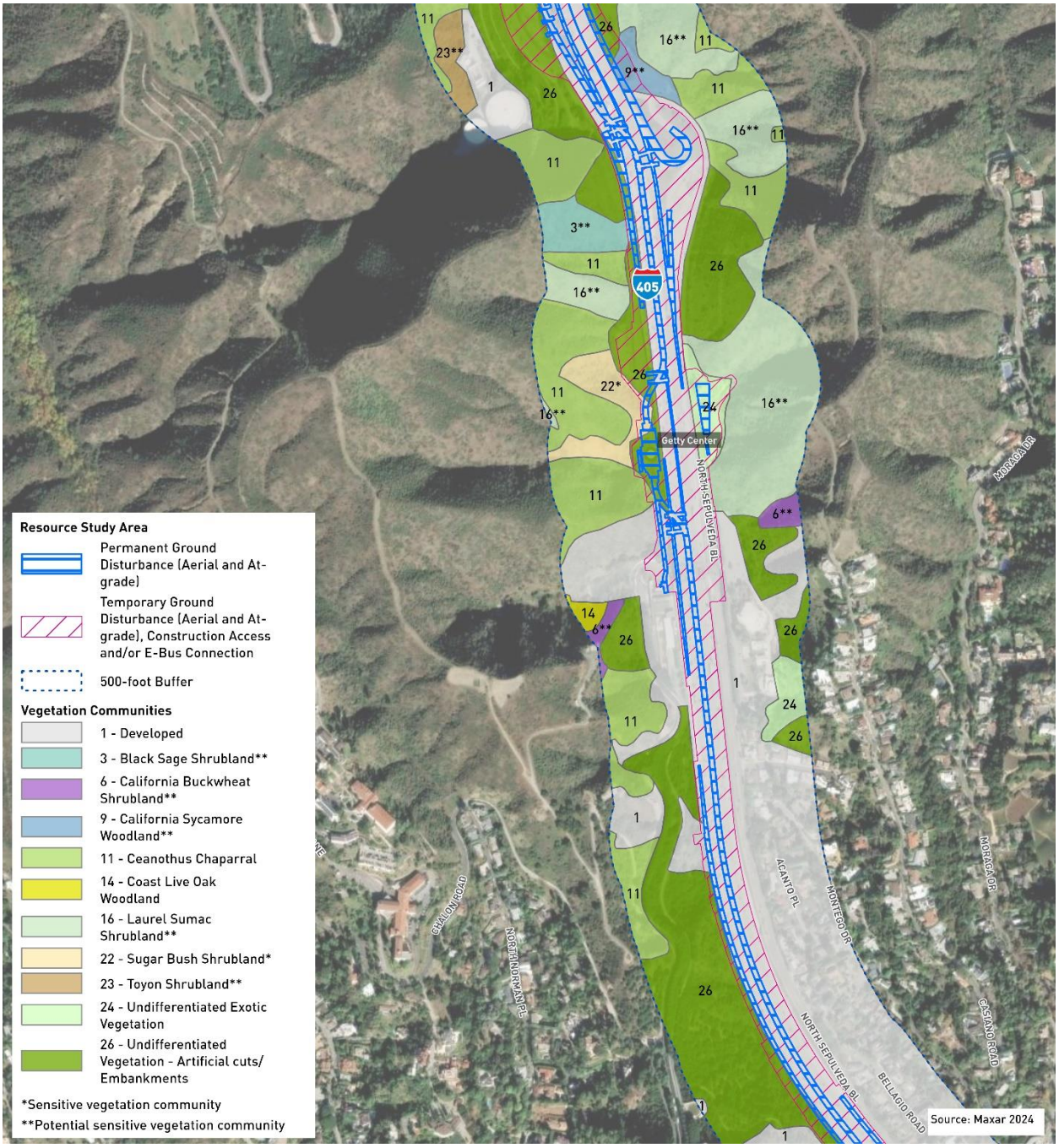
Source: HTA, 2024

Figure 6-16. Alternative 1: Vegetation Communities, Map 4 of 14



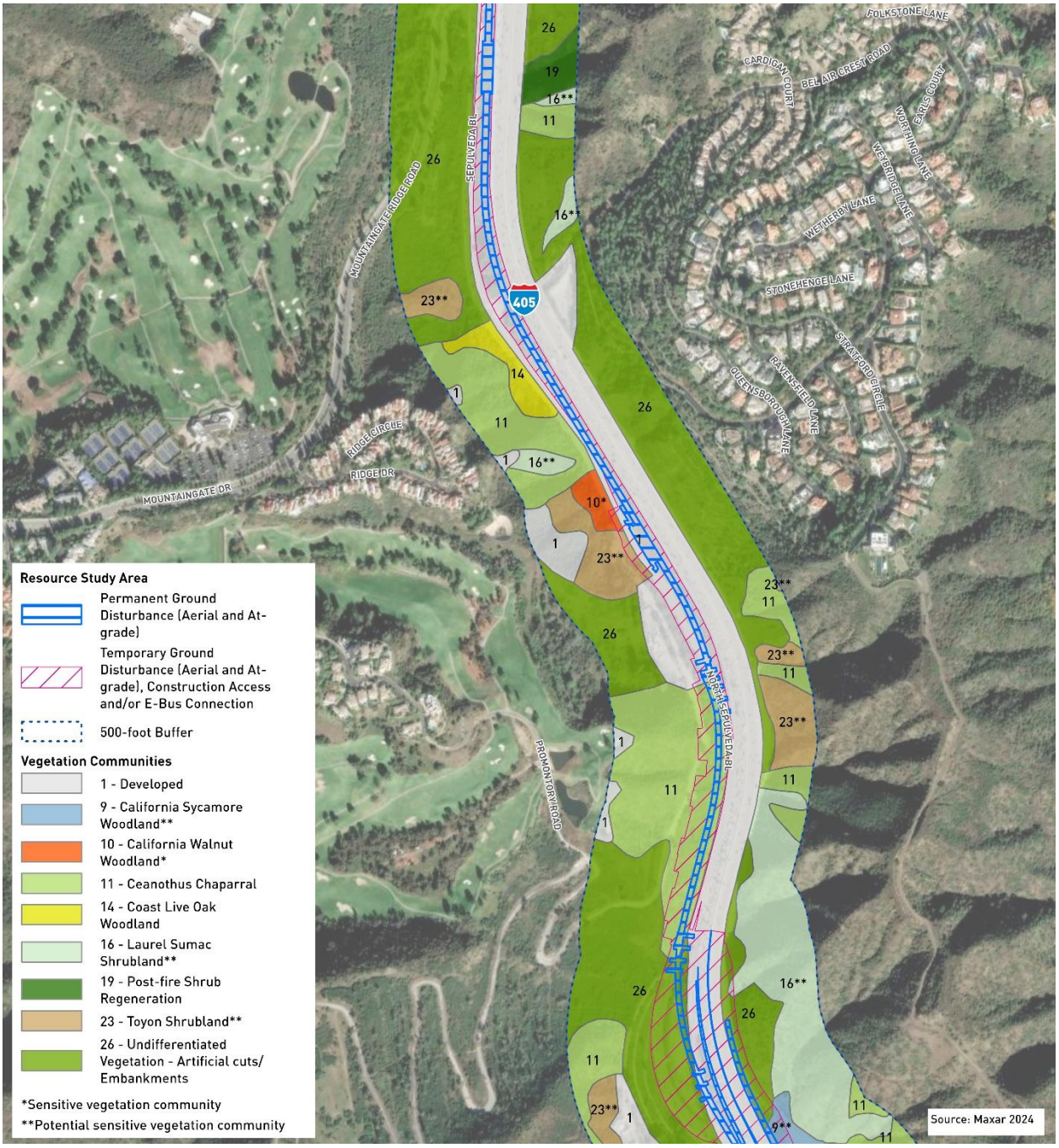
Source: HTA, 2024

Figure 6-17. Alternative 1: Vegetation Communities, Map 5 of 14



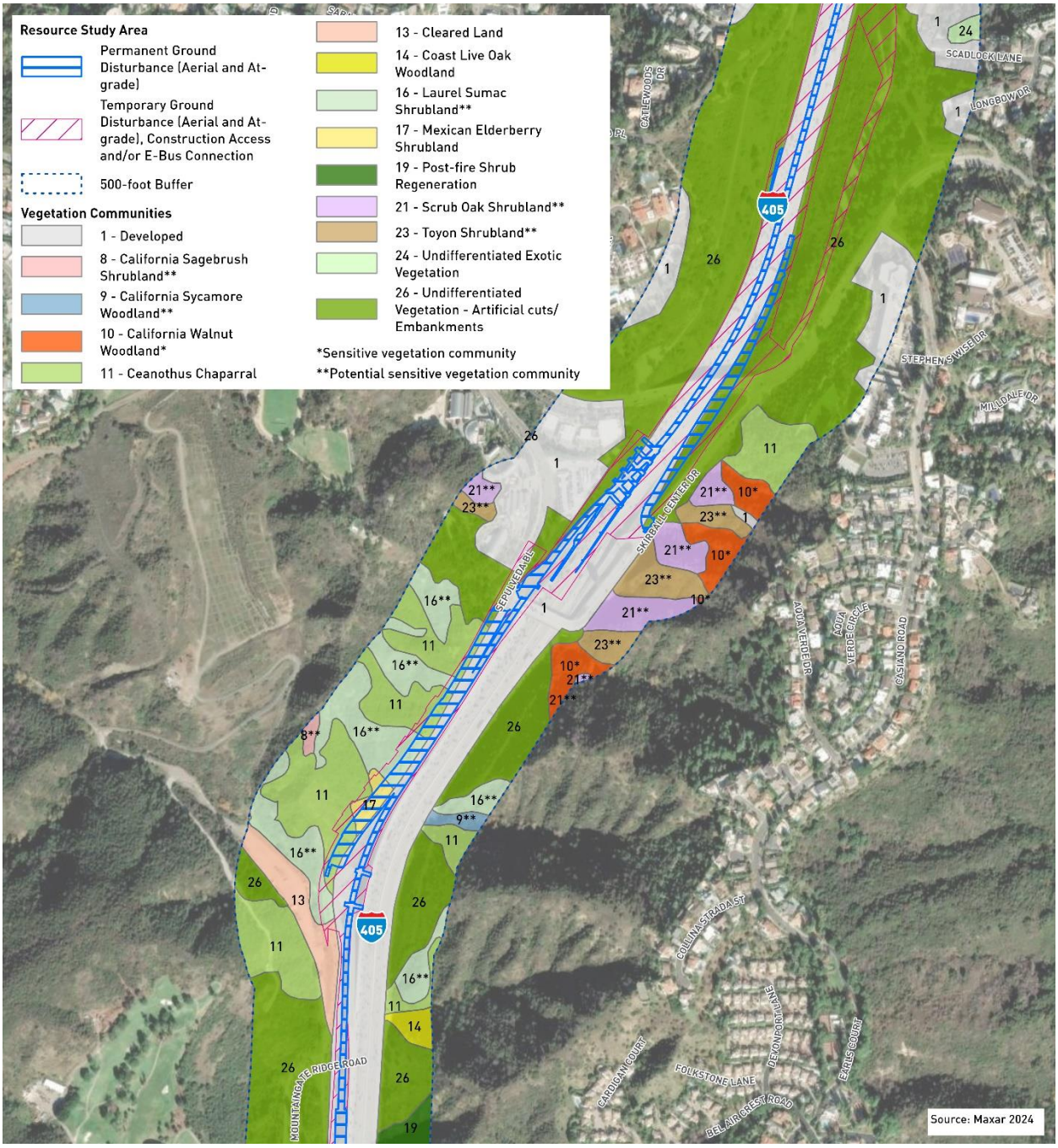
Source: HTA, 2024

Figure 6-18. Alternative 1: Vegetation Communities, Map 6 of 14



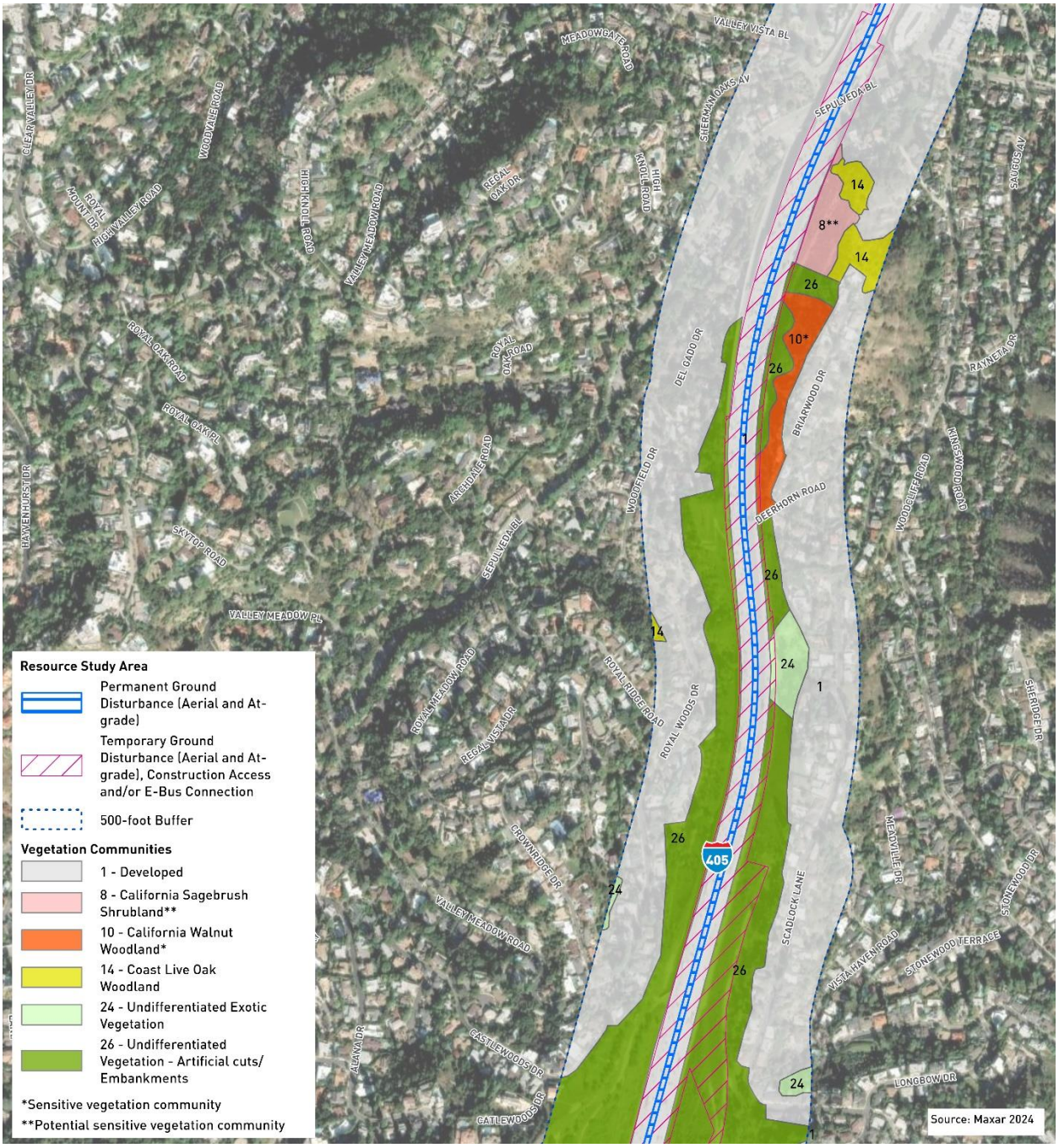
Source: HTA, 2024

Figure 6-19. Alternative 1: Vegetation Communities, Map 7 of 14



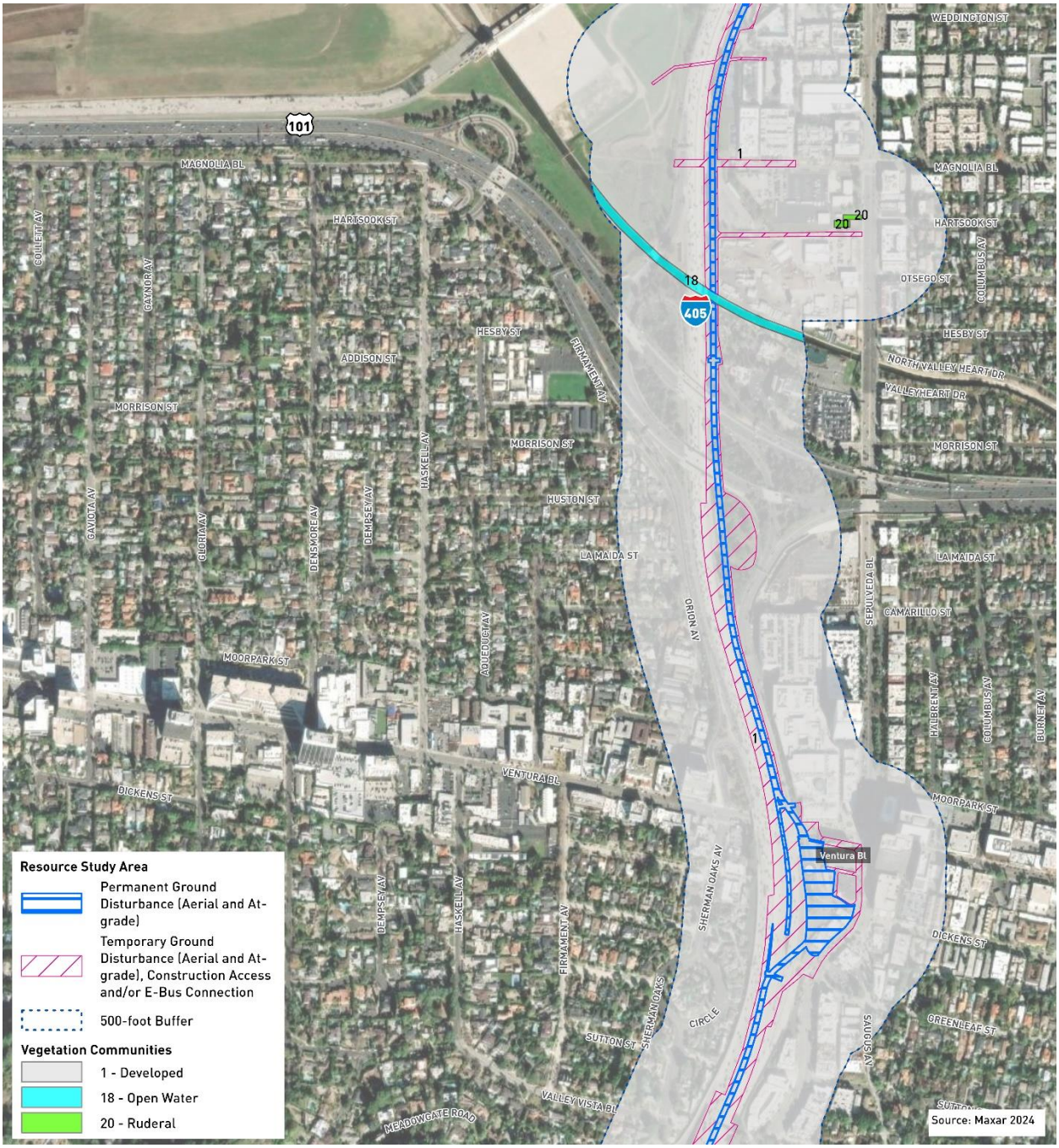
Source: HTA, 2024

Figure 6-20. Alternative 1: Vegetation Communities, Map 8 of 14



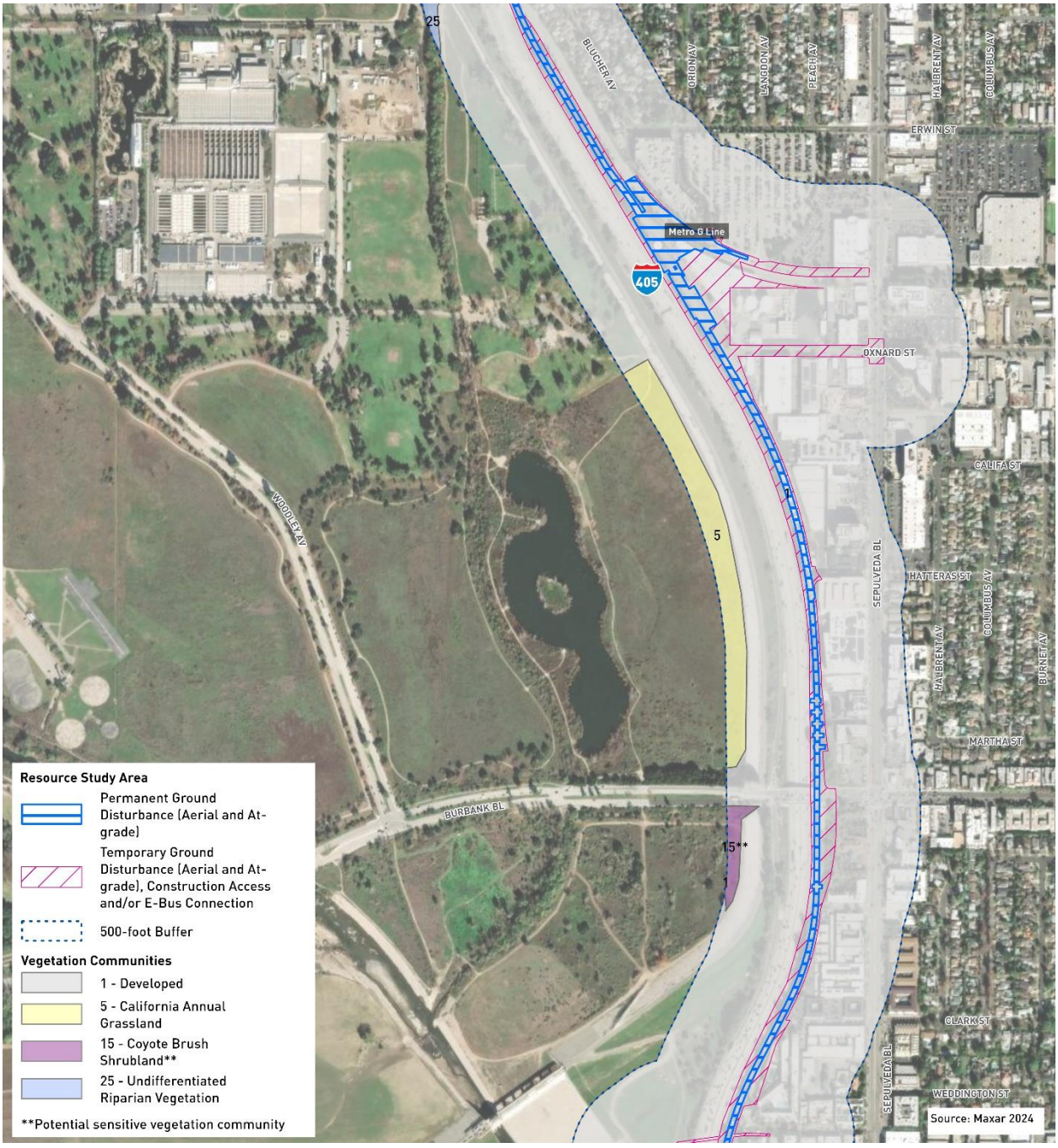
Source: HTA, 2024

Figure 6-21. Alternative 1: Vegetation Communities, Map 9 of 14



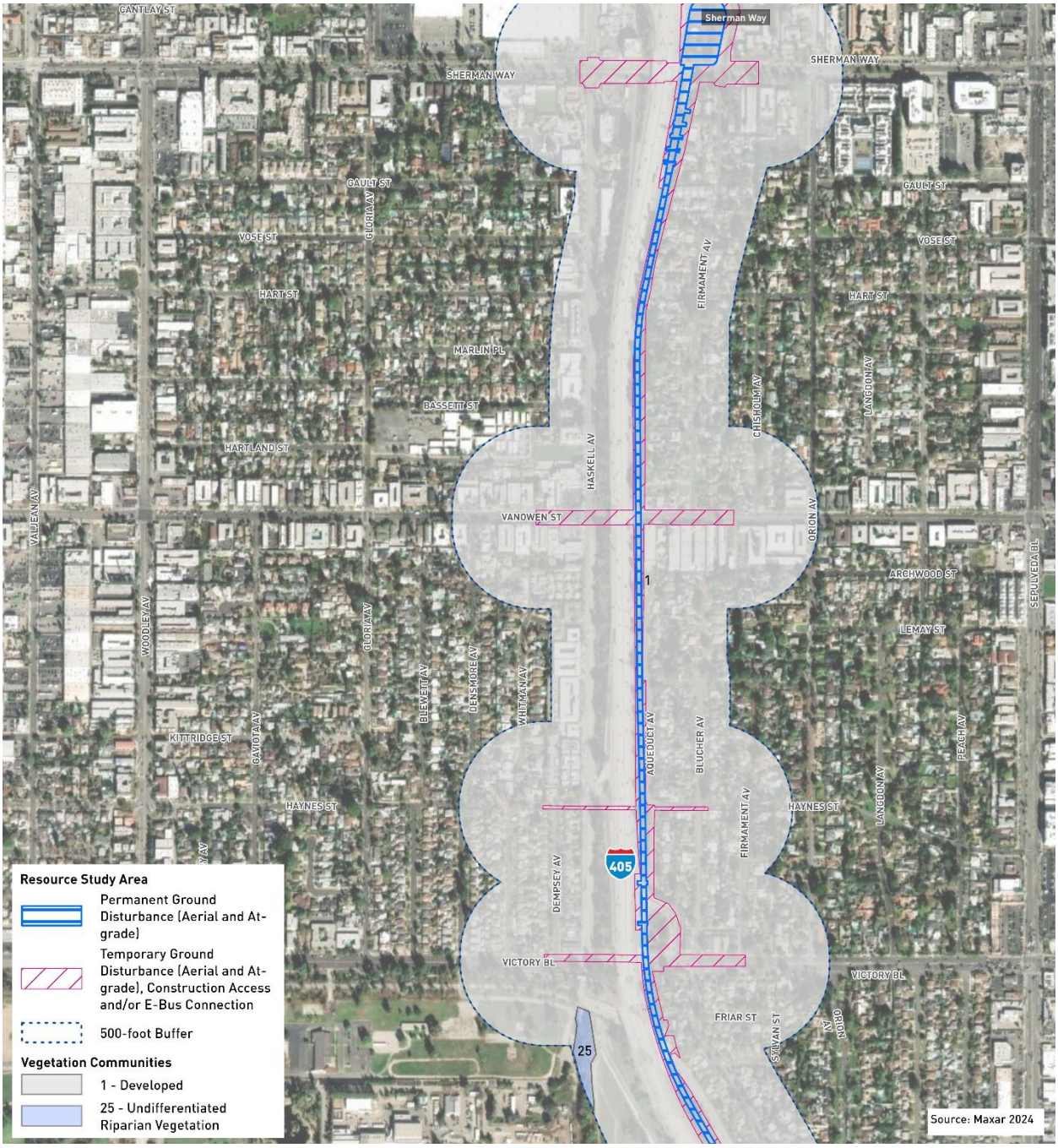
Source: HTA, 2024

Figure 6-22. Alternative 1: Vegetation Communities, Map 10 of 14



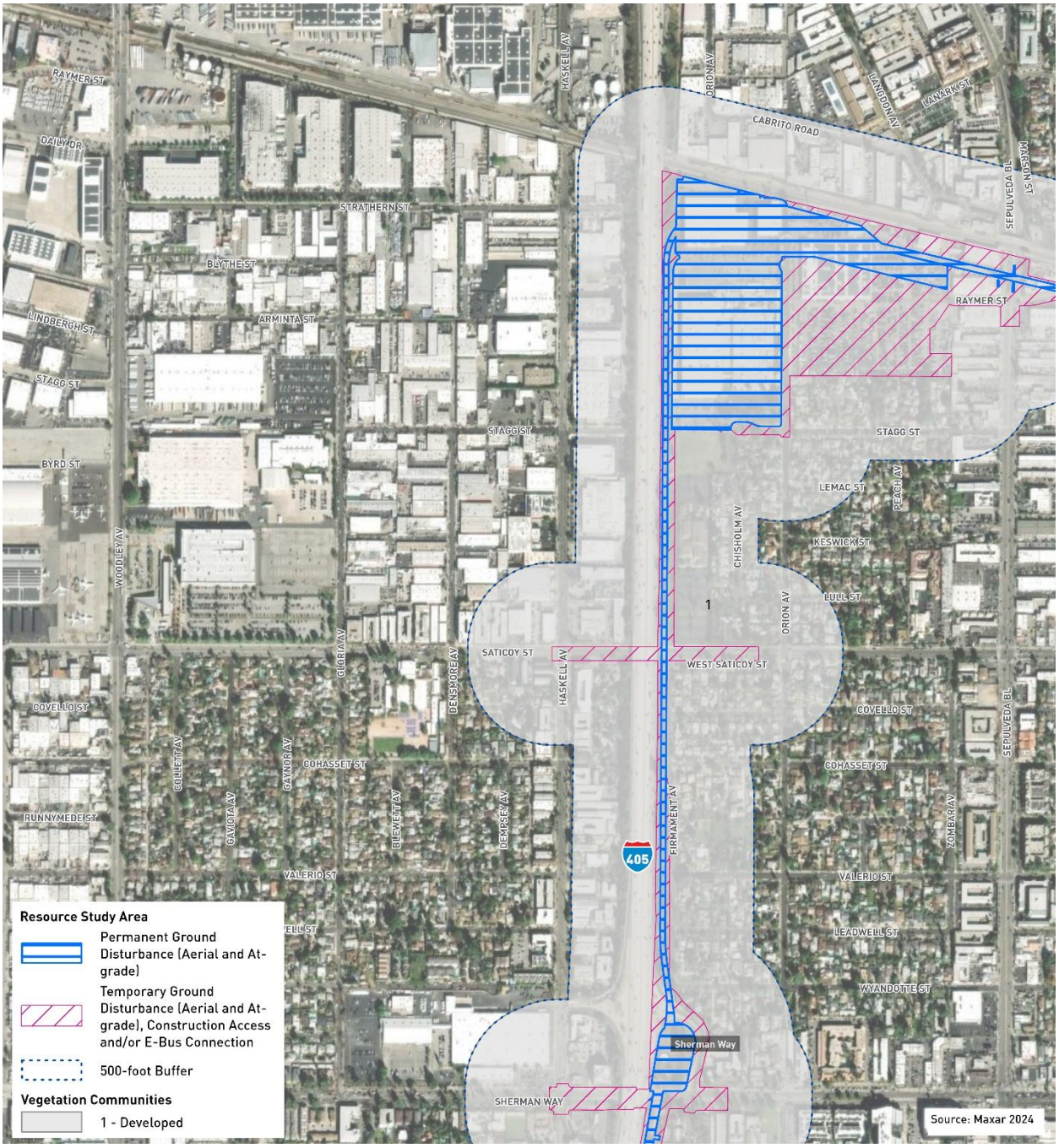
Source: HTA, 2024

Figure 6-23. Alternative 1: Vegetation Communities, Map 11 of 14



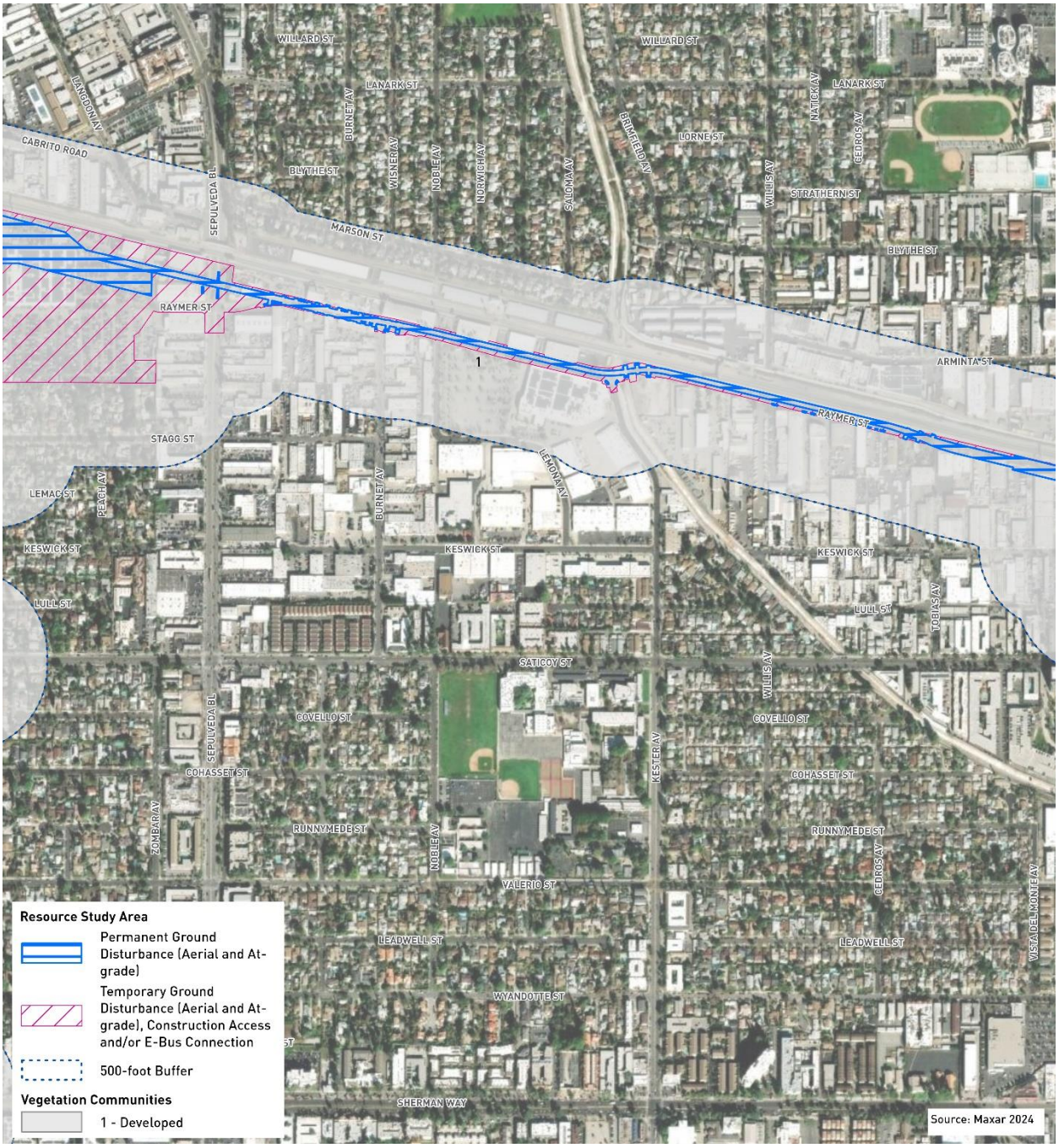
Source: HTA, 2024

Figure 6-24. Alternative 1: Vegetation Communities, Map 12 of 14



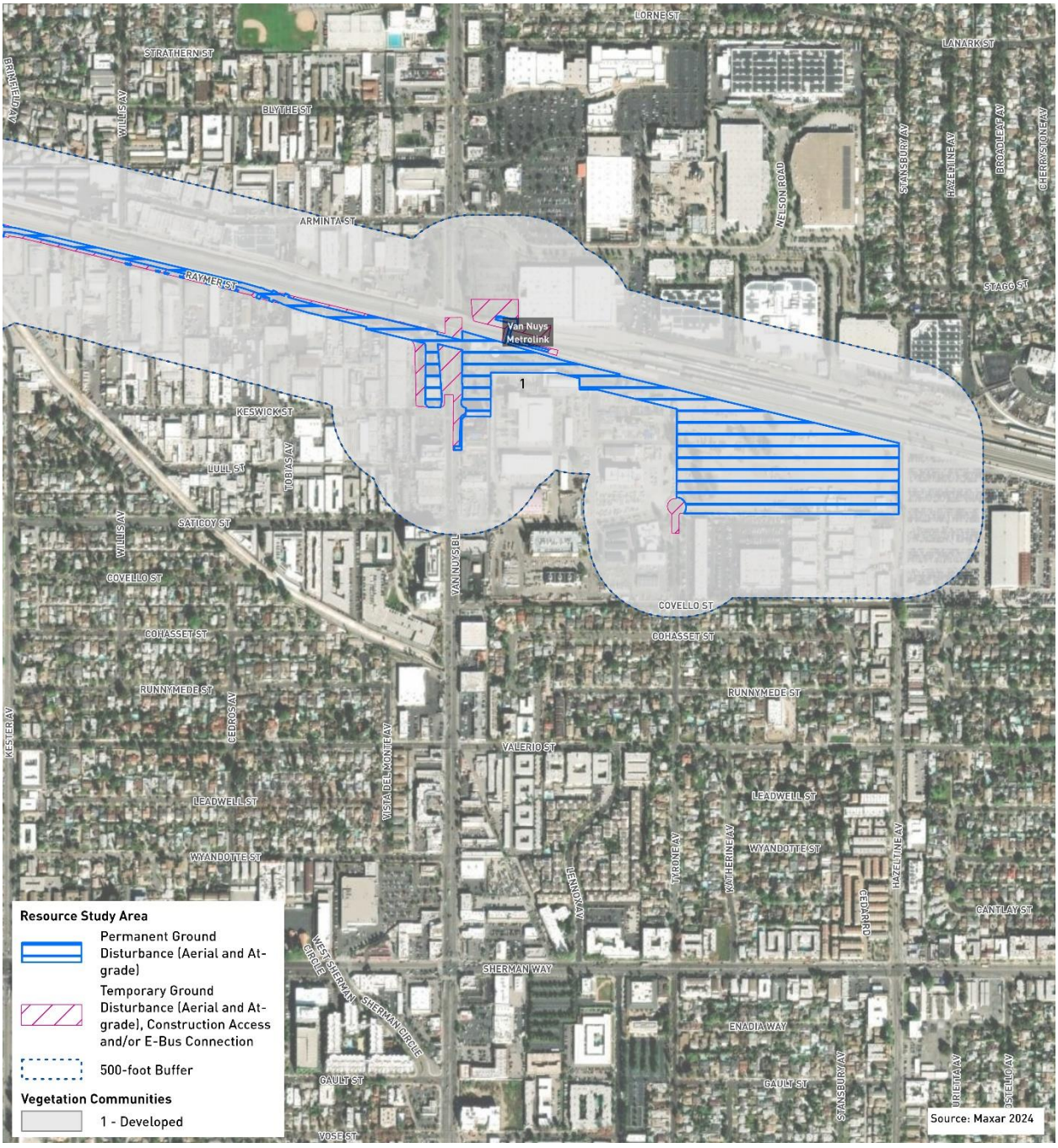
Source: HTA, 2024

Figure 6-25. Alternative 1: Vegetation Communities, Map 13 of 14



Source: HTA, 2024

Figure 6-26. Alternative 1: Vegetation Communities, Map 14 of 14



Source: HTA, 2024

Developed

The developed cover class consists of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or minimal ornamental landscaping. Ornamental landscaping was demarcated during the tree and shrub inventory as a subset of the developed cover class. The ornamental landscaping subcategory is characterized by developed areas dominated by ornamental trees, shrubs, grasses, and herbs, with some areas including native species. The dominant ornamental trees include carob tree (*Ceratonia siliqua*), Chinese banyan (*Ficus microcarpa*), shamel ash (*Fraxinus uhdei*), Chinese elm (*Ulmus parvifolia*), jacaranda (*Jacaranda mimisifolia*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Mexican fan palm (*Washingtonia robusta*), and several species of eucalyptus trees (*Eucalyptus* spp.). Dominant native trees found in this subcategory include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and southern California black walnut (*Juglans californica*). This cover class represents 82.6 percent the Alternative 1 RSA and occurs throughout it.

Post Fire Shrub Regeneration and Undifferentiated Categories- Artificial cuts/Embankments and Exotic Vegetation

These designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided; combined they represent 9.9 percent of the Alternative 1 RSA. Areas of undifferentiated vegetation will be further refined upon future analysis and field surveys prior to initiation of construction. The post fire shrub regeneration classification refers to areas that have experienced wildlife where shrub root bases survived the fire and resprouting has begun. Undifferentiated areas categorized as artificial cuts/embankments are subject to anthropogenic disturbance where vegetation is periodically altered through removal along roadways. Within these classifications, approximately 96 percent of acreage is within the artificial cuts/embankments, 4 percent is undifferentiated exotic vegetation, and less than 1 percent is within post fire shrub regeneration. Post fire shrub regeneration occurs in the central portion of the Alternative 1 RSA where the Santa Monica Mountains intersect the Alternative 1 RSA. Undifferentiated exotic vegetation and undifferentiated vegetation-artificial cuts/embankments occur throughout the Alternative 1 RSA.

Ceanothus Chaparral

Ceanothus chaparral is characterized by a dominance of ceanothus (*Ceanothus* spp.). Laurel sumac (*Malosma laurina*) and toyon (*Heteromeles arbutifolia*) can also be present but at much lower cover. Other species typically found in the shrub layer of this community include chamise (*Adenostoma fasciculatum*), sugar bush (*Rhus ovata*), and black sage (*Salvia mellifera*) (NPS, 2006). The tree layer is emergent and open and may include coast live oak, California black walnut and/or California bay (*Umbellularia californica*) with low levels of canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes chilicothe (*Marah macrocarpa*), foxtail brome (*Bromus madritensis*), coast range melic (*Melica imperfecta*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), giant wild rye (*Elymus condensatus*) and black mustard (*Brassica nigra*) (NPS, 2006). Ceanothus chaparral represents 3.0 percent of the Alternative 1 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

Laurel Sumac Shrubland

Laurel sumac shrubland occurs on gentle to very steep southeast- to northwest- facing slopes at low elevations between approximately 0 to 1,750 feet (NPS, 2006). Laurel sumac is primarily the dominant shrub species within this vegetation community (NPS, 2006). Codominant and co-occurring species include coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), Menzies'

goldenbush (*Isocoma menziesii*), lemonade berry (*Rhus integrifolia*), sugar bush, greenbark ceanothus (*Ceanothus spinosus*), Mexican elderberry (*Sambucus lexippua*), hollyleaf cherry (*Prunus ilicifolia*), toyon, hollyleaf redberry (*Rhamnus ilicifolia*), scrub oak (*Quercus berberidifolia*), and mountain mahogany (*Cercocarpus betuloides*). Non-native species such as tobacco tree (*Nicotiana glauca*), castor bean (*Ricinus communis*), and fountain grass (*Pennisetum setaceum*) are common in disturbed areas within this vegetation community. Laurel sumac shrubland represents 1.9 percent of the Alternative 1 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

Toyon Shrubland

Toyon shrubland is characterized by the dominance of toyon. Laurel sumac, hollyleaf cherry, and ceanothus can be codominant species within this vegetation community. Other species that may be present include Mexican elderberry, southern California black walnut, and coast live oak. Toyon shrubland represents 0.6 percent of the Alternative 1 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

California Walnut Woodland

California walnut woodland is characterized by the dominance of California black walnut. Other species that can be co-dominate within the tree layer include white alder (*Alnus rhombifolia*), two-petaled ash (*Fraxinus dipetala*), toyon, coast live oak, valley oak (*Quercus lobata*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Mexican elderberry, and California bay (Sawyer et al., 2009). The shrub layer is sparse to intermittent, and the herbaceous layer is sparse or grassy (Sawyer et al., 2009). California walnut woodland represents 0.3 percent of the Alternative 1 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

California Annual Grassland

California annual grassland includes wild oats (*Avena sp*.), red brome (*Bromus rubens*), ripgut brome, prickly lettuce (*Lactuca seriola*), black mustard, and the occasional mulefat (*Baccharis salicifolia*) and/or coyote brush. California annual grassland represents 0.3 percent of the Alternative 1 RSA and occurs on the northern end of the RSA on the east side of the Sepulveda Basin.

Coast Live Oak Woodland

Coast live oak woodland is an open to dense tree community with coast live oak as the dominant overstory species and Engelmann oak (*Quercus engelmannii*) as an occasional associate. The shrub understory of this community is well developed in undisturbed sites and may include Mexican elderberry, gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), and toyon (Beauchamp, 1986; Holland, 1986). An herbaceous stratum is usually present including miner's lettuce (*Claytonia perfoliata* var. *perfoliata*), chickweed (*Stellaria media*), and non-native grasses. Coast live oak woodland represents 0.2 percent of the Alternative 1 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

Scrub Oak Shrubland

Scrub oak shrubland occurs on gentle to very steep northwest- and northeast-facing slopes at low to middle elevations between approximately 400 to 2,500 feet (NPS, 2006). Scrub oak is dominant in the shrub layer with toyon often occurring as well. Other species that occasionally occur within the shrub layer of this community include chamise, sugar bush, purple sage (*Salvia leucophylla*), greenbark ceanothus, poison oak, and laurel sumac (NPS, 2006). The tree layer is open and emergent and sometimes includes coast live oak, California black walnut, and valley oak (NPS, 2006). The herbaceous layer is diverse and sometimes includes tocalote, foxtail brome, black mustard, ripgut brome, chilicothe,

clustered tarweed (*Hemizonia fasciculata*), coast range melic, and mustard (NPS, 2006). Scrub oak shrubland represents 0.2 percent of the Alternative 1 RSA and occurs on the northern end of the intersection of the Santa Monica Mountains with the RSA.

Cleared Land

Cleared land has had native vegetation eliminated by grading, agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of another plant association. The vegetation is sparse, when present, and typically includes non-native weed species including mustard, Russian thistle, fountain grass, and horseweed (*Erigeron canadensis*), among others. Cleared land represents 0.1 percent of the Alternative 1 RSA and occurs on the west side of I-405 on the northern end of the intersection of the Santa Monica Mountains and the Alternative 1 RSA.

Sugar Bush Shrubland

Sugar bush shrubland occurs on somewhat steep to steep southwest- and northwest-facing slopes at low elevations between approximately 600 to 1,700 feet (NPS, 2006). The shrub layer is dominated by sugar bush (NPS, 2006). Other species that occur within this community include bush-mallow, black sage, toyon, and laurel sumac (NPS, 2006). The herbaceous layer is generally open with a varying mixture of native and non-native species that can sometimes include black mustard, tocalote, mustard, and giant wild rye (NPS, 2006). The emergent tree layer includes coast live oak and California black walnut but is usually absent (NPS, 2006). Sugar bush shrubland represents 0.1 percent of the Alternative 1 RSA and occurs toward the southern end of the Alternative 1 RSA, adjacent to the Getty Center.

California Sagebrush Shrubland

California sagebrush shrubland occurs on gentle to steep slopes of variable aspect at low elevations between approximately 0 to 2,000 feet (NPS, 2006). California sagebrush is dominant in the shrub layer (NPS, 2006). Other species that can be found in the shrub layer of this community include laurel sumac, purple sage, coyote brush, and black sage (NPS, 2006). The tree layer is emergent and open and infrequently includes coast live oak, California black walnut, and Peruvian pepper tree (*Schinus molle*) at low canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, black mustard, tocalote, mustard, giant wild rye, and ripgut brome (NPS, 2006). California sage shrubland represents 0.1 percent of the Alternative 1 RSA and occurs on the northern portion of the Alternative 1 RSA.

Black Sage Shrubland

Black sage shrubland occurs on moderate to very steep southeast- and southwest-facing slopes at low elevations between approximately 50 to 2,550 feet (NPS, 2006). Black sage is the dominant shrub within this community (NPS, 2006). Other species often included in the shrub layer include chaparral yucca (*Yucca whipplei*), chamise, and California sagebrush (*Artemisia californica*) (NPS, 2006). Trees often found within this community include California black walnut, coast live oak, and Peruvian pepper tree (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, tocalote, and black mustard (NPS, 2006). Other herbs present may include mustard (*Hirschfeldia incana*), giant wild rye, coast range melic, and foothill needle grass (*Stipalepida*) (NPS, 2006). Black sage shrubland represents 0.1 percent of the Alternative 1 RSA and occurs toward the southern end of the Alternative 1 RSA, north of the Getty Center.

Ruderal

The ruderal cover class consists of areas that are dominated by bare ground or invasive non-native forbs (herbaceous, non-grass species) that are adapted to a regime of frequent disturbances. Non-native annual grasses will occur in low abundance and typically contribute less than 50 percent to the entire herbaceous cover. Species typically found in this cover class include non-native grasses and forbs such as wild oats, bromes, mustards, thistles, tumbleweed (*Salsola* sp.), tobacco tree and castor bean. Ruderal land often contains trash and rubble, such as fragments of concrete or asphalt, and is dominated by invasive species. This cover class represents 0.1 percent of the Alternative 1 RSA and occurs on the northern and southern ends of the RSA.

California Sycamore Woodland

California sycamore woodland is characterized by the dominance of western sycamore. Coast live oak can sometimes be codominant within the tree layer. Other species that may be present within this community include white alder, California black walnut, Fremont cottonwood (*Populus fremontii*), valley oak, narrowleaf willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), red willow, arroyo willow, (*Salix lutea*), Peruvian pepper tree, and California bay. California sycamore woodland represents 0.1 percent of the Alternative 1 RSA and occurs in the central portion where the Santa Monica Mountains intersect the Alternative 1 RSA.

Open Water

This community consists of any open body including lakes, reservoirs, bays, flowing water within a river channel, and small ponds along stream courses. Open water represents 0.1 percent of the Alternative 1 RSA and occurs on the northern end, southeast of the Sepulveda Basin within the Los Angeles River.

California Buckwheat Shrubland

California buckwheat shrubland occurs on gentle to very steep slopes of variable aspect at low elevations between approximately 15 to 1,850 feet (NPS, 2006). California buckwheat is dominant in the shrub layer. Other species found in the shrub layer include deerweed, California sagebrush, and laurel sumac (NPS, 2006). The herbaceous layer is largely a sparse mix of non-native species and can include foxtail brome, ripgut brome, black mustard, and tocalote (NPS, 2006). The emergent tree layer is largely absent (NPS, 2006). California buckwheat shrubland represents 0.1 percent of the Alternative 1 RSA and occurs on the southern portion, south of the Getty Center.

Coyote Brush Shrubland

This community is dominated by coyote brush with a codominant of mulefat. Coyote brush shrubland is found in native shrubland areas with a history of anthropogenic disturbance. This community represents less than 0.1 percent of the Alternative 1 RSA and occurs on the northern end, on the east side of the Sepulveda Basin.

Undifferentiated Riparian Vegetation

Undifferentiated designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Undifferentiated riparian vegetation has the potential to be sensitive depending on species present within the community; this will be further refined upon future analysis and field surveys prior to initiation of construction. Undifferentiated riparian vegetation represents less than 1 percent of the Alternative 1 RSA and occurs on the northern end in the Sepulveda Basin. For this analysis, Metro is conservatively considering impacts to this community to be significant pending further analysis and refinement of vegetation mapping.

Mexican Elderberry Shrubland

Mexican elderberry shrubland is characterized by the dominance of Mexican elderberry. Species that can be codominant within this community include giant wild rye and toyon (NPS, 2006). Mexican elderberry shrubland represents less than 0.1 percent of the Alternative 1 RSA and occurs on the northern end of the intersection of the Santa Monica Mountains and the Alternative 1 RSA.

6.2.5.3 Trees Within Proposed Construction Areas

Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. Abundant trees occur within the Alternative 1 RSA. The northern and southern portions of the Alternative 1 RSA are highly urbanized and dominated by non-native, ornamental trees planted within residential, commercial, and roadside ornamental landscapes. Native trees, such as coast live oak, western sycamore, and southern California black walnut, occur in smaller numbers in various locations throughout the northern and southern portions of the Alternative 1 RSA. Due to their location adjacent to roadways, there is potential for several of these native trees to be revegetated from entities such as Caltrans. In the central, less developed portion of the Alternative 1 RSA, native trees are more frequent, specifically to the east and west of I-405 from Valley Vista Boulevard to Getty Center Drive where the Alternative 1 entirely aerial monorail alignment will run along I-405. Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, contains information about the protected trees and shrubs that were mapped within the Alternative 1 RSA.

Because initial field assessments did not indicate oak woodland presence, the County Oak Woodland Plan is not considered herein. However, application of this conservation plan will be assessed in the Tree Expert's Tree Report once a preferred alternative is selected to verify oak woodland absence.

Within SMMNRA, trees within the Tree Survey Area were located on lands owned or managed by the County of Los Angeles and the MRCA within the Sepulveda Pass Open Space, Mission Canyon Open Space, and the MRCA Mountaingate Conservation Easement.

6.2.5.4 Sensitive Natural Vegetation Communities

Based on vegetation community mapping, two identified sensitive communities, California walnut woodland (S3) and sugar bush shrubland (S3), are present within the Alternative 1 RSA. Eight identified additional communities and one undifferentiated category have potential to be considered sensitive depending on the associated plants present, i.e., associations (see Section 3.2.2 for additional details). For these communities, classification of vegetation associations is required to determine sensitivity, since not all associations within the community are sensitive. Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping. The identified communities include laurel sumac shrubland, black sage shrubland, toyon shrubland, coyote brush shrubland, scrub oak shrubland, California buckwheat shrubland, California sagebrush shrubland, and California sycamore woodland. One additional community, undifferentiated riparian, also has potential to be sensitive depending on species present within the community, which was not defined in SMMNRA mapping. Determination of the sensitivity of these nine communities would occur during future analysis and refinement of vegetation mapping in the field after a preferred alternative is selected; for the purposes of this analysis, these communities will be marked as potentially sensitive and will be included in acreage calculations of impacts to sensitive communities. Additional sensitive vegetation communities may be present within the Alternative 1 RSA that were not captured in the vegetation mapping effort, if their extent is smaller than the minimum mapping unit for SMMNRA mapping (0.5 hectare).

6.2.5.5 Special-Status Plant Species

Of the 49 special-status plant species with potential to occur within the Project Study Area, 19 were identified as having potential to occur within the Alternative 1 RSA based on the CNDDB, California Native Plant Society (CNPS), IPaC, and iNaturalist database searches (CDFW, 2023a; CNPS, 2024; USFWS, 2023a; iNaturalist, 2024 to 2024aa). These species are listed in Table 6-7 with an assessment of their potential to occur within the Alternative 1 RSA.

Seventeen of the special-status plant species were concluded to be known or have potential to occur within the Alternative 1 RSA (Table 6-7); the remaining two were determined to have no potential to occur and are not discussed further for Alternative 1. The 12 species with low potential are considered unlikely to be detected within the Alternative 1 RSA or impacted by Alternative 1 due to the lack of known recent occurrences and suitable habitat within the Alternative 1 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 6-7. Within Table 6-7, rows discussing species that were determined to be present or to have a high potential to occur within the Project Study Area are highlighted blue.

Table 6-7. Alternative 1: Special-Status Plant Species with Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in RSA
Astragalus brauntonii	Braunton's milk-vetch	FE 1B.1	Fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum*), yucca (*Yucca whipplei*), and the rare Tecate cypress (*Cupressus forbesii*).	**High**. Suitable habitat occurs within the Alternative 1 RSA. Recent observations of the species have been made 0.15 mile east of the Alternative 1 RSA in Bel Air Crest and within Fossil Ridge Park approximately 1.5 miles east of the Alternative 1 RSA (2019) (iNaturalist, 2024o).
Atriplex coulteri	Coulter's saltbush	1B.2	Associated with areas of saline and alkaline soils, such as ocean bluffs.	**No Potential.** Suitable habitat is not present in the Alternative 1 RSA. Only historical observations exist within 10 miles of the Alternative 1 RSA (1881 and 1902) (CDFW, 2023a).
Berberis nevinii	Nevin's barberry	FE/SE 1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian scrub. Found in gravelly or sandy micro habitats. Blooms from February (March)–June at elevations ranging from 230 to 2,750 feet.	**Low**. Suitable habitat is present within the Alternative 1 RSA; however, the closest non-ornamental observations are over 3 miles east of the Alternative 1 RSA (iNaturalist, 2024p).
Calochortus clavatus var. *gracilis*	Slender mariposa lily	1B.2	Chaparral, coastal scrub, and valley and foothill grasslands, on shaded foothill canyons within the Transverse Ranges and the San Gabriel Mountains. Occurs between 1,050 and 3,280 feet.	**Moderate**. Suitable habitat is present within the Alternative 1 RSA and the species was observed in approximately 6 miles west 2017 in Topanga Canyon (CDFW, 2023a) and in 2023 at the Hansen Dam Golf Course 4.5 miles northeast of the Alternative 1 RSA (iNaturalist, 2024q).
Centromadia parryi ssp. *australis*	Southern tarplant	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Blooms from May to November at elevations ranging from 0 to 1,575 feet.	**Low.** Suitable habitat is present in the Alternative 1 RSA. One recent record from 2022 is located in Kenneth Hahn State Recreation Area, 4.5 miles southeast of the southern terminus of the Alternative 1 RSA (iNaturalist, 2024r). One historical record from 1957 located on a brushy hill east of the Getty is within the Alternative 1 RSA (CDFW, 2023a).
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	SE 1B.1	Sandy portions of coastal scrub, valley and foothill grassland, between 490 and 4,005 feet. Blooms April to July.	**Low.** Suitable habitat is present within the Alternative 1 RSA although only historical occurrences from the early 1900s are within 7 miles of the Alternative 1 RSA (CDFW, 2023a).
Dodecahema leptoceras	Slender-horned spineflower	FE/SE 1B.1	Found in sandy sites within chaparral, cismontane woodland, or alluvial fans within coastal scrub. Occurs between 655 and 2,495 feet.	**Low.** Suitable habitat is present within the Alternative 1 RSA. Two recent sightings in 2022 (iNaturalist, 2024t) and one historical observation (1906) (CDFW, 2023a) are located approximately 3 miles east of the Alternative 1 RSA.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in RSA
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT 1B.1	Chaparral, coastal sage scrub, on shaded, rocky slopes.	**Low.** Suitable habitat is present in the Alternative 1 RSA, although the plant is only currently known from 10 total locations. The nearest location is over 6 miles to the west in Topanga State Park, reported in 1987 and 2012 (CDFW, 2023a).
Horkelia cuneata var. *puberula*	Mesa horkelia	1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Blooms from February to July at elevations ranging from 225 to 2,655 feet.	**Low.** Suitable habitat is present in the Alternative 1 RSA and an observation from 1956 within the Alternative 1 RSA is reported from Sepulveda Boulevard near the Getty, although it is listed as possibly extirpated. (CDFW, 2023a).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Blooms from February to June at elevations ranging from 0-4,005 feet.	**Low.** Suitable habitat is present in the Alternative 1 RSA; two historical records from 1934 and 1966 are within 7 miles of the Alternative 1 RSA (CDFW, 2023a).
Malacothamnus davidsonii	Davidson's bushmallow	1B.2	On slopes of chaparral, oak woodland, and other habitats.	**High**. Suitable habitat is present in the Alternative 1 RSA. A recent (2021) observation is located 0.25 mile west of the Alternative 1 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021).
Monardella hypoleuca ssp. *hypoleuca*	White-veined monardella	1B.3	Chaparral and cismontane woodlands. Known only from the Santa Monica, Santa Ynes, and Sierra Madre Mountains.	**Low.** Suitable habitat is present in the Alternative 1 RSA. The nearest observation is from 2008 and is approximately 5 miles west of the Alternative 1 RSA near the Santa Ynez Canyon Trailhead (CDFW, 2023a).
Nama stenocarpa	Mud nama	2B.2	Marshes and swamps. Blooms from January to July at elevations ranging from 15 to 164 feet.	**Low.** Suitable habitat is not present in the Alternative 1 RSA. The last known occurrence within the Alternative 1 RSA is from 1902 around the VA Hospital Site (CDFW, 2023a); the area is now highly developed.
Nolina cismontana	Chaparral nolina	1B.2	Coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone substrates.	**High**. Suitable habitat is present, and species was detected within 1 mile of the Alternative 1 RSA in Deervale-Stone Canyon Park in 2020 (iNaturalist, 2024u).
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	2B.2	Wetlands, meadows, and seeps between 165 and 2,000 feet.	**No Potential.** No suitable habitat is present in the Alternative 1 RSA.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in RSA
Quercus dumosa	Nuttall's scrub oak	1B.1	Generally found on sandy soils near the coast, often found in chaparral and coastal sage scrub communities between 50 and 1,300 feet.	**High**. Suitable habitat is present in the Alternative 1 RSA. An individual was observed in 2024 approximately 0.50 mile outside the Alternative 1 RSA, east of the UCLA Gateway Plaza (iNaturalist, 2024v) and in 2009, a multi-stemmed individual was observed 3 miles southeast of the Alternative 1 RSA in Kenneth Hahn State Recreation Area (CDFW, 2023a).
Sagittaria sanfordii	Sanford's arrowhead	1B.2	Freshwater wetlands. Occurs between 0 and 2,135 feet. Blooms May to October (November).	**Low.** Suitable habitat is present in the Sepulveda Basin Recreation Area, adjacent to the Alternative 1 RSA. One recent observation (2021) was 1.5 miles west of the Alternative 1 RSA within the Los Angeles River (CDFW, 2023a) in the Sepulveda Basin Recreation Area where the river is free flowing with an earthen bottom. Within the Alternative 1 RSA, the river is within a concrete channel which has no potential to host this species. A second observation from 2022 is 0.75 mile east of the Alternative 1 RSA in the southern portion, adjacent to Holmby Park (iNaturalist, 2024w) within a private residence.
Symphyotrichum greatae	Greata's aster	1B.3	Within mesic microhabitats in chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Occurs between 985 to 6,595 feet. Blooms June to October.	**Low**. Suitable habitat is present in the Alternative 1 RSA. One historical, undated sample from Benedict Canyon in the Santa Monica Mountains is 2 miles east of the Alternative 1 RSA (CDFW, 2023a). No recent observations are present.

Source: HTA, 2024

[a]Special-status plant species identified during reviews of the CNDDB (CDFW, 2023a), CNPS database (CNPS, 2024), and iNaturalist (iNaturalist, 2024p to 2024x) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; and a review of IPaC (USFWS, 2024a) for the Alternative 1 RSA.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened

State Status Designations:
SC = State Candidate Species for Listing
SE = State Endangered
SR = State Rare
ST = State Threatened

California Native Plant Society Ranks:
1A. — Presumed Extirpated in California and either rare or extinct elsewhere.

1B. – Rare or Endangered in California and elsewhere.
1B.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) and elsewhere.
1B.2 – Fairly endangered in California (20-80 percent occurrences threatened) but more common elsewhere.
2A. – Presumed extirpated in California but common elsewhere.
2B. – Rare, Threatened, or Endangered in California but more common elsewhere.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, CNPS, iNaturalist, or another database as occurring in the Alternative 1 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 1 RSA; however, no records occur directly with the Alternative 1 RSA. Species has been detected within 1 mile of the Alternative 1 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 1 RSA is of marginal quality. No records occur in RSA, but the species has been documented over 1 mile from the Alternative 1 RSA.

Low = Suitable habitat within the Alternative 1 RSA is of low quality. There are no known recent occurrences within or near the Alternative 1 RSA.

No Potential = Suitable habitat is not present for the species.

Braunton's Milk-Vetch

Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb that is native to California and has high potential to occur within the Alternative 1 RSA. The species has the California Rare Plant Rank (CRPR) of 1B.1 (rare, threatened, or endangered in California and elsewhere) and is federally listed as endangered. Braunton's milk-vetch occurs in valleys and foothill grasslands, limestone, coastal scrub, and chaparral habitats. It is often found in recent burns or disturbed areas, usually on sandstone with carbonate layers. Braunton's milk-vetch typically blooms from January to August at elevations from 15 to 2,100 feet. Suitable habitat occurs within the Alternative 1 RSA and recent records of the species have been observed 0.15 mile east of I-405 in Bel Air Crest and in Fossil Ridge Park approximately 1.5 miles east of I-405, 1 mile south of US-101 (iNaturalist, 2024o).

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) is a perennial herb that is native and endemic to California and is a CRPR 1B.2 rare species. This species has moderate potential to occur within the Alternative 1 RSA. This species has moderate potential to occur within the Alternative 1 RSA and grows in shaded, foothill canyons in Southern California, primarily in the Transverse Range region. It tends to grow on rocky slopes and open areas at elevations from 0 to 5,900 feet and typically blooms from March to June. Suitable habitat is present within the Alternative 1 RSA and it has moderate potential to occur due to recent records of approximately 6 miles west in Topanga Canyon in 2017 (CDFW, 2023a) and at the Hansen Dam Golf Course in 2023, 4.5 miles northeast of the Alternative 1 MSF Base Design (iNaturalist, 2024q).

Davidson's Bushmallow

Davidson's bushmallow (*Malacothamnus davidsonii*) is a shrub that is native and endemic to California and is a CRPR 1B.2 rare species. This species has high potential to occur within the Alternative 1 RSA; an observation from 2021 is located 0.25 mile west of the Alternative 1 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021). This species typically grows in chaparral, oak woodland, and other habitats on slopes within three California regions: the southern San Francisco Bay Area, in Monterey County in the Santa Lucia Mountains, and in Los Angeles County in the eastern San Fernando Valley and the Transverse Ranges including the Santa Monica Mountains. Suitable habitat for this species is present in the Alternative 1 RSA particularly along I-405 on the Sepulveda Pass in the Santa Monica Mountains.

Chaparral Nolina

Chaparral nolina (*Nolina cismontana*) is a CRPR 1B.2 shrub native to California with a high potential to occur within the Alternative 1 RSA. An individual was observed in 2020 within 1 mile of the Alternative 1 RSA, in Deervale-Stone Canyon Park located west of the Alternative 1 RSA (iNaturalist, 2024u). This species occurs in coastal sage scrub and open chaparral habitats in foothills from Ventura County south to San Diego County and typically blooms from May to June. Suitable habitat for chaparral nolina is present within Alternative 1 RSA, mainly in the central portion of the Alternative 1 RSA within the Santa Monica Mountains.

Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 perennial evergreen shrub species with high potential to occur that is native to the South Coast, Peninsular Ranges and San Jacinto Mountains of California. This species occurs in coastal sage scrub and chaparral habitats with sandy, clay or loam soils between 50 and 1,300 feet. Recent observations include one individual located 0.5 mile outside of the Alternative 1 RSA, east of the UCLA Gateway Plaza, (iNaturalist, 2024v) and a second in Kenneth Hahn State Recreation Area, less than 2 miles southeast of RSA (CDFW, 2023a). The former is likely to be a

landscaped plant due to its location in a yard; the latter was described as a multi-stemmed, wind-cropped, very old individual with other chapparal relic species present.

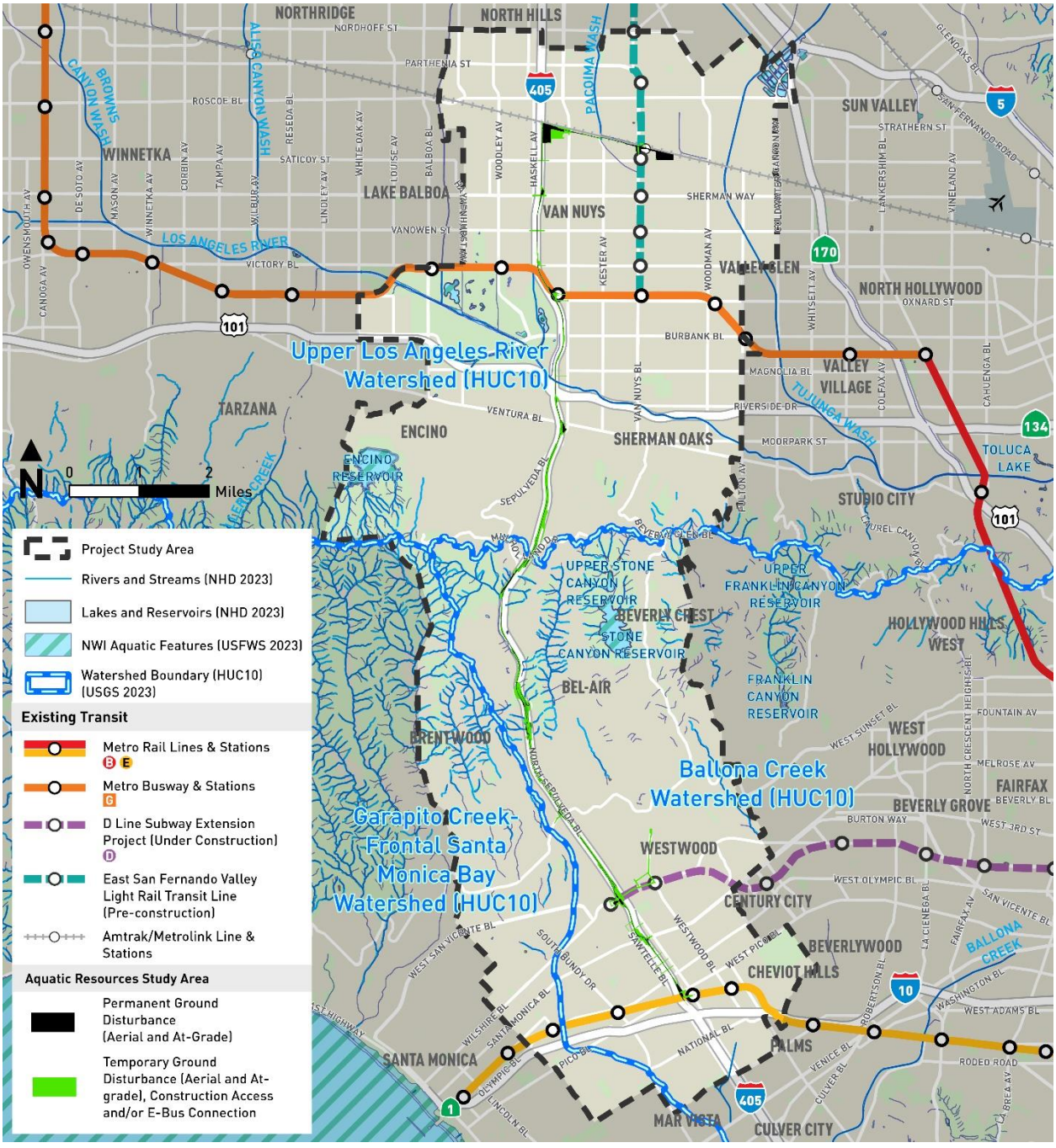
6.2.5.6 Jurisdictional Resources

The Project Study Area was assessed for water resources and local conditions that affect hydrology and water availability for the region including watershed context and drainage; see Figure 6-27 for an overview. For the purposes of the jurisdictional resource evaluation for potential impacts, field surveys occurred within the Ground Disturbance Area portion of the Alternative 1 RSA where direct impacts would occur, and an associated 500-foot buffer on ground disturbance was assessed through desktop analysis of vegetation communities for indirect impacts to potential aquatic resources.

An online review of the National Hydrography Dataset (NHD) (USGS, 2023) and National Wetlands Inventory (NWI) (USFWS, 2023a) indicates the presence of mapped aquatic features within the Project Study Area. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels in the vicinity of the Alternative 1 RSA (Figure 6-27). Named aquatic resources nearby the Alternative 1 RSA include the Los Angeles River, Pacoima Wash, Encino Creek, and the Sepulveda Channel. However, only the Los Angeles River is within the Alternative 1 RSA and will be traversed by Alternative 1. The remainder of the aquatic resources within the Alternative 1 RSA are either underground, or ephemeral and unnamed.

While the larger Project Study Area includes the Upper Los Angeles River, Ballona Creek, and Garapito Creek Frontal Santa Monica Bay Watersheds (Figure 6-27), only the Upper Los Angeles River and Ballona Creek Watersheds receive waters from the Alternative 1 RSA. Therefore, discussion is limited to these two watersheds. The receiving waters from the Alternative 1 RSA include the Los Angeles River and Ballona Creek with their respective tributaries. The Los Angeles River crosses the Alternative 1 RSA from west to east, roughly parallel, and adjacent to the US-101, while Ballona Creek is 3 miles south of the Alternative 1 RSA.

Figure 6-27. Alternative 1: National Hydrography Dataset and National Wetlands Inventory Aquatic Features



Source: USFWS, 2023a, 2023b

Upper Los Angeles River Watershed

The Upper Los Angeles River Watershed is located is the northwest portion of Los Angeles County and covers over 613 square miles. This watershed includes the San Fernando Valley and portions of the San Gabriel and Santa Susana Mountains. The six major tributaries along the river include Tujunga Wash, Burbank Western Storm Drain, Verdugo Wash, Arroyo Secco, Rio Hondo, and Compton Creek. The primary source of input into the Los Angeles River watershed is wet weather runoff originating from direct precipitation, and dry weather inputs from urban runoff, and groundwater upwelling (LADPW, 2022).

The northern portion of the Alternative 1 RSA crosses the Los Angeles River in Reach 5, where the river flows west to east, at the base of the Santa Monica Mountains in the San Fernando Valley. Reach 5 of the Los Angeles River runs through low density residential neighborhoods, the Sepulveda Basin, other commercial developed areas, and under I-405, Sepulveda Boulevard, and Van Nuys Boulevard.

Topography throughout the coastal plain area of Upper Los Angeles River Watershed is generally defined by gradually sloping land from the foothills of the San Gabriel Mountains to the Pacific Ocean. Ground elevations range from 10,000 feet in the San Gabriel Mountains approximately 15 miles east of the Alternative 1 RSA, to mean sea level at the mouth of the Los Angeles River approximately 22 miles south of the Alternative 1 RSA. Most of the coastal plain is less than 1,000 feet in elevation (GLAC, 2014), while the upper portion of the watershed is covered by forest and open space. The majority of land in the Upper Los Angeles River Watershed is developed with urban uses, including the portion of the river that traverses the Alternative 1 RSA (LA County, 2023b).

Ballona Creek Watershed

Ballona Creek consists of a 9-mile-long flood protection channel that drains the Los Angeles Basin south of the Alternative 1 RSA. The Ballona Creek Watershed covers approximately 130 square miles in the western portion of the Los Angeles Basin and is made up by the Culver City, Wilshire, and Hollywood sub-watersheds. The headwaters of the watershed are in the Santa Monica Mountains, including a portion in the Alternative 1 RSA, and Baldwin Hills to the southeast of the Alternative 1 RSA. Most of the Ballona Creek drainage network consists of storm drains, underground culverts, and open concrete channels. However, Ballona Creek does not traverse the Alternative 1 RSA. Ballona Creek is an open channel between Venice Boulevard and Pickford Street and its confluence with Santa Monica Bay (a length of approximately 9 miles); it is located approximately 4 miles south of the Alternative 1 RSA. A few natural channels remain in the Santa Monica Mountains and Baldwin Hills. The Sepulveda Channel, which is mostly channelized and underground, runs along I-405 approximately 2.5 miles south of the Alternative 1 RSA and is a major tributary to the Ballona Creek Watershed.

Riparian Habitats

Although not mapped in the NWI, riparian habitats may be present along many of the jurisdictional features identified in the NWI database. Riparian habitats fall under CDFW jurisdiction, which generally extends to the outer limits of riparian habitats occurring around aquatic features. Such habitats provide valuable buffers around aquatic features and provide specific habitat requirements for many plant and wildlife species, including many of the regional special-status species identified above. Based on Alternative 1 vegetation mapping, 1.1 acres of undifferentiated riparian habitat are located within the 500-foot buffer for Alternative 1, approximately 300 feet west of the Ground Disturbance Area along the northern end of Haskell Creek in the Sepulveda Basin Recreation Area. Within the SMMNRA mapping, undifferentiated designations appear for locations where further classification was not conducted and no finer detail was provided (Section 6.2.5.2). The undifferentiated riparian habitat will be further

refined upon future analysis and field surveys. If the refined community is considered a CDFW sensitive community, it would increase the acreage of sensitive communities within the RSA but would not increase acreage impacted (since it is outside the Ground Disturbance Area).

The RSA for Alternative 1 will traverse the Los Angeles River north of the US-101. Alternative 1 includes an aerial alignment that will cross over the river adjacent to and east of I-405. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where the Alternative 1 RSA would traverse the river. The Los Angeles River is a Traditional Navigable Water throughout its entire reach. However, it is only considered a Navigable Water[4] from the river's outlet into San Pedro Bay to San Pedro Highway Bridge and/or up to 2.5 feet amsl, which is not within the Alternative 1 RSA. Because Alternative 1 proposes traversing above the river (via aerial tramway) supported by structures constructed and installed outside of the jurisdictional area, impacts to the Los Angeles River are not expected.

Ephemeral drainages under the jurisdiction of USACE, CDFW, and Regional Water Quality Control Boards (RWQCB) were observed adjacent to I-405 within the Alternative 1 RSA. However, drainages mapped within the Ground Disturbance Area were limited to a small portion of one ephemeral drainage that entered and exited the Ground Disturbance Area via underground storm drain. This drainage was mapped and photographed; it is included herein.

No potential wetlands or riparian areas were observed within the Ground Disturbance Area; therefore, no wetland delineation forms were required.

Non-wetland jurisdictional features mapped within the Ground Disturbance Area for Alternative 1 are summarized as follows:

- 0.11 acre (4,943 square feet) of non-wetland Waters of the United States (WOTUS), CDFW streambed, and RWQCB waters of the state within Los Angeles River
- 0.02 acre (837 square feet) of non-wetland RWQCB waters of the state adjacent to I-405 within the Ground Disturbance Area for Alternative 1
- 0.03 acre (1,183 square feet) of non-wetland CDFW streambed adjacent to I-405 within the Ground Disturbance Area for Alternative 1

Further details on jurisdictional aquatic resources can be found in Appendix A.

6.2.5.7 Other Protected or Managed Biological Resources

This section provides an overview of other protected or managed biological resources that may occur within the Alternative 1 RSA and were considered in this analysis.

USFWS Critical Habitat

Critical habitat is designated by USFWS for threatened or endangered species listed under the Endangered Species Act (ESA); these areas are considered essential for species conservation (USFWS, 2024b). Critical habitat provides protection to locations necessary for life processes and reproduction where species and populations can thrive in habitats that are protected from disturbances. Specifically, it provides cover, shelter, food, water, light, minerals, and other nutritional or physiological requirements for survival of the species, along with sites for breeding and rearing offspring (USFWS,

[4] The term "Traditional Navigable Water" is used in reference to Section 404 of the Clean Water Act, while the term "Navigable Water" is used in reference to Section 10 of the Rivers and Harbors Act. The entire stretch of the Los Angeles River is considered a Traditional Navigable Water, but only the portion in proximity to its outlet into San Pedro Bay is considered a Navigable Water.

2024b). Areas currently unoccupied may be included in critical habitat boundaries if it would be needed for species recovery (USFWS, 2024b).

No USFWS-designated critical habitat coincides with the Alternative 1 RSA. The nearest critical habitat for plant species listed under the federal ESA includes Braunton's milk-vetch; this unit is located approximately 4 miles west of the Alternative 1 RSA in Topanga State Park. The nearest critical habitat for wildlife includes western snowy plover (*Charadrius nivosus nivosus*), approximately 4 miles west of the Alternative 1 RSA along the coastline in the City of Santa Monica; and tidewater goby (*Eucyclogobius newberryi*), approximately 7 miles west of the Alternative 1 RSA along Topanga Creek in the Santa Monica Mountains. No USFWS-proposed critical habitat coincides with Alternative 1 RSA.

Since no federally designated critical habitat occurs for any species within the Alternative 1 RSA, no impacts are anticipated; hence, critical habitat is not discussed in the impact evaluation section below.

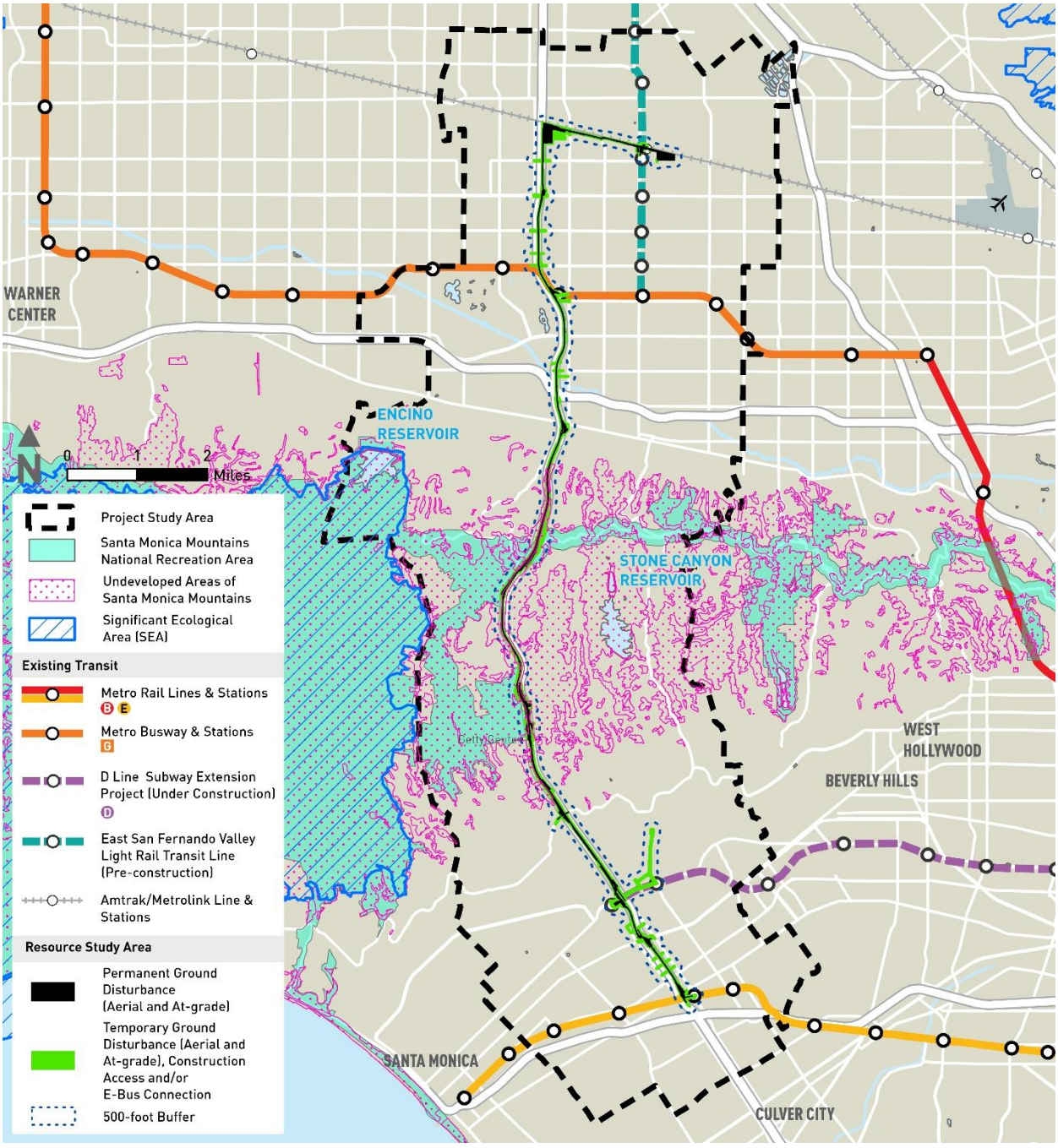
Santa Monica Mountains National Recreation Area

The SMMNRA extends from the Pacific coastline east across the middle of the Alternative 1 RSA, although only 32.0 acres of the SMMNRA coincides with the Alternative 1 RSA (Figure 6-28). On the west side of I-405 within the Alternative 1 RSA, two local parks, San Vicente Mountain Park and Westridge-Canyonback Wilderness Park, and adjacent conserved lands occur along and extend into the western perimeter of the Alternative 1 RSA. Conserved lands under the SMMNRA also occur along Mulholland Drive and Fossil Ridge Park on the east side of I-405. The various parks and other conserved areas under the SMMNRA umbrella provide scenic vistas, nature viewing, and hiking, biking, and horseback riding opportunities, often through undisturbed native chaparral habitats.

Significant Ecological Areas

As introduced in Section 2 of this report, Los Angeles County-designated Significant Ecological Areas (SEA) are ecologically important land and water systems that are valuable as plant or animal communities and are often important to the preservation of threatened or endangered species and conservation of biological diversity in the county. The Santa Monica Mountains SEA is outside the 500-foot buffer and does not intersect with the Alternative 1 RSA (Figure 6-28).

Figure 6-28. Alternative 1: Santa Monica Mountains National Recreation Area, Undeveloped Areas within the Santa Monica Mountains, and Los Angeles County Significant Ecological Areas



Source: LA County Planning, 2009; NPF, 2021

Natural Community Conservation Plan/Habitat Conservation Plan Areas

The RSA is not located within the boundary of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan (CDFW, 2023c; USFWS, 2023b).

6.3 Impact Evaluation

6.3.1 Impact BIO-1: Would the project 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 US Fish and Wildlife Service?

6.3.1.1 Operational Impacts

The potential for operational impacts such as injury or mortality due to collisions with vehicles, behavioral and habitat usage modifications due to exposure to noise and vibration from passing trains or the electric bus, habitat degradation due to edge effects, and impacts on movement due to infrastructure are limited for most wildlife species for Alternative 1 since both the aerial and at-grade portions of the alignment occur in developed areas. Anticipated impacts are described below.

Special-Status Invertebrates and Reptiles

Special-status invertebrates, such as Crotch's bumble bee, and special-status reptiles that may occur in habitats along the alignment are not anticipated to be subject to operation-associated direct impacts, including injury or mortality due to collision with vehicles, since the alignment is primarily aerial and occurs in mostly developed areas that are not suitable for these species. The electric bus would be routed within the roadways of Wilshire Boulevard and Westwood Boulevard and stops would be at the Wilshire Boulevard/Metro D Line Station and UCLA Gateway Plaza, all of which are within existing development. Therefore, the areal extent of suitable habitat for special-status invertebrates and reptiles that overlaps with Alternative 1 is very limited.

Habitat degradation due to edge effects where native habitats are removed to facilitate construction (see Section 6.3.1.2) will be similarly limited due to the low amount of suitable habitat present along the alignment. Edge effects may include changes to the microclimate due to increase exposure to sun and wind, incursion by nonnative, weedy plant species that alter the vegetation structure, and changes in the distribution and diversity of foraging plant species (for bumble bees) and prey species (for reptiles). These habitat alteration impacts would persist through operation of the facility; however, due to the limited areal extent, is anticipated to constitute a less than significant impact. Further, indirect habitat degradation would be mitigated through the habitat restoration measures related to construction of Alternative 1.

For these reasons, operations-related impacts to special-status invertebrates and reptiles are anticipated to be less than significant.

Special-Status Birds and Bats

Special-status birds (including those protected by the MBTA) and special-status bats listed in Table 6-5 could potentially be significantly impacted during operations of Alternative 1 when nesting birds or roosting bats are present in trees and/or shrubs located within the Alternative 1 RSA would require routine maintenance trimming. Adult birds and bats are highly mobile and are anticipated to be able to relocate away from maintenance trimming activities of their own volition; however, nests, eggs, and nestlings, and bat pups, could be injured, killed, or destroyed by maintenance activities if they are located in the vegetation slated for removal. Additionally, if breeding birds or bats are present in the adjacent areas, individuals may be subject to indirect impacts including exposure to noise, human presence, and dust, which could disrupt natural breeding behaviors such as incubation of eggs and feeding and care of young. In some cases, habitat changes due to vegetation removal could be sufficient

to reduce protective cover, resulting in abandonment of nests and eggs. Impacts from dust and noise to special-status birds or bats are not anticipated during operation, since maintenance activities would primarily occur within developed or paved areas.

Special-Status Mammals

Impacts to special-status bats were previously addressed with special-status birds.

Direct significant impacts are not expected for mountain lions since collisions with vehicles are not anticipated; aerial monorail vehicle collisions are unlikely due to the height at which vehicles will be traveling (Figure 6-2, 16.5 feet 32 feet) and electric bus collisions are unlikely since the bus route is not within the Santa Monica Mountains or I-405 where they are known to occur. While operation of Alternative 1 is anticipated to reduce vehicle traffic on I-405, changes in vehicle traffic associated with operation of Alternative 1 are not likely to substantially reduce the risk for a mountain lion attempting to cross the freeway due to the exponentially high risk of collision (i.e., I-405 is considered by NPS to be impermeable to mountain lions; NPS, 2023). Alternative 1 is intended to reduce congestion during rush hour, while collision risk is greatest when vehicles are traveling the fastest during off-peak hours, including dawn and dusk when mountain lions are most active. Within Alternative 1, 11 percent (47.9 acres) of the total impacts are within non-developed natural areas in the Santa Monica Mountains (suitable habitat for mountain lion); the remaining acreage is either in urban areas within the mountain range or are outside of the mountains. Within suitable mountain lion habitat in the Santa Monica Mountains, the majority of the impacts will be temporary (81 percent of suitable mountain lion habitat impacts; or 39.0 acres) while permanent impacts represent the rest (19 percent of suitable mountain lion habitat impacts, or 8.9 acres). Permanent habitat reductions of this size adjacent to an impermeable highway are anticipated to be less than significant for mountain lions to survive or recover in the wild. However, impacts to native vegetation could affect movement within the Santa Monica Mountains, which is discussed in Section 6.3.4.

Special-Status Plants

Impacts to special-status plants that could occur during operation include crushing or trampling of individual plants during normal maintenance, or tree trimming for maintenance. Since maintenance activities would primarily occur within developed or paved areas, it is unlikely that the operation of Alternative 1 would result in significant impacts to special-status plants, including from exposure to fugitive dust.

One special-status tree, Nuttall's scrub oak (*Quercus dumosa*), has high potential to be present along the Santa Monica Mountains, in landscaping and within pockets of native vegetation in developed areas. Where present, Nuttall's scrub oak could potentially be impacted by required routine maintenance trimming. However, no significant impacts are anticipated since Nuttall's scrub oak was not identified within the Ground Disturbance Area during the initial tree inventory.

Mitigation Measures

Mitigation Measure (MM) BIO-1 and MM BIO-2, presented in Section 6.4, are included to reduce potentially significant operational-related impacts to nesting birds and roosting special-status bats from maintenance vegetation trimming to a level less than significant by limiting vegetation removal to outside the nesting bird and roosting bat season where possible, requiring preconstruction nesting bird and bat surveys during the appropriate season, and implementing installation and biological monitoring of no-disturbance buffers around nests or roosts to ensure the resource is adequately protected. MM BIO-3 would reduce operational-related impacts to special-status trees from vegetation maintenance to less than significant through application of mitigation, as determined in the applicable local ordinance or

policy where the impact would occur. Therefore, with the implementation of MM BIO-1, MM BIO-2, and MM BIO-3, operational impacts of Alternative 1 on special-status species would be reduced to a less than significant level.

6.3.1.2 Construction Impacts

Impacts to vegetation within the Ground Disturbance Area have the potential to affect sensitive vegetation communities, as well as special-status wildlife or plant species, both directly and through modifications to their habitat. No impacts are anticipated from the electric bus shuttle since the route would be within existing developed roadways and the UCLA Gateway Plaza. Clearing and grading of vegetation would be required for construction of components of Alternative 1, including the structural support beams for the guideway track, staging yards, cut-and-cover construction of TPSSs, and aerial monorail transit (MRT) stations. While most of the vegetation that could be impacted consists of non-native and ornamental landscaping, some native vegetation is also present within the Ground Disturbance Area. Construction activities for Alternative 1 could result in significant impacts to special-status wildlife including nesting birds, special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potentially significant impacts include injury or mortality of plant species, habitat loss due to permanent vegetation removal, behavioral or health modifications from noise pollution or exposure to fugitive dust from prolonged heavy equipment operation, and behavioral modifications due to increased human presence within species habitats during construction.

Other anticipated construction impacts related to the construction along Sepulveda Pass for Alternative 1 include the possibility of increased noise, dust, and vibration during drilling of the aerial track footings. Excessive noise generated from the drilling and heavy equipment operation could significantly disturb nesting avian species. Vibration related disturbance could also disrupt their normal behavioral patterns. Construction-related dust could significantly impact habitat quality by depositing on vegetation, which may reduce photosynthesis and increase leaf temperature, making vegetation more susceptible to drought (Farmer, 1993). Evaluation of the Project's impact on wildfire risk and occurrence is discussed in the wildfire chapter of the *Sepulveda Transit Corridor Project Safety and Security Technical Report* (Metro, 2025b).

Vegetation Communities/Land Cover Types and Sensitive Vegetation Communities

Direct impacts to vegetation communities would occur within the Ground Disturbance Area; acreages of temporary and permanent impacts to vegetation communities within Alternative 1 are detailed in Table 6-8. Due to the sparse vegetation, lack of diversity, and continued anthropogenic disturbance, special-status wildlife and plant species are less likely to be found in land cover types developed, cleared land, and ruderal vegetation. Approximately 97 percent (442.4 acres) of the acreage in Alternative 1 planned for ground disturbing activities consist of developed, undifferentiated artificial cuts/embankments, cleared land, or ruderal areas. Excluding these areas, construction of Alternative 1 is anticipated to result in 41.0 acres of temporary impacts and 9.3 acres of permanent impacts. Within the vegetated areas subject to impacts, less than 1 percent (1.9 acres) is undifferentiated exotic vegetation. The remaining vegetation communities are native vegetation across nine communities. These represent approximately 3 percent (12.8 acres) of the impacted areas, of which 4.0 acres are anticipated to be permanently impacted and 8.9 acres are anticipated to be temporarily impacted from construction of Alternative 1. Indirect impacts to vegetation communities may also occur during construction activities. For example, fugitive dust deposition on foliage may reduce photosynthesis and increase plant vulnerability to drought. Additionally, vegetation removals may increase edge effects, including incursion of nonnative, weedy plants that compete with natives for space and resources.

Approximately 0.7 acre of identified sensitive vegetation communities California walnut woodland and sugar bush shrubland would be permanently and temporarily impacted by clearing and grading for I-405 highway improvements along North Sepulveda Boulevard near Mountain Gate Country Club (Figure 6-18) and along Briarwood Drive (Figure 6-20), as well as construction of the Getty Center MRT Station and adjacent drainage improvements (Figure 6-17). An additional five vegetation communities have potential to be considered sensitive (** in Table 6-8) depending upon the associated codominant plant species present (as described in Sections 3.2.2 and 6.2.5.4). Up to an additional 3.2 acres of potentially sensitive vegetation communities are also within the Alternative 1 RSA along I-405. For this analysis, Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping.

The removal and degradation of native and sensitive vegetation communities would constitute potentially significant impacts.

Table 6-8. Alternative 1: Impacts on Land Cover Types and Vegetation Communities within Resource Study Area

Vegetation Community/ Land Cover Type[a]	Permanent Impacts (acres)	Temporary Impacts (acres)	Total Project Impacts (acres)[b]	Percent of Total Project Impacts
Developed	135.6	268.7	404.4	88.4
Ruderal	1.6	1.4	2.9	0.6
Cleared Land	0	0.1	0.1	<0.1
Developed, Ruderal, Cleared Land Total	**137.2**	**270.2**	**407.4**	**89.0**
Post Fire Shrub Regeneration and Undifferentiated Categories including Artificial Cuts/Embankments and Exotic Vegetation	5.3	32.1	37.4	8.2
Ceanothus Chaparral	2.4	5.7	8.1	1.8
Laurel Sumac Shrubland**	0.6	1.3	1.9	0.4
Mexican Elderberry Shrubland	0.6	0.3	0.9	0.2
California Sycamore Woodland**	0.1	0.6	0.7	0.2
Sugar Bush Shrubland*	0.2	0.2	0.4	0.1
California Walnut Woodland*	0	0.3	0.3	0.1
Toyon Shrubland**	0	0.3	0.3	0.1
Black Sage Shrubland**	0.1	0.1	0.2	<0.1
California Sagebrush Shrubland**	0	0.1	0.1	<0.1
Vegetation Total	**9.3**	**41.0**	**50.3**	**11.0**
GRAND TOTAL	**146.5**	**311.1**	**457.6**	**100.0**

Source: HTA, 2024

[a] Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b] Inconsistencies in calculations due to rounding errors.

* Sensitive vegetation community
** Potential sensitive vegetation community based on codominant species on-site.

Special-Status Invertebrates

One special-status invertebrate, Crotch's bumble bee, has potential to be present within the Alternative 1 RSA during construction activities. Despite having a relatively narrow range, they are known to occupy

a wide variety of natural and disturbed habitat for nesting and foraging and could be present throughout the RSA in undeveloped areas where pavement is not present and the earth is not regularly maintained through grading, tilling or planting. Based on their broad range of suitable habitat and generalist foraging behavior, Crotch's bumble bee are likely to forage throughout the RSA where preferred flowering plants are present (e.g., native sage species [*Salvia* spp.], milkweeds [*Asclepias* spp.], and plants within the pea family [*Fabaceae*]) and nest where abandoned rodent burrows are present.

Individuals in occupied burrow nests or overwintering queens in surface soils could be crushed or trapped during construction if present within the Ground Disturbance Area. Additionally, foraging Individuals also could be injured or killed if they are foraging during vegetation clearing activities. This species could also be impacted through removal of nectar sources and nests in the Ground Disturbance Area resulting from construction of Alternative 1 features, including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and TPSS sites. Ground-disturbing impacts from grading and vegetation clearing throughout the RSA would impact individuals and would likely result in loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for Crotch's bumble bee.

The loss of individual Crotch's bumble bees and suitable habitat for this species would constitute a significant impact.

Special-Status Reptiles

Three special-status reptiles are known to occur and two have moderate potential to occur within the Alternative 1 RSA; individuals of these species may be present during construction activities. Reptiles present during construction activities could be directly injured or killed due to collisions with vehicles and equipment or during vegetation clearing activities. Species that shelter in burrows or under debris could be entrapped and suffocate or be crushed during grading activities; buried nests could be similar crushed or destroyed. Additionally, if individuals become entrapped in open trenches or excavations during construction activities, they could be subject to injury or mortality due to dehydration, opportunistic predation, inability to properly thermoregulate, starvation, or other causes associated with constrained movement. Indirect impacts could include disruption of normal feeding, basking, sheltering, and breeding behaviors due to avoidance of excessive noise and vibration, fugitive dust, and increased human presence. Normal movement patterns throughout a home range also may be disrupted temporarily by avoidance of areas adjacent to construction activities, or permanently by habitat structure modifications. During construction, special-status reptiles also may be subject to higher predation rates by opportunistic predators such as common ravens (*Corvus corax*), coyote, or skunk, that could be attracted to work areas if food debris is present.

Two of the species, southwestern pond turtle and two-striped garter snake, are most likely to occur near aquatic resources such as the ponds in the Sepulveda Basin and UCLA Mathias Botanical Garden. Based on habitat requirements, the remaining three are most likely to be found in the Sepulveda Pass and Santa Monica Mountains. Individuals could be found in or proximate to work areas along I-405 in the Santa Monica Mountains. Roadway realignment along I-405 between Sunset Boulevard and Mulholland Drive would involve clearing and grading of native vegetation adjacent to the freeway. The clearing of vegetation in the Sepulveda Pass would likely result in injury or mortality of individuals, disruptions of natural behaviors, and loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for the following five special-status reptiles:

- Southwestern pond turtle (*Actinemys pallida, FP, SSC*) is known to occur in the Alternative 1 RSA on UCLA's campus, adjacent to I-405 south of Ventura Boulevard in, and adjacent to water sources with

aquatic vegetation including streams and lakes. This species could be impacted through removal of upland breeding habitat, destruction of buried nest sites, or degraded water quality resulting from ground disturbance activities within the Alterative 1 RSA, including construction of structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and TPSS sites.

- Southern California legless lizard (*Anniella stebbinsi*, SSC) has moderate potential to occur in loose soil, sand and leaf litter in the Santa Monica Mountains and remnant patches of native vegetation. This species could be impacted by ground-disturbance activities within the Alternative 1 RSA such as drilling, grading, pile driving, and excavating for Alternative 1.
- Coastal whiptail (*Aspidoscelis tigris stejnegeri,* SSC) is known to occur in chaparral and coastal sage scrub in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities within the Alternative 1 RSA for construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Coast horned lizard (*Phrynosoma blainvillii*, SSC) is known to occur in chaparral and coastal sage scrub in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities within the Alternative 1 RSA for construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites. Coast horned lizards are particularly vulnerable to injury or mortality due to vehicle collisions since their defensive strategy is to rely on natural camouflage and remain still when approached by potential predators.
- Two-striped garter snake (*Thamnophis hammondii*, SSC) has moderate potential to occur along the Santa Monica Mountains and could be impacted by the removal of vegetation and ground-disturbance activities within the Alternative 1 RSA for construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.

The loss of individuals and suitable habitat for these special-status reptiles would constitute a significant impact.

Special-Status Birds

Four special-status bird species were identified as likely to be present and five have high potential to occur within the Alternative 1 RSA during construction activities. Based on habitat requirements for these nine species, they are likely to be found throughout the RSA in transit, resting, and/or foraging from the Los Angeles National Cemetery in the south to the Sepulveda Basin in the north. Birds in transit are unlikely to be affected by construction activities; adults are highly mobile and can be expected to relocate away from construction activities of their own volition. However, migratory individuals may experience temporary or permanent loss of transitory habitat. If overwintering burrowing owls are present, individuals could be entrapped and suffocate or be crushed if burrows are present in the work areas during grading and vegetation removal. Additionally, grading could result in loss of suitable wintering burrows for migratory burrowing owls. If native birds breeding within or adjacent to work areas, nests, eggs, and nestlings would be vulnerable to destruction, injury, or mortality if they are present during vegetation clearing and other construction activities. Ground nests may be vulnerable to crushing, trampling, or destruction by pedestrians and vehicles. Nests in adjacent areas also may be exposed to noise, fugitive dust, human presence, and vibration that could disrupt natural breeding

behaviors including incubation of eggs and care and feeding of young; these disruptions could result in failure of a nest to successfully produce young. Excessive disruption, or substantial changes in habitat during the nesting period, could also result in abandonment of nest sites, eggs, or young. Further, impacts associated with clearing and grading of vegetation adjacent to I-405 would likely result in loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for the following nine special-status species and nesting birds protected under the MBTA:

- Tricolored blackbird (*Agelaius tricolor*, state threatened and SSC) has high potential to occur in freshwater marshes, freshwater lakes, and agricultural fields in the Sepulveda Basin Wildlife Preserve adjacent to the Alternative 1 RSA. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites. Breeding habitat is not expected to be impacted, as none is present within the Alternative 1 RSA.
- Burrowing owl (*Athene cunicularia*, state candidate and SSC) has high potential to occur in grassland and open scrub throughout the Alternative 1 RSA. This species could be impacted from construction noise and activity, removal of burrows, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites. Impacts to nests and nestlings are not anticipated as the RSA is outside the breeding range for this species; only overwintering adult burrowing owls are anticipated to occur. If burrowing owls are present in burrows during construction, individuals could be trapped and suffocate or be crushed during vegetation clearing, grading, and other initial ground disturbance.
- Swainson's hawk (*Buteo swainsoni*, state threatened) is present throughout the Alternative 1 RSA during migration, particularly in grasslands. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Northern harrier (*Circus hudsonius*, SSC) has high potential to occur throughout the Alternative 1 RSA during migration, particularly in grasslands. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Olive-sided flycatcher (*Contopus cooperi*, SSC) is known to occur throughout the Alternative 1 RSA during migration and could be present during construction activities. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites. Breeding habitat is not expected to be impacted due to its absence.
- Bald eagle (*Haliaeetus leucocephalus*, state endangered and Fully Protected) has high potential to occur as a flyover or near bodies of water, particularly in the Sepulveda Basin Wildlife Preserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites. Species habitat is not expected to be impacted.

- Loggerhead shrike (*Lanius ludovicianus*, SSC) has high potential to occur in and breed in grasslands or chaparral, particularly the Santa Monica Mountains or in the Sepulveda Basin Wildlife Preserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Vermilion flycatcher (*Pyrocephalus obscurus*, SSC) is known to occur in the Los Angeles National Cemetery in the southern portion of the alignment and has potential to occur in and breed in a variety of habitats in the Alternative 1 RSA, particularly park and cemeteries. This species could be impacted from vegetation removal during construction for Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Least Bell's vireo (*Vireo bellii pusillus*, FE and SE) is known to occur and breed along the Santa Monica Mountains and in the Sepulveda Basin Wildlife Reserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities for Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.

The loss of nests, eggs, or nestlings, impacts to natural breeding behaviors, eviction from wintering burrows, and loss of suitable habitat for these special-status birds would constitute a significant impact.

Special-Status Mammals

Three special-status mammals were identified as likely to be present and one has high potential to occur within the Alternative 1 RSA during construction activities, including mountain lion, silver-haired bat, and hoary bat. Mountain lions are known to occur within the Santa Monica Mountains, while the silver-haired and hoary bat have broader habitat requirements and have potential to forage in both natural and developed habitats. Within the Sepulveda Pass and Santa Monica Mountains, special-status mammals could occur in or proximate to work areas along I-405. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway.

Within the developed northern and southern ends of the project, special-status bats could be present in ornamental street trees or on existing infrastructure, such as bridges and buildings. Individuals may be subject to injury or mortality if they are present as roosting adults during vegetation clearing activities. Roosting adults also may be disturbed by construction-related noise and vibration, causing them to flee roosts during daylight hours. Maternal roosts would also be vulnerable to injury or mortality if present, as pups are unable to take flight and would be likely to be killed if present. Suitable foraging, sheltering, and roosting habitats have potential to be removed during vegetation clearing and grading, or temporarily impacts by construction noise, fugitive dust, and increased human presence. Nighttime construction lighting also may impact foraging habitat by attracting prey species, which may attract some bat species and repel others.

Individual larger mammals, including mountain lions, are unlikely to be directly impacted by construction activities as they are highly mobile and can be anticipated to relocate away from work areas of their own volition. Individuals are not likely to be vulnerable to collisions with slower moving construction equipment and vehicles. However, natural foraging, sheltering, and breeding behaviors may be disrupted by construction activities, both temporarily through avoidance of areas with

construction-related noise, human presence, vibration, and fugitive dust, and permanently through changes in habitat due to vegetation clearing and grading.

The clearing of vegetation in the Sepulveda Pass and along city streets and demolition of structures with suitable roosts would likely result in loss of suitable habitat that could be used for roosting, breeding, shelter, and/or foraging for the following three special-status mammals:

- Silver-haired bat (*Lasionycteris noctivagans*, WBWG medium priority) is known to occur in the northern and southern portions of the Alternative 1 RSA. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Hoary bat (*Lasiurus cinereus*, WBWG medium priority) has high potential to occur along the Santa Monica Mountains, portions of the Alternative 1 RSA with large mature trees, and the Sepulveda Basin Wildlife Reserve in or near riparian habitats. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Mountain lion (*Puma concolor*, state candidate for listing) is present in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities during construction of Alternative 1 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and TPSS sites. Alternative 1 is not expected to result in significant impacts to suitable habitat due to the small size and linear nature of the clearing and grading activities in comparison to the species' large home range size. However, the construction of Alternative 1, specifically widening of I-405 between Sunset Boulevard and Mulholland Drive, has the potential to result in significant impacts to mountain lion movement and usage of wildlife corridors (evaluated in Section 6.3.4).

The loss of suitable habitat for silver-haired bats and hoary bats would constitute a significant impact.

Special-Status Plants

Five special-status plant species were identified with medium or high potential to occur within the Alternative 1 RSA; none were identified as known to occur. Based on habitat requirements, these five species are most likely to occur in chaparral and/or coastal sage scrub habitats that are present on the Project in the Sepulveda Pass and could occur in or proximate to work areas along I-405 in the Santa Monica Mountains. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway. Clearing and grading of vegetation would also be required for construction of the structural support beams for the guideway track, staging yards, TPSSs, and aerial MRT stations; although vegetation to be impacted is largely non-native and/or ornamental landscaping, native vegetation is also present. If individuals are present during clearing and grading activities, they could be subject to trampling, crushing, and removal. Individuals present in adjacent areas may be exposed to fugitive dust, which can settle on vegetation and interrupt natural photosynthesis. Following vegetation clearing, adjacent areas also may be subject to edge effects including higher exposure to sun, dust, and wind, and incursion by nonnative, weedy species, which can increase competition for space and resources and decrease habitat value for special-status plants.

The clearing of vegetation in the Sepulveda Pass could result in loss of suitable habitat for the following special-status plant species:

- Braunton's milk-vetch (*Astragalus brauntonii*, federally endangered, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 1 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*, CRPR 1B.2) has moderate potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 1 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Davidson's bushmallow (*Malacothamnus davidsonii*, CRPR 1B.2) has high potential to occur in the Santa Monica Mountains, the Sepulveda Basin, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for Alternative 1 features such as structural support beams for the guideway track, stations, MSFs, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Chaparral nolina (*Nolina cismontana*, CRPR 1B.2) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 1 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and TPSS sites.
- Nuttall's scrub oak (*Quercus dumosa*, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 1 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and TPSS sites.

The loss of individuals or suitable habitat for these special-status plants would constitute a significant impact.

Mitigation Measures

As described in Section 5.4, mitigation measures would be implemented to reduce construction-related impacts to special-status plant and wildlife species and their habitats to a less than significant level through establishment of survey and monitoring requirements (MM BIO-4, MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-17, and MM BIO-29); monitoring of bird nests and determination if no-disturbance buffers require adjustments (such as due to noise from construction activities) (MM BIO-4); education and training of personnel about Project's biological concerns and requirements (MM BIO-18); establishment and demarcation of Environmentally Sensitive Areas (MM BIO-16); and creation of a habitat restoration plan (MM BIO-9). General construction measures to protect special-status species include protection from wildfire (MM BIO-19), domestic pets (MM BIO-20), impacts from night lighting (MM BIO-22), invasive plants (MM BIO-23), entrapment (MM BIO-26), vehicular collisions (MM BIO-25), dust (MM BIO-24), and construction-related trash (MM BIO-27).

6.3.1.3 Maintenance and Storage Facilities

Maintenance of the monorail vehicles and equipment would occur at the MSF Base Design and may occasionally require routine maintenance trimming of ornamental trees and shrubs located within the MSF Base Design. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected nesting birds through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, presented in Section 5.4, are included to reduce operations-related impacts from vegetation trimming to nesting birds and special-status bats to a less than significant level.

MSF Base Design

The MSF Base Design for Alternative 1 would be on developed property at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor; no habitat modifications or removal would be required for the construction of the MSF. No impacts to special-status plant species would result from the construction of the MSF since suitable habitat is not present. Roosting bats and nesting birds have potential to be impacted during construction of the MSF Base Design if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed; this would potentially be a significant impact. Impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, included in Section 6.4, are specified to reduce construction-related impacts to nesting birds and special-status bats from vegetation trimming or removal to a less than significant level by requiring pre-activity surveys for nesting birds and roosting bats during the relevant seasons, and implementing no-disturbance buffers as relevant.

MSF Design Option 1

Maintenance of the monorail vehicles and equipment would occur at the MSF Design Option 1 and may occasionally require maintenance trimming of ornamental trees and shrubs located within the MSF Design Option 1. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected nesting birds through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, presented in Section 5.4, are included to reduce operations-related impacts to nesting birds and special-status bats from vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The MSF Design Option 1 for Alternative 1 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor; no habitat modification or removal would be required for the construction of the MSF Design Option 1. No impacts to special-status plant species would result from the construction of the MSF Design Option 1 since suitable habitat is not present. Roosting bats and

MBTA-protected nesting birds have potential to be impacted during construction of the MSF if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed; this would potentially be a significant impact. Impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, included in Section 6.4, are specified to reduce construction-related impacts to nesting birds and special-status bats to a less than significant level.

Electric Bus MSF

Maintenance of the electric buses and equipment would occur at the Electric Bus MSF and may occasionally require maintenance trimming of ornamental trees and shrubs located within the Electric Bus MSF. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to roosting bats and nesting birds protected by the MBTA through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, presented in Section 5.4, are specified to reduce operations-related impacts to nesting birds and special-status bats from vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The Electric Bus MSF for Alternative 1 would be located on developed property on the corner of Pico Boulevard and Cotner Avenue; no habitat modifications or removal would be required for the construction of the Electric Bus MSF. No impacts on special-status plant species would result from the construction of the Electric Bus MSF since suitable habitat is not present. Roosting bats and MBTA-protected nesting birds have potential to be impacted during construction of the MSF if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed; this would potentially be a significant impact. Impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, included in Section 6.4, are specified to reduce construction-related impacts to nesting birds and special-status bats from vegetation trimming or removal to a less than significant level.

6.3.2 Impact BIO-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, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

There is no riparian habitat within the Alternative 1 Ground Disturbance Area, although there is 1.1 acres of undifferentiated riparian habitat in the RSA, located in the 500-foot buffer.

Sensitive natural vegetation communities present within the Ground Disturbance Area for Alternative 1 include sugar bush shrubland and California walnut woodland. Five additional vegetation communities have potential to be sensitive based on the codominant species present, including the following: laurel sumac shrubland, California sycamore woodland, toyon shrubland, black sage shrubland, and California

sagebrush woodland. Potentially sensitive communities are assumed to be as such for this discussion of impact analysis.

6.3.2.1 Operational Impacts

No riparian habitat occurs within the Ground Disturbance Area; therefore, there are no operational impacts anticipated from maintenance vegetation trimming.

Minor vegetation trimming of sensitive communities may occur during operations. Vegetation trimming would likely remove overhanging branches (if any) and is not anticipated to result in the removal of entire trees, shrubs, or root bases. No significant impacts to sensitive natural vegetation communities from operation of Alternative 1 are anticipated since vegetation that may require operational maintenance trimming will have been mitigated under impacts for construction of the Project. An additional potential impact to sensitive communities is introduction of invasive plant seeds into native habitat through vehicle tires used to transport equipment used for operational maintenance activities onto Alternative 1, such as work trucks carrying pressure washing or painting equipment. However, maintenance activities with potential to introduce or spread invasive plant species would primarily occur within developed or paved areas where tires would not be touching bare ground.

6.3.2.2 Construction Impacts

No riparian habitat occurs within the Ground Disturbance Area; however, 1.1 acres of undifferentiated riparian habitat is located in the RSA along Haskell Creek in the northeastern corner of Sepulveda Basin in the 500-foot buffer (Figure 5-15). No impacts from construction to this riparian habitat are anticipated since construction activities including installation of structural support columns for the aerial guideway and construction staging would occur on the east side of I-405, over 300 feet away from the riparian habitat on the west side of I-405.

Sensitive natural vegetation communities (California walnut woodland and sugar bush shrubland) are known to occur within the Ground Disturbance Area along the Sepulveda Pass in the Santa Monica Mountains; 0.7 acres of these communities are present within the Alternative 1 Ground Disturbance Area (Table 6-8). Construction activities adjacent to these locations are associated with aerial guideway construction in the Santa Monica Mountains, specifically I-405 widening and construction of the Getty Center MRT Station and drainage improvements next to the station. Installation of the structural support columns would occur along the aerial alignment next to the sensitive vegetation communities. Within freeway-widening work zones, retaining walls, drainage, and outer pavement widenings would be constructed, which would require clearing and grading of native habitat. Five potentially sensitive vegetation communities (Table 6-8) occur along I-405 through the Santa Monica Mountains, with 3.2 acres present within the Alternative 1 Ground Disturbance Area. Clearing of vegetation for construction activities in this area would likely result in loss of sensitive natural communities within the Ground Disturbance Area of the Alternative 1 RSA. Vehicle tires on equipment used for construction of Alternative 1 have potential to transport invasive plant seeds into native habitat during clearing and grading. An additional risk to sensitive natural community would exist from elevated levels of particulate matter from tires. Dust deposition on vegetation from active construction and particulate matter from tires can disrupt photosynthesis and other processes critical for plant survival.

Alternative 1 could result in significant impacts to sensitive natural communities from construction activities, including permanent vegetation removal activities associated with the construction for Alternative 1. MM BIO-10, MM BIO-16 through MM BIO-18, and MM BIO-23 through MM BIO-25, described in Section 6.4, are included to reduce construction-related impacts to sensitive natural

communities to a less than significant level through establishment of Environmentally Sensitive Areas, biological monitoring of work within these communities, environmental training to Project workers, protection from invasive weeds and protection from dust from speeding or other sources.

6.3.2.3 Maintenance and Storage Facilities

MSF Base Design

The MSF Base Design for Alternative 1 would be located at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. There are no riparian habitat or sensitive natural communities present within the Ground Disturbance Area and 500-foot buffer of the MSF Base Design. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF Base Design.

MSF Design Option 1

The MSF Design Option 1 for Alternative 1 would be located on industrial property abutting Orion Avenue, south of the LOSSAN rail corridor. No riparian habitat or sensitive natural communities are present within the Ground Disturbance Area or the 500-foot buffer of the MSF Design Option 1. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF Design Option 1.

Electric Bus MSF

The Electric Bus MSF for Alternative 1 would be located on developed property near the southern end of the Alternative 1 RSA on the corner of Pico Boulevard and Cotner Avenue. No riparian habitat or sensitive natural communities are present within the Ground Disturbance Area or the 500-foot buffer of the Electric Bus MSF. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the Electric Bus MSF.

6.3.3 Impact BIO-3: Would the project 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?

6.3.3.1 Operational Impacts

There are no state or federally protected wetlands within the Ground Disturbance Area for Alternative 1; therefore, there would be no impacts to protected wetlands related to the operation of Alternative 1.

However, non-wetland waters do occur in the Alternative 1 Ground Disturbance Area. The Los Angeles River occurs along the Alternative 1 alignment and is a WOTUS under the jurisdiction of the USACE, RWQCB and CDFW. One unnamed ephemeral drainage also occurs, portions of which are under the jurisdiction of the RWQCB and CDFW. While temporary impacts to these features may occur during construction, as described below, no operations-related impacts are anticipated as all operations and regular maintenance activities will occur only on existing roadways and developed surfaces.

6.3.3.2 Construction Impacts

The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 1 traverses above the river; no wetlands are associated with the river at this location. There are no state or federally protected wetlands that occur within the Ground Disturbance Area for Alternative 1; consequently, no impacts to protected wetlands are anticipated from construction of Alternative 1.

The Los Angeles River is considered WOTUS under the jurisdiction of the USACE, RWQCB and CDFW within the Alternative 1 Ground Disturbance Area. A total of 0.11 acres of non-wetland waters is associated with the Los Angeles River within the Alternative 1 Ground Disturbance Area. Construction activities would occur outside of jurisdictional areas associated with the Los Angeles River; therefore, no direct significant impacts to the Los Angeles River are anticipated during construction.

Additionally, there is one unnamed ephemeral channel, including 164 linear feet of non-wetland waters, under the jurisdiction of the RWQCB and CDFW present within the Alternative 1 Ground Disturbance Area. This includes temporary impacts to 0.02 acres of Waters of the State under the jurisdiction of RWQCB and 0.03 acre of CDFW-jurisdictional streambed. Construction-related impacts to these features could include temporary filling of, or sedimentation or erosion into the waterways, or disturbance of the bank or bed during construction activities. This would be a potentially significant impact to aquatic resources.

Impacts to aquatic resources will be avoided, minimized, and mitigated for through implementation of MM BIO-15, MM BIO-18, and MM BIO-21, which require monitoring of aquatic features during work near jurisdictional waters, work area delineation, best management practice (BMP) implementation to protect against sedimentation, worker education on sensitive aquatic resources, and avoidance of work near jurisdictional waters during and following rain events.

6.3.3.3 Maintenance and Storage Facilities

MSF Base Design

The MSF Base Design for Alternative 1 would be on developed property located at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. Since there are no wetlands or non-wetland waters present within the Ground Disturbance Area of the MSF Base Design, no impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of the MSF Base Design.

MSF Design Option 1

The MSF Design Option 1 for Alternative 1 would be on developed property abutting Orion Avenue located south of the LOSSAN rail corridor. Since no wetlands or non-wetland waters are present within the Ground Disturbance Area of MSF Design Option 1, no impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of MSF Design Option 1.

Electric Bus MSF

The Electric Bus MSF for Alternative 1 would be located on developed property on the corner of Pico Boulevard and Cotner Avenue. No wetlands or non-wetland waters are present within the Ground Disturbance Area of the Electric Bus MSF. No impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of the Electric Bus MSF.

6.3.4 Impact BIO-4: Would the project 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?

The Santa Monica Mountains and SMMNRA, which transect the Alternative 1 RSA, along with habitat in the Santa Monica Mountains that is outside of SMMNRA, represent a regional connectivity corridor with respect to habitat patches. The SMMC's habitat linkage planning map (SMMC, 2021) identifies four potential wildlife corridors along the I-405 corridor: Mulholland Drive Bridge, Skirball Center Drive

bridge, Bel Air Crest Road underpass, and the Sepulveda Boulevard underpass. Habitat for nesting birds and roosting bats is also present in the form of natural and ornamental vegetation such as trees and infrastructure such as buildings and bridges (see Section 6.4.1 for a discussion of impacts to roosting and nesting habitat).

6.3.4.1 Operational Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 1 RSA. Thus, no operations-related impacts to the movement of resident or migratory fish is anticipated for Alternative 1.

Native Resident or Migratory Wildlife

The Alternative 1 RSA runs north to south and bisects the Santa Monica Mountains. Currently, I-405 acts as a restrictive barrier to mountain lion and vertebrate movement from east to west and vice-versa where it traverses the Santa Monica Mountains. Barriers to movement result in gene flow limitations and isolation of populations, both of which negatively affect the overall health and success of a species (NPS, 2019b). Underpasses and culverts become increasingly important to wildlife movement in areas with extensive road networks (Penrod et. al, 2001). Instances of I-405 crossings by mountain lions and other large mammals are rare but have been recorded on occasion, both successfully and unsuccessfully (i.e., death resulting from vehicle collision), during National Park Service studies of the Santa Monica Mountains population (NPS, 2019b). Anthropogenic disturbance for ongoing maintenance is expected to be minimal and unlikely to significantly impact wildlife movement. Operation of Alternative 1 and permanent impacts from the Project would further impact movement of mountain lions and other large mammals across I-405 as a result of the expanded roadway (i.e., increased width at four locations, including the following: approximately 50 feet east at the Mulholland Drive Bridge wildlife crossing, approximately 50 feet west by Promontory Road near Mountaingate Country Club, up to approximately 30 feet west immediately south of the Getty Center MRT Station, and up to approximately 25 feet west of Getty Center Drive south to Beverly Park Drive by The Getty). The aerial guideway will also represent a new, novel obstacle for transiting wildlife. Noise, lighting, and the overall presence of trains passing overhead on the aerial guideway are anticipated to deter wildlife movement. Anthropogenic disturbance for ongoing maintenance is expected to be intermittent and so is unlikely to significantly impact wildlife movement. Alternative 1 operation is likely to decrease the potential of a successful crossing and increase barriers to movement due to increase in crossing distance from wider disturbance footprint and presence of an overhead guideway and moving trains. This would be a significant impact to wildlife movement and habitat connectivity.

Permanent changes to this area could impact local wildlife movement (Suvarna, 2020). Aerial trains could influence the behavior and movement of wildlife during operation. Specifically, the noise and vibrations associated with operation of trains could alter foraging, mating, or dispersal patterns. Lights used for operational and safety purposes have potential to confuse and disrupt nocturnal species. In addition, birds and bats are at risk of collision with the moving components of aerial trains. However, operation of aerial trains, when compared to a ground level roadway, also have the potential to provide some benefits to wildlife, including less consistent and sustained source traffic noise, a decreased chance of direct strikes due to reduced vehicle traffic, and a lower level of fragmentation to habitat (Lucas et al., 2017). Synanthropic species, such as raccoon and coyote, are those that have adapted to living in close proximity to humans and are more assimilated to anthropogenic disturbances; these species are frequently found in urban environments, making them more likely to adapt and utilize

corridors during operation. However, wary species, such as mountain lion and bobcat, have potential to be more easily deterred by the aerial tram when it is present and passing overheard during operation. Research based on the I-405 Sepulveda Pass Widening and HOV project found that wildlife crossing activity did not return to preconstruction levels following project conclusion at three of the four crossings identified by SMMC (NPS, 2024a), presumably due to changes to the crossings and adjacent vegetation following construction. Bel Air Crest underpass was the exception, where crossing activity did not decrease, presumably due to lower habitat impacts (i.e., vegetation leading to crossing remained intact) and construction activity (i.e., no construction staging). Impacts to habitat adjacent to wildlife crossings would significantly impact wildlife movement corridors.

The Sepulveda Basin Recreation Area is a potential local movement corridor, with habitat for avian species, coyotes, and herpetological species. Approximately 35 acres along the eastern edge of the Sepulveda Basin is within the Alternative 1 RSA, in the 500-foot ground disturbance buffer. If permanent disruption to habitat within the Sepulveda Basin were to occur, it would be likely to alter local corridors by blocking or altering travel routes. However, no ground disturbing activities are planned for within the area. The aerial guideway would be on the eastern side of I-405 when adjacent to the refuge, located 300 feet or more from suitable wildlife habitat. Once operational, the presence of the guideway increases the distance wildlife must cross if wildlife is entering or exiting the area from the east; up to 75 feet would be added to the distance to safely cross I-405 into the refuge. Even urban-adapted species such as opossums and striped skunks may need to adjust local movement corridors to access the refuge if access would be too close to the guideway or traffic. This increased distance and potential disruption to local corridors would represent a significant impact to local wildlife movement if unmitigated.

The aerial monorail associated with Alternative 1 could pose a potentially significant impact to avian species by hindering avian movement; the aerial monorail also presents a risk for aerial collisions with the monorail vehicle and guideway. For regional movement corridors, this alignment would run predominantly north to south within the Alternative 1 RSA and therefore would be perpendicular to the primary direction of avian movement for migrating birds. Most bird species would migrate above the height of the aerial monorail (45 to 55 feet above the existing ground level), so disruptions are expected to be minimal. However, lights on the vehicles or guideway could pose a risk of disorienting birds during migration periods (early April through late May and mid-August through early November) and lead to exhaustion and death (USFWS, 2020). This would constitute a significant impact. Dispersing local resident or younger, recently fledged birds have potential to collide with the guideway track or vehicles while flying along local movement corridors, which would constitute a significant impact.

If special-status bat species have roosting or maternity habitat or commuting or foraging flyways (e.g., roads through or alongside tree stands, riparian corridors) adjacent to the guideway, significant impacts to bats could occur from vehicle collisions (Caltrans, 2019). One special-status migratory bat species, the hoary bat, and special-status birds have the potential to occur in the Alternative 1 RSA during operation of Alternative 1. Operations-related activities associated with Alternative 1, such as vegetation removal or trimming, could also result in a potentially significant impact to migratory bat and avian species by removing potential nesting, roosting, and foraging habitat. Artificial lighting that may be present on guideway structures and within the vehicle during operation could negatively affect adjacent bat roosting locations.

MM BIO-1 and MM BIO-2, described in Section 6.4, are included to reduce significant operational-related impacts to migratory wildlife species from aerial train presence to a less than significant level through constraining vegetation trimming to occur outside nesting bird and roosting seasons where feasible, and installation of appropriate anti-collision devices to aerial vehicles and support structures

where an aerial alignment is present. MM BIO-28 mitigates significant operational-related impacts to the movement of native wildlife species, specifically mountain lions and other vertebrates, to less than significant through monitoring of wildlife crossings and implementation of additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, within six months if impacts are observed.

6.3.4.2 Construction Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 1 RSA. Thus, no construction-related impacts to the movement of resident or migratory fish is anticipated for Alternative 1.

Native Resident or Migratory Wildlife

Mountain lion movement is already dramatically impacted within the Alternative 1 RSA due to I-405. Construction activities associated with Alternative 1 could temporarily further hinder mountain lion movement the Santa Monica Mountains.

The Ground Disturbance Area of Alternative 1 along the Sepulveda Pass would include aerial guideway construction in the Santa Monica Mountains and the widening of I-405 at discrete locations through the Santa Monica Mountains. Within these freeway work zones, retaining walls construction, drainage improvements, and pavement expansion would be conducted for the I-405 widening. Construction of Alternative 1 could impact movement of mountain lions and other vertebrates across I-405 as a result of construction activities, including equipment and lighting and prolonged human presence, thereby decreasing the potential of a successful crossing and increasing barriers to movement. This would be a significant impact. MM BIO-14, included in Section 6.4, is included to reduce construction-related impacts to the movement of native wildlife species, specifically mountain lions and other vertebrates, to less than significant through preconstruction surveys, protection of natal dens if located, limiting vegetation removal, vegetation restoration, and creation of a 5-year monitoring plan.

Local movement through corridors may be temporarily impacted by construction noise, lights, anthropogenic presence, and air pollution. Although resident species are assumed to be exposed to, and therefore acclimated to, at least some level of existing disturbance associated with I-405 and other nearby development, an increase in disturbances related to Project construction could further disrupt behavior patterns in an already urbanized environment. Urban-adapted wildlife may alter their pathways through the region based on construction. Impacts to migratory birds and bats from construction of Alternative 1 may occur due to equipment and lighting associated with nightwork. Bat species have differing reactions to light, with some being attracted and some repelled, but the insects they prey on are influenced by artificial lighting. If artificial lighting for nightwork is adjacent to roosting habitat, it can negatively affect the quality of the habitat. One special-status migratory bat species, the hoary bat, has moderate potential to occur within the Alternative 1 RSA during migratory flyover events. The Santa Monica Mountains provides habitat for the hoary bat for roosting, and foraging resources during their migration from south to north, and vice-versa. Migratory special-status birds also have the potential to occur in the Alternative 1 RSA during construction of Alternative 1. Ground disturbance activities such as removal of vegetation/habitat, drilling, excavating, pile driving, topsoil removal, grading, associated with the construction of Alternative 1, could therefore result in a potentially significant impact to migratory bat and migratory avian species.

MM BIO-4, MM BIO-5, MM BIO-7 and MM BIO-14 included in Section 6.4, are recommended to reduce construction-related impacts to migratory species to a less than significant level through protection to nesting birds, special-status bats, least Bell's vireo, and wildlife movement corridors.

6.3.4.3 Maintenance and Storage Facilities

MSF Base Design

The MSF Base Design for Alternative 1 would on developed property at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. Since there is no open habitat, waterways, or native vegetation present, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of the MSF Base Design.

MSF Design Option 1

The MSF Design Option 1 for Alternative 1 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor. Since there is no open habitat, waterways, or native vegetation present in MSF Design Option 1, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of MSF Design Option 1.

Electric Bus MSF

The Electric Bus MSF for Alternative 1 would be located on developed property on the corner of Pico Boulevard and Cotner Avenue. Since there is no open habitat, waterways, or native vegetation present in the Electric Bus MSF, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of the Electric Bus MSF.

6.3.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The County of Los Angeles General Plan is applicable to the unincorporated County land located in the southern portion of the Alternative 1 RSA, where the U.S Department of Veterans Affairs (VA) Hospital site and Los Angeles National Cemetery are located, among other entities. The County land is already highly developed and landscaped in this area; no woodlands are present and there is low to no likelihood of native vegetation being present that would represent a diverse ecosystem to be preserved. Of the 16 trees within the Tree Survey Area, 12 are nonnative landscaped species and four are oak trees within landscaped areas (discussed below under applicable tree ordinances or policies).

The goal of the "OurCounty" *Sustainability Plan* is to reduce car dependency by providing a safe, affordable public transit system, which is also the purpose of the Project. In addition, the Project would mitigate for tree impacts on unincorporated County land through an applicable ordinance or policy based on species and therefore contribute to the "living streets" approach of the Sustainability Plan.

For Alternative 1, the *City of Los Angeles General Plan's* (DCP, 2001)policies to create and maintain an integrated open space system that apply to and are addressed by the Project include preserving habitat linkages and providing wildlife corridors (MM BIO-14); conserving and managing watersheds (MM BIO-13 with jurisdictional aquatic resource mitigation); onsite evaluation of sensitive habitats (MM BIO-10) and species (MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-14), and analysis of wildlife movement (MM BIO-14).

Since no SEAs intersect with the RSA and no ground disturbance is planned for the Sepulveda Basin, these policies do not apply to Alternative 1.

The City of Santa Monica General Plan is not applicable to Alternative 1 since no land owned by the City is within the RSA.

The Project complies with the SMMNRA General Management Plan in that the Alternative 1 alignment intersects with SMMNRA in locations that are already developed and therefore is preserving natural resources. Roadside vegetation impacts within SMMNRA are temporary impacts for I-405 improvements. MM BIO-9 requires Metro to prepare a Habitat Restoration Plan that will restore temporary impacted locations. MM BIO-14 details coordination with appropriate entities to mitigation for vertebrate crossing impacts which could including vegetation restoration. Trail locations within SMMNRA would not be affected by the Project. The Project would reduce dependency on cars to comply with the Action Plan. MM BIO-23 complies with the Invasive Plant Management Plan by requiring equipment and personnel to be free of mud, debris, or vegetation when entering the Project.

Four local tree ordinances or policies protecting trees and shrubs were found to be applicable to the Alternative 1 RSA, including the City of Los Angeles Protected Tree and Shrub Ordinance, Los Angeles County Oak Tree Ordinance, City of Los Angeles Street Tree Policy (City of LA Policy), and the Metro Tree Policy. For the purpose of this analysis, trees within SMMNRA were assumed to be under the protection of one of these ordinances or policies. No other ordinances or policies related to biological resources were identified that would be pertinent to the operation or construction of Alternative 1. Each tree or cluster within the Tree Survey Area was assigned to one ordinance or policy; applicable ordinance or policy per tree is included in the detailed tree inventory (Appendix B, Attachment 1, Tree Inventory Tables). When protection requirements for City of LA Ordinance or County Oak Tree Ordinance were not met, trees were considered protected through either the City of LA Policy or Metro Tree Policy. Mitigation amounts and maintenance periods vary between ordinances and policies (Table 6-9).

As discussed below, there is potential for significant impacts related to protected tree and shrub removal within the City of Los Angeles, unincorporated County of Los Angeles, and SMMNRA related to the operation and construction of Alternative 1.

Table 6-9. Details of Jurisdiction, Mitigation Ratios, and Maintenance Period for Landowners with Potential for Impacts to Trees

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
City of LA Protected Tree and Shrub Ordinance	City of LA including private property	4:1	3 years	Survival of continuously living replacements for maintenance period required
LA County Oak Tree Ordinance	Unincorporated LA County	2:1	2 years minimum	Applicant's proposal should include future maintenance measures where required.
Santa Monica Mountains National Recreation Area (SMMNRA)	Many, National Park Service acts as administrator	2:1 to 4:1[c]	3 to 5 years[c]	Mitigation for impacts within the SMMNRA are determined through coordination with appropriate entities. Replacement ratio and maintenance period presented represent a preliminary estimate.
City of Santa Monica Tree Code	City of Santa Monica Public right-of-way (ROW)	2:1 to 4:1 [c]	3 to 5 years[c]	Mitigation ratio and maintenance period at discretion of City of Santa Monica. Replacement ratio and

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
				maintenance period presented represent a preliminary estimate.
Metro Tree Policy	Metro right-of-way, Properties & Capital Project Sites	2:1	3 years	Heritage trees, as defined by local ordinance, are protected at 4:1[a].
City of Los Angeles Street Tree Policy	City of LA public right-of-way	2:1	5 years	Applicable to any tree or upon any street or parkway in the city, but does not apply to trees within private properties, in Caltrans right-of-way, or on University of California, Los Angeles campusb unless the tree was planted and maintained by the City

Source: HTA, 2024

[a]Mitigation ratios are for number of replacement trees required per individual tree impacted.

[b]Teresa Estrada, phone call by C. Hargreaves to LA Dept of Urban Forestry Division, July 19, 2024.

[c]Mitigation ratio and maintenance period for trees within SMMNRA and the City of Santa Monica estimated from the range of accepted ratios for replacement trees, between 2:1 and 4:1, for the Metro Tree Policy to the City of LA Ordinance.

NA = not applicable
SMMRNA = Santa Monica Mountains National Recreation Area

6.3.5.1 Operational Impacts

During operations of Alternative 1, activities such as trimming, encroaching into the protection zone (i.e., dripline or canopy), or other actions that could damage root systems or alter the grade around a trunk may impact protected tree and shrub species. These activities could result in potentially significant impact to protected trees.

Protected tree species on Alternative 1 that may require operational maintenance include coast live oaks, southern California black walnuts, and Mexican elderberry near the Getty Center Station and adjacent TPSS facility; coast live oaks and western sycamores at the Metro G Line Station; and coast live oaks and southern California black walnut located at the proposed Sherman Way Station and adjacent TPSS facility. Maintenance to these protected trees would constitute a significant impact. At the Wilshire Boulevard Station within the VA Hospital site, coast live oaks and a holly oak are present; however, although these trees are located within the expanded 200-foot Tree Survey Area required for oak trees on unincorporated county land, they are unlikely to require maintenance trimming as a result of Alternative 1.

To address this impact, Alternative 1 would implement MM BIO-3, described in Section 5.4, which would require the installation and maintenance of replacement trees or shrubs when impacts are unavoidable. With implementation of MM BIO-3, impacts to protected trees during operations of Alternative 1 would be reduced to a less than significant level through installation and maintenance of replacement trees or shrubs following the requirements of the pertinent tree preservation ordinance.

6.3.5.2 Construction Impacts

For the purpose of this assessment, protected trees and shrubs that meet the size and species criteria and whose Tree Protection Zone (TPZ) (dripline or canopy) falls at least partially within the Tree Survey Area are presumed to require removal during construction.

For Alternative 1, total of 3,282 protected trees and shrubs are mapped within the Tree Survey Area (Table 6-10, map series in Appendix B, Attachment 2). Of those, 246 are protected under the by the City of LA Ordinance, irrespective of land ownership, and require permits for any alterations made to protected trees and shrubs during construction, including trimming and encroachment into the tree/shrub protection zone in any manner that could cause a protected tree or shrub to die, such as damaging the root system with compaction or injury and changing the grade around the trunk.

Four individual oak trees are protected under the County Oak Tree Ordinance, since they occur on unincorporated county land within 200 feet of the Ground Disturbance Area; any modification to them would require a permit beforehand from the Director of Public Works. However, no impacts are anticipated to these four oak trees due to their distance from the Ground Disturbance Area (i.e., outside the 10-foot buffer, but within the 200-foot buffer required by the County Oak Tree Ordinance).

The remaining 2,934 trees within the Tree Survey Area of Alternative 1 are protected under the Metro Tree Policy and City of LA Policy. Within SMMNRA, 98 trees of 11 known species and 1 unknown species occur within the Tree Survey Area. Heritage or protected trees, as determined by local ordinances or policy, may be present within the Alternative 1 Tree Survey Area; impacts such as substantial trimming or removal of these heritage or protected trees would constitute a significant impact.

Table 6-10. Alternative 1: Protected Trees and Shrubs by Jurisdiction within Tree Survey Area

Jurisdiction	Scientific Name	Common Name	Quantity	Mitigation Amount (# replacement trees)
City of LA Protected Tree and Shrub Ordinance	*Heteromeles arbutifolia*	Toyon	55	220
	Juglans californica	Southern California black walnut	31	124
	Platanus racemosa	Western sycamore	24	104
	Quercus agrifolia	Coast live oak	109	436
	Quercus chrysolepis	Canyon live oak	3	12
	Quercus lobata	Valley oak	2	8
	Sambucus mexicana	Mexican elderberry	22	88
LA County Oak Tree Ordinance[a]	*Quercus agrifolia*	Coast live oak	3	6
	Quercus ilexa	Holly oak	1	2
TOTAL			**250**	**992**
Santa Monica Mountains National Recreation Area	6 native, 5 non-native, and 1 unknown tree species[b]		98	196 to 392[d]
City of Santa Monica Tree Code	Numerous native and non-native tree species[b]		—	—
Metro Tree Policy or City of Los Angeles Street Tree Policy	Numerous native and non-native tree species[b]		2,934	5,868 plus additional for heritage trees
GRAND TOTAL			**3,282**	**7,056 to 7,252 plus heritage trees**

Source: HTA, 2024

[a]Los Angeles County Oak Tree Ordinance states "any tree of the oak genus"; therefore, non-native oak species are included in this inventory and mitigation calculations.

[b]Mitigation amounts would be at discretion of City of Santa Monica.

[c]Full list of SMMNRA and Policy-protected trees listed in Appendix B, Attachment 1, Tree Inventory Tables.

[d]SMMNRA and City of Santa Monica Tree Code mitigation amounts presumed to be within range of ordinances and policies within the area; final mitigation would be decided through coordination with appropriate entities.

— = not applicable
SMMNRA = Santa Monica Mountains National Recreation Area
TBD = to be determined

Unless mitigated, the anticipated removal and alteration of protected trees and shrubs during construction of Alternative 1 would conflict with the City and County tree ordinances and with Metro and City tree policies. This is considered a significant impact. See Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, for the full list of these recorded trees.

To address this impact, Alternative 1 would implement MM BIO-11, described in Section 5.4, which would require installation and maintenance of replacement trees or shrubs when impacts are unavoidable. With implementation of MM BIO-11, impacts associated with the removal of protected trees and shrubs during construction of Alternative 1 would be reduced to a less than significant level.

6.3.5.3 Maintenance and Storage Facilities

Trees present within any of the MSF locations associated with Alternative 1 are summarized below; they are policy-protected by either the City of LA Policy or Metro Tree Policy. Permitting would be required for trees on the public ROW and covered by the City LA Policy. Tree impacts under the Metro Tree Policy would not require permits; instead, coordination and negotiation with landowners would be required to reconcile for tree removals. Mitigation amounts required for trees located in MSFs are included in Table 6-10.

MSF Base Design

The MSF Base Design is not within unincorporated County land so the Los Angeles County General Plan and Sustainability Plan "OurCounty" are not applicable.

The MSF Base Design for Alternatives 1 would be on developed property at the LADWP facility located east of the Van Nuys Metrolink/Amtrak Station and directly south of the LOSSAN rail corridor. Within the MSF Base Design, there are 32 ornamental trees, including Chinese elm (*Ulmus parvifolia*), jacaranda *(Jacaranda mimosifolia*), Canary Island pine (*Pinus canariensis*), and shamel ash (*Fraxinus uhdei*), among others. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF; these trees are covered by the Metro Tree Policy.

Impacts to trees at the MSF Base Design during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW. Trees within the MSFs are anticipated to be removed during construction. Those that are not removed during construction could be subject to potentially significant impacts during operations if maintenance, such as trimming, injury that would result in death, or removal, is required during operations. With implementation of MM BIO-3, impacts to protected trees and shrubs during operations of the MSF for Alternatives 1 and 3 would be reduced to less than significant.

Tree removal at the MSF Base Design during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact.

To address this impact, the MSF Base Design would implement MM BIO-11, described in Section 5.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-11, impacts associated with removal of protected trees and shrubs during construction of the MSF Base Design would be reduced to less than significant.

MSF Design Option 1

The MSF Design Option 1 is not within unincorporated County land, so the Los Angeles County General Plan and Sustainability Plan "OurCounty" are not applicable.

The MSF Design Option 1 for Alternative 1 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor. Within the MSF Design Option 1, there are 206 ornamental trees including carob (*Ceratonia siliqua*), eucalyptus (*Eucalyptus* spp.), sweetgum (*Liquidambar styraciflua*), cajeput, jacaranda, and assorted palm species among others.

Impacts to trees at the MSF Design Option 1 during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW; however, no impacts to trees within the MSF Design Option 1 are anticipated during operation since trees within the MSF would have been removed during construction.

Tree removal at the MSF Design Option 1 during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact.

To address the impact, the MSF Design Option 1 would implement MM BIO-11, described in Section 5.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-11, impacts associated with removal of protected trees and shrubs during construction of the MSF Design Option 1 would be reduced to less than significant.

Electric Bus MSF

The Electric Bus MSF is not within unincorporated County land, so the Los Angeles County General Plan and Sustainability Plan "OurCounty" are not applicable.

The Electric Bus MSF for Alternative 1 would be located on developed property on the corner of Pico Boulevard and Cotner Avenue near the southern end of the Alternative 1 RSA. This area has 15 ornamental trees including Brisbane box (*Lophostemon confertus*), crape myrtle (*Lagerstroemia* spp.), brush box (*Lophostemon confertus*), and queen palm trees (*Syagrus romanzoffiana***)**. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF.

Tree removal at the Electric Bus MSF during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW; however, no impacts to trees within the Electric Bus MSF are anticipated during operation since trees within the MSF would have been removed during construction.

Tree removal at the Electric Bus MSF during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact.

To address this impact, the Electric Bus MSF for Alternative 1 would implement MM BIO-11, described in Section 5.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-11, impacts associated with removal of protected trees and shrubs during construction of the Electric Bus MSF for Alternative 1 would be reduced to less than significant.

6.3.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 1 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur due to operation or construction of Alternative 1.

6.3.6.1 Maintenance and Storage Facilities

MSF Base Design

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 1 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

MSF Design Option 1

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 1 RSA. Therefore, no impacts would occur.

Electric Bus MSF

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 1 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

6.4 Mitigation Measures

6.4.1 Operational Mitigation Measures

MM BIO-1: ***Avoid and Minimize Operations-Related Impacts to Nesting Birds.*** *Vegetation trimming for operation of the Project related to operational maintenance shall be under the purview and conducted in compliance with the existing Metro Tree Policy on facilities owned by Metro. The Metro Tree Policy's measures to protect native nesting birds (generally February 15 through September 15), including implementation of bird surveys if tree maintenance must occur within the breeding season, shall be implemented. Metro shall be responsible for ensuring compliance with the Metro Tree Policy throughout operations where such activities occur on its own properties.*

- *Project features and/or mitigation recommendations to avoid direct impacts to bird movement shall be implemented where possible, such as Implementation of appropriate deterrents (e.g., visual and/or auditory) on aerial vehicles and/or support structures of the aerial alignment (where present) to prevent bird collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*

MM BIO-2: ***Avoid and Minimize Operations-Related Impacts to Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from operations-related activities, the following shall be implemented:*

- *Specific mitigation measures related to operational work for the Project shall be detailed in a Bat Habitat Mitigation and Monitoring Plan (BHMMP) created by a Qualified Biologist and approved by the California Department of Fish and*

Wildlife prior to initiation of construction. The BHMMP shall include site-specific measures for operational work to avoid and minimize Project-related impacts to roosting, overwintering, and breeding special-status bat species. The BHMMP also shall include reporting requirements to document activities and the results of these measures. Bat protection measures may include, but not be limited to, the following:

- *Limiting vegetation removal wherever possible.*
- *Implementation of appropriate deterrents (e.g., visual, sonar, and/or auditory) on aerial vehicles and/or support structures of the aerial alignment where present to prevent bat collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*
- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during operations, they shall be removed only during the fall (September 1 to October 31) or a time recommended by a Qualified Biologist to ensure removal occurs outside of bat maternity and hibernation seasons. Removal shall occur at night whenever feasible to minimize disturbances. Before removal, a Qualified Bat Biologist shall inspect each swallow nest for occupancy. If the nest is unoccupied, it may be removed immediately. If bats are present, a small portion of the nest shall be carefully removed to make it less suitable for roosting. This process shall be repeated nightly until the nest is vacated. If the next is not vacated after successive attempts, consultation with California Department of Fish and Wildlife shall occur to determine appropriate actions.*

- *Trees, bridges, or other structures that may need to have maintenance work conducted during operations shall be evaluated for potential to support bat roosts. Before work is conducted, a Qualified Biologist shall conduct a one-night emergence survey during acceptable weather conditions. The following measures shall apply to trees, bridges, or other structures should bat roosts be detected.*
  - *If roosting bats are determined to be present during the maternity season (April 15 through August 31), work on the tree/structure shall be avoided to the extent feasible until after the maternity season when young are self-sufficient. If work on a tree/structure must occur during the maternity season (for repairs or other activities that cannot wait until the end of the maternity season), bat surveys shall be conducted by a Qualified Biologist to determine the use of the roost by bats, if a maternity roost is present, etc. This shall help inform additional avoidance and minimization measures that may need to be implemented in conjunction with the California Department of Fish and Wildlife to permit work during the maternity season.*

- *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state, which occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of operations activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, impacts to the roost shall be avoided, to the extent feasible, until after the winter season when bats are once again active. If avoidance of roosting bats is not possible due to the need for repairs, discussion with the California Department of Fish and Wildlife may be necessary to reduce potential impacts while permitting repair activities.*

- *Trees, bridges, or structures with potential colonial bat habitat that require trimming or repairs during operations outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) can be conducted using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities that would potentially be used by bats shall be removed by hand (e.g., using handsaws) or smaller components of the structure should begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree will likely cause bats roosting in the tree to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree, bridge, or structure can occur the following day under the supervision of a Qualified Biologist.*
  - *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-3: ***Avoid and Minimize Operations-Related Impacts to Protected Trees and Shrubs.*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *Compliance with the applicable tree policies requirements for permitting and mitigation.*
- *Impacts to protected trees and shrubs during operation of the Project shall be minimized to the maximum extent feasible. When impacts to protected trees and shrubs are unavoidable — including alterations made such as trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy of the tree/shrub) — the following measures shall be required.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture in a manner that does not cause permanent damage or adversely affect the health of*

the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities with jurisdiction as follows:

- *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
- *Trees protected under the City of LA Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
- *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*
- *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
- *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority).*

- *If operations and maintenance requires removal of protected trees or shrubs, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***Special-status trees afforded protection under California Endangered Species Act or federal Endangered Species Act:*** *Impacts to all trees protected by the California Endangered Species Act or federal Endangered Species Act (e.g., Quercus dumosa) shall require coordination with the California Department of Fish and Wildlife or U.S. Fish & Wildlife Service, as applicable, in addition to the appropriate tree protection ordinance or policy.*
  - ***Los Angeles County Oak Tree Ordinance:*** *All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:*** *Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***Policy-Protected Trees****: All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1, or an in-lieu fee shall be made. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*

  - ***Santa Monica Mountains National Recreation Area****: Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*

- *All trees occurring on private property, including within the Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*

MM BIO-28: ***Avoid and Minimize Operations-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors during operations shall be avoided, minimized, and/or mitigated as follows:*

- *Metro shall develop, in coordination with California Department of Fish and Wildlife and relevant species experts, and implement a five-year monitoring plan to track wildlife movement across corridors during operations of the Project. This shall include a survey of the Project area prior to construction to establish baseline conditions, as well as monitoring the Project area during operations. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is adversely impacted by the presence of the Project (e.g., injury or mortality due to collisions and other effects, reduced habitat patch connectivity, disruptions in corridor usage or avoidance of pre-existing travel corridors), additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

6.4.2 Construction Mitigation Measures

6.4.2.1 Resource-Specific Mitigation Measures

MM BIO-4: ***Avoid and Minimize Construction-Related Impacts to Nesting Birds.*** *Vegetation clearance for construction of the Project shall occur outside of the nesting bird season (generally February 15 through September 15) to the extent feasible. If vegetation removal outside this time period is not feasible, the following additional measures shall be employed to avoid and minimize impacts to special-status bird species and nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code:*

- *A preconstruction nesting bird survey of the work area (as defined by the Ground Disturbance Area, including staging and laydown yards) plus a 300-foot buffer shall be conducted by a Qualified Biologist within three days prior to the start of ground disturbing activities (including vegetation removal activities) to determine whether active nests (defined as nests with eggs or young) are present within or adjacent to (i.e., within 100 feet for non-special-status songbirds, 300 feet for raptors and special-status species) the work zone. Any active nests found shall be recorded and a nest avoidance zone shall be established where no work shall occur. If project activities are delayed beyond 72 hours, a new nesting bird survey shall be completed within 72 hours prior to the resumption of ground disturbing activities.*
- *Active bird nests for species protected by the Migratory Bird Treaty Act shall have a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer established as follows: 300-foot radius buffer for raptors and special-status birds (refer to MM BIO-7 for additional least Bell's vireo measures) and 100-foot-radius buffer for non-raptor and non-special-status avian nests. The Qualified Biologist can adjust buffer distances to increase or decrease the radius contingent on topography, existing noise levels, planned operational activities, species specific tolerances to disturbances such as noise and vibration from construction activities, and observations specific nesting pair tolerance to disturbances. Nest monitoring by the Qualified Biologist shall be required following buffer modifications to ensure new buffer is appropriate; adjustments can be made only following monitoring of nesting pair to determine if the buffer is adequate to protect the nest from construction impacts, including from noise and vibrations. Installation of temporary noise barriers between the work area and nest can also be evaluated, if installation can occur in a manner to not disturb the nesting pair based on the Qualified Biologist's recommendation. If a Qualified Biologist determines work activities may result in nest failure, project work shall cease within the recommended no-disturbance buffer until a Qualified Biologist determines nest status. Additional follow-up surveys shall be conducted as necessary to determine nest status. Once the nest is determined to be fledged or no longer active, the buffer shall be removed.*
- *A Qualified Biologist shall inform maintenance personnel of any active nests, facilitate avoidance measures, and verify operational activities do not cause disturbance. Maintenance personnel shall be updated on nest status and when avoidance buffers are no longer necessary.*
- *A Qualified Biologist shall monitor each nest on a biweekly basis and project activities shall not occur within the buffer until a Qualified Biologist determines the nest is no longer active (either by fledging or failing naturally). If a nest is adjacent to an access road where no project activities are being conducted, vehicles can drive past the nest without stopping or parking. Signage stating no stopping or idling vehicles shall be posted (facing outwards from the buffer) at the start and end of the nest buffer where it crosses the road.*
- *A Qualified Biologist can determine a nest is inactive (defined as eggs and young no longer present or reliant on the nest site, including fledged young that still*

depend upon the nest) following no observations of activity at the nest location for 1 hour for non-raptor avian nests and 4 hours for raptors.

- *A summary of nesting bird surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented by the biologist at the conclusion of each nesting season and submitted to Metro. In the event that an active bird nest is identified as belonging to a special-status species afforded protection under the California Endangered Species Act or the federal Endangered Species Act, then the appropriate agency shall be immediately informed, and additional coordination shall occur, as needed.*

MM BIO-5: ***Avoid and Minimize Construction-Related Impacts to Roosting Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from construction activities, the following shall be implemented:*

- *A bat habitat assessment shall be conducted during the bat maternity season (generally April 15 through August 31 for southern California, yearly timing dependent on weather conditions) at least one year prior to construction. A Qualified Biologist shall conduct surveys to determine the presence of bat roosting or maternity habitat within suitable areas where vegetation trimming, tree removal, bridge repair activities, structure demolition, or other construction-related activities may occur and bats may be present. A visual inspection and/or one-night emergence survey of potential bat habitat that may be impacted by activities shall be completed utilizing acoustic recognition technology to determine if any maternity roosts are present. Results from this survey shall be used to create a Bat Habitat Mitigation and Monitoring Plan (BHMMP), produced by a Qualified Biologist, and shall include site-specific minimization and avoidance measures for operations and construction of the Project. These measures shall include but not be limited to establishment of no-disturbance buffers, monitoring of roosting bats to ensure tolerance to disturbances such as noise and vibration from Project activities, mitigation for habitat impacts, and humane eviction or exclusion. If monitoring indicates established no-disturbance buffer is not adequate to prevent disturbances to roosting bats, a Qualified Biologist can adjust the buffer as needed.*
- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed, including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (e.g., vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during construction, removal shall occur in the fall (September 1 to October 31 or based on local expert bat biologist input as long as it is outside of bat maternity or hibernation season), preferably at night. Nests shall be inspected for occupancy by a Qualified Biologist and if empty, removed. If a bat is present, if feasible a small portion of the nest can be carefully removed to make the nest a less suitable for roosting. The following night, if the nest is empty, it can be removed entirely. If not, another small portion can be*

removed if feasible. If removal is not feasible or bats are still present, consultation with California Department of Fish and Wildlife may be appropriate.

- *Trees or structures to be removed as part of the Project shall be evaluated for their potential to support bat roosts. An experienced bat biologist shall conduct a one-night emergence survey during acceptable weather conditions, before the start of removal. The following measures shall apply to trees or structures to be removed that provide potential bat roost habitat; these shall be implemented by a Qualified Biologist.*
  - *If roosting bats are determined present in a tree or on a structure during the maternity season (April 15 through August 31), the tree/structure shall be avoided until after the maternity season when young are self-sufficient. If other trees/structures in the immediate vicinity are slated for removal, or other work shall occur in the immediate vicinity that might disturb roosting bat, a no-work buffer may be needed.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state that occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of project activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, the tree or structure shall be avoided until after the winter season when bats are once again active.*
- *Trees or structures with potential to serve as colonial bat habitat can be removed outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities shall be removed by hand (e.g., using handsaws) or smaller components of the structure shall begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree/structure will likely cause bats roosting to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree or structure can occur the following day under the supervision of a Qualified Biologist.*
- *Trees that are only to be trimmed and not removed shall also require a two-step process with these deviations from the removal process explained above: if a branch with a potential roost must be removed, all surrounding branches shall be trimmed on Day 1 under supervision of a Qualified Biologist and then the limb with the potential roost shall be removed on Day 2.*

- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-6: ***Avoid and Minimize Construction-Related Impacts to Crotch's Bumble Bee.*** *To reduce impacts on Crotch's bumble bee from construction activities, the following shall be implemented:*

- *A pre-construction habitat assessment for Crotch's bumble bee shall be conducted by a Qualified Biologist within the Ground Disturbance Area and a surrounding 100-foot buffer to demarcate potentially suitable nesting and foraging habitat.*
- *Nesting surveys and foraging surveys shall be conducted during the most active flight period and peak blooming period of nectar and pollen sources (generally April 1 through July 31). The survey shall be conducted between at least 1 hour after sunrise and at least 2 hours before sunset, with ambient air temperature between 60- and 90-degrees Fahrenheit. Surveys shall not be conducted during windy periods with speeds of over 10 mph, during fog or low visibility, or precipitation heavier than drizzling rain.*
- *Foraging surveys shall focus on areas of high abundance of nectar and pollen sources with meandering transects within these areas at a rate of no more than 2.5 acres per hour.*
- *Nesting surveys shall focus on areas with existing, abandoned, rodent burrows; the biologist shall focus on detecting potential Crotch's bumble bee nest within suitable habitat.*
- *If a nest is documented, a 50-foot "no-disturbance" buffer shall be established and clearly identified in the field for avoidance. Construction activities shall avoid the nest location and surrounding buffer until the nest has senesced.*
- *Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed and/or a nest is located, California Department of Fish and Wildlife shall be informed, and additional coordination shall occur as needed.*

MM BIO-7: ***Avoid and Minimize Project-Related Impacts to Least Bell's Vireo.*** *To reduce impacts on least Bell's vireo from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, the Project shall perform one full season of protocol surveys for least Bell's vireo in suitable habitat within 500 feet of construction activities following the accepted U.S. Fish & Wildlife Service protocol. Focused surveys shall be completed prior to construction initiation and results shall be used to inform a consultation process with the U.S. Fish & Wildlife Service for project permitting. Eight surveys shall be conducted between April 10 and July 31, with each survey spaced at least 10 days apart. Reduction in the prescribed number of individual surveys may be evaluated in accordance with the U.S. Fish & Wildlife Service protocol. Surveys shall be conducted*

between dawn and 11:00am and outside of periods of inclement weather (excessive heat or cold, high winds, rain, etc.). Surveys shall not be conducted concurrently with other surveys. Per the U.S. Fish & Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.

- *Following completion of protocol surveys, pre-construction presence/absence clearance surveys shall be required if construction is planned to begin within the nesting season. Clearance surveys shall be required within 500 feet of suitable habitat and must occur 3 or fewer days prior to start of activities. Presence/absence surveys shall be conducted by a Qualified Biologist who is familiar with species visually and aurally, and who is able to differentiate similar species. The Qualified Biologist shall not be required to have an Endangered Species Act Section 10(a) recovery permit covering this species since recorded vocalizations shall not be used to illicit responses and nest monitoring (i.e., locate and monitor the nest, including removal of brown-headed cowbird (Molothrus ater) eggs and chicks from parasitized nests) and handling of individual are not proposed.*
- *If protocol and pre-construction survey results are negative, construction activities can commence, and a Qualified Biologist shall conduct presence/absence surveys weekly during the breeding season while construction is occurring within 500 feet of suitable habitat. If least Bell's vireo are detected during a survey, a Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat until the end of the breeding season. If construction within 500 feet of suitable habitat is paused for more than 3 days, a new survey must be conducted to verify if least Bell's vireo are present.*
- *If an active nest is documented, a no-disturbance 300-foot radius buffer shall be established and clearly identified in the field. Construction activities shall avoid the nest location and buffer until a Qualified Biologist declares the nest inactive. A Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat every day work is occurring while the nest is active. Noise monitoring shall be required weekly on varying days to account for changes in construction-related noise levels from before the nest is active to after. Monitoring shall be to ensure noise levels remain at or below 60 A-weighted decibels (dBA) or to the ambient noise level if it already exceeds 60 dBA before construction at specified monitoring locations within 100 feet of the nest. The Qualified Biologist shall either conduct the noise monitoring or escort the noise monitor if they are not a Qualified Biologist.*
- *The results of the surveys shall be used to design project features and temporary work areas to avoid direct impacts to occupied habitat for listed riparian bird species. Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*

MM BIO-8: ***Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles.*** *To reduce impacts on special-status reptiles from construction activities, the following shall be implemented:*

- *Prior to the start of vegetation removal, the Ground Disturbance Area shall be clearly fenced (usually with silt fencing) to delineate the extent of the construction area.*
- *Once fencing is in place, a Qualified Biologist shall conduct a pre-vegetation clearance sweep to look for and remove any special-status reptile species (e.g., coast horned lizard, two-striped garter snake, southwestern pond turtle, coastal whiptail, and southern California legless lizard) that may occur within the Ground Disturbance Area. If any special-status reptile species are detected within the Ground Disturbance Area, personnel shall allow the species to escape unimpeded if possible. Alternatively, the Qualified Biologist shall move the species outside of the fencing to the closest suitable habitat pending authorization from the U.S. Fish & Wildlife Service or California Department of Fish and Wildlife, if required.*
- *Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*
- *Any observations of special-status reptiles shall be summarized in writing and submitted to Metro. In the event that an observed special-status species is afforded protection under the California Endangered Species Act or federal Endangered Species Act, then the appropriate agency shall be immediately informed and additional coordination shall occur, as needed.*

MM BIO-9: ***Avoid and Minimize Construction-Related Impacts to Special-Status Plants.*** *Impacts to special-status plants shall be avoided, minimized and/or mitigated through incorporation of the following:*

- *Prior to any Project activities that may modify vegetation, focused rare plant surveys shall be conducted following California Department of Fish and Wildlife protocols. Focused surveys shall occur during optimal blooming periods for special-status species likely to occur, which typically results in multiple visits within one growing season (e.g., early, mid- and late-season surveys). In the event a federally listed species is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*
- *If focused rare plant data is more than 1 year old at commencement of construction, pre-construction surveys during the optimal blooming periods shall occur to demarcate special-status plant populations for avoidance (where feasible). The results of the focused surveys shall be used to design project features and temporary work areas to avoid direct impacts to federally and state-listed plant species.*
- *All observations of special-status plants prior to and during Project construction activities shall be documented in writing, including detailed descriptions of the location, species, and condition of the plant. If a special-status species protected*

under the California Endangered Species Act or the federal Endangered Species Act is observed, Metro shall immediately notify the appropriate agency (e.g., California Department of Fish and Wildlife or U.S. Fish & Wildlife Service) and coordinate further actions as required by law. This may include consultation to determine the need for additional avoidance, minimization, or mitigation measures. If impacts to special-status plants cannot be avoided, the Project shall prepare and implement a Habitat Restoration Plan. The Habitat Restoration Plan shall include mitigation ratios for impacted special-status plants and native habitats, installation methods, a detailed monitoring plan that includes quantifiable data collection, maintenance strategies, reporting requirements, and quantifiable performance criteria for restoration success.

- *Special-status plant mitigation strategies shall include restoration of impacted areas through seeding and/or plantings. Weed abatement shall be implemented if Project activities result in non-native species within the Ground Disturbance Area that were not present before activities began. Specific strategies shall be implemented as described below:*
- *If special-status plant species observed during surveys can feasibly be transplanted, such as slender mariposa lily (Calochortus clavatus var. gracilis), individuals shall be salvaged prior to ground disturbance for translocation. Salvage may include collection by hand of individual plants, storage in an appropriate manner depending on species, and replanting within suitable habitat close to its original location following completion of construction activities. For the purposes of this measure, "feasible" shall mean the ability to transplant plants without jeopardizing plant viability, project design, or safety requirements.*
  - *If on-site repair or restoration efforts are not feasible or adequate to mitigate for impacted plants, alternative measures, such as off-site compensation, shall be implemented. Off-site compensation shall achieve equivalent or greater ecological value and shall utilize a minimum 3:1 replacement ratio (three replacement plants for every one impacted plant). The replacement ratio shall be based on the number of individuals impacted or the acreage of habitat affected, depending on the specific circumstances, and the species affected. The compensation area shall be protected in perpetuity through mechanisms such as conservation easements, deed restrictions, or long-term management agreements.*
  - *To protect special-status plant populations from human disturbance after construction is completed, fencing or signage shall be installed around restored areas where public access is anticipated.*

MM BIO-10: ***Avoid and Minimize Construction-Related Impacts to Sensitive Vegetation Communities.*** *Impacts to sensitive vegetation communities shall be avoided, minimized, and/or mitigated as follows:*

- *The Project shall prioritize avoiding impacts to sensitive vegetation communities, including but not limited to California walnut woodland and sugar bush shrubland, and any other communities ranked S1 to S3 by the California Department of Fish and Wildlife. When avoidance is not possible, impacts shall be minimized by planning construction activities in previously disturbed areas to the extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid impacts without compromising essential project design, safety, regulatory compliance, or causing environmental impacts that would be greater than those being minimized.*
- *Impacts to any natural vegetation communities designated sensitive, such as California walnut woodland and sugar bush shrubland, shall be reduced by trimming vegetation instead of removing entire trees or shrubs where feasible. For the purposes of this measure, "feasible" is defined as the ability to trim vegetation without compromising plant health, public or worker safety, or essential project design requirements. Where trimming alone is infeasible, removal shall be conducted in a manner that avoids further damage to surrounding vegetation.*
- *When feasible, temporary impact areas shall have vegetation trimmed and rootballs left intact to enable regrowth once construction is complete.*
- *In conjunction with appropriate entities with jurisdiction (i.e., Caltrans for their right-of-way, Santa Monica Mountains Conservancy for Santa Monica Mountains National Recreation Area), Metro shall design, develop and implement a 5-year restoration plan to restore native vegetation communities disturbed by construction activities. A preconstruction assessment of sensitive vegetation communities shall be conducted to collect a comprehensive plant species list, community structure data, native and nonnative plant cover assessments, and preconstruction photos for permanent photo points; this information shall be incorporated into the restoration plan. The plan shall include a monitoring program that includes both qualitative and quantitative data collection, quantified performance criteria that consider pre-construction conditions, irrigation and maintenance actions, and the use of native plantings and/or seedlings to restore native communities. Performance criteria shall be defined with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and shall include the following habitat characteristics: native plant species cover and diversity, container plant survivorship (if applicable), non-native annual species cover, absence of non-native, woody perennial species cover, and self-sufficiency of restoration plants (i.e., ability to persist without supplemental irrigation).*
- *Native species such as succulents, bulb species, and cactus shall be salvaged from the Ground Disturbance Area before work begins, to the maximum extent feasible, and stored in an appropriate manner depending on species requirements. These species shall be replanted within the Ground Disturbance Area at project conclusion as part of the restoration efforts.*

- *Progress toward these performance criteria shall be evaluated on a regular basis as defined in the restoration plan, but a minimum of once annually for the 5-year maintenance period. If the success standards are not met by the end of Year Five, additional measures such as replanting, remedial seeding, and/or supplemental watering shall be implemented. Monitoring shall continue thereafter until performance criteria are attained.*
- *Restoration monitoring results and future recommendations shall be submitted in annual reports submitted to Caltrans, the Santa Monica Mountains Conservancy, and other relevant agencies until success criteria are achieved.*

MM BIO-11: ***Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Applicable to Alternatives 1 and 3).*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *A Tree Expert, as defined under the City of Los Angeles Protected Tree and Shrub Ordinance, shall complete a detailed tree survey report prior to construction and once access is obtained to properties within the alignment. The report shall build upon the Initial Protected Tree and Shrub Inventory Memorandum (Appendix B of the Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report) and include detailed field methods and data for each protected tree or shrub, such as species, height, diameter, canopy spread, physical condition, and precise location. The City of Los Angeles Protected Tree and Shrub Ordinance has jurisdiction in the Project; therefore, a Tree Expert shall be required to conduct the detailed survey and procure permit for protected tree/shrub removal from the Los Angeles Board of Public Works. The Tree Expert's follow-up report shall expand upon the initial assessment to provide a comprehensive dataset with verification of tree/shrub species, height, canopy width, and tree/shrub health for the Ground Disturbance Area. This follow-up report shall be used to procure the required permit prior to commencement of tree impacts within the City of Los Angeles.*
- *Impacts to protected trees and shrubs shall be minimized to the maximum extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid or minimize impacts while meeting project design, safety, and operational requirements, as determined by the Tree Expert and project engineers. When trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy) is needed, the following measures shall be implemented.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture and conducted in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Since the Metro Tree Policy Trimming shall require coordination and permitting with the appropriate entities as follows:*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*

- *Trees protected under the City of Los Angeles Street Tree Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
- *Trees covered by the Metro Tree Policy and designated for retention shall require the Project to prepare a Tree Protection Plan. The Tree Protection Plan shall identify Tree Protection Zones for all trees designated for retention and shall protect larger trees from immediate damage during construction and delayed damage from construction activities, such as loss of root area or soil compaction. The Project shall prepare a mitigation plan for damaged and removed trees with a minimum replacement ratio of 2:1 per removed street tree.*
- *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
- *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority).*

- *For impacts to protected trees and shrubs beyond trimming, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***Los Angeles County Oak Tree Ordinance:*** *All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:*** *Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***Policy-Protected Trees:*** *All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1 per individual. The Los Angeles Street Tree Policy allows for an in-lieu fee to be made with approval of the Board of Public Works following verification that replacement trees cannot be feasibly planted onsite. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*
  - ***Santa Monica Mountains National Recreation Area:*** *Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*

- *All trees occurring on private property or Caltrans right-of-way shall not require permitting but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1 per individual.*
- *For protected trees and shrubs that are not anticipated to be impacted, a Tree Protection Zone shall be established around each tree/shrub or cluster of trees/shrubs prior to the commencement of work. The Tree Protection Zone shall be erected using temporary fencing in an environmentally sensitive manner and remain in place until all site work has been completed. Specific installation timeframe may vary but the Tree Protection Zone must be inspected and approved by a Qualified Arborist prior to construction work occurring, including staging of equipment. Work can commence directly following arborist inspection and approval. No construction-related materials shall be stored or staged within the Tree Protection Zone (fenced areas).*
- *The LA Street Tree Policy would require coordination with the City of Los Angeles Department of Public Works for removal or maintenance of protected trees; this policy does not apply to trees within private property, UCLA, or within the Caltrans right-of-way. Metro Tree Policy would not require permitting but would require coordination with the landowners (i.e., private landowners, UCLA, Caltrans) when a tree must be removed. Additionally, Metro Tree Policy states a mitigation plan would be required to be developed in consultation with a Certified Arborist if construction impacts resulted in a damage to or removed a protected tree; decisions would be made in accordance with local ordinances identifying protected trees.*

MM BIO-14: ***Avoid and Minimize Construction-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors shall be avoided, minimized, and/or mitigated as follows:*

- *Prior to any ground-disturbing activity, a Qualified Biologist shall conduct a detailed analysis of wildlife movement and corridors within the Santa Monica Mountains as they relate to ground disturbance activities for the Project. Analysis shall include desktop review of publicly available documentation — including research publications, project reports, environmental analyses, and high-quality aerial imagery — to anticipate wildlife movement patterns within the project vicinity. Field surveys shall also be conducted to identify and document wildlife crossings.*
- *Prior to construction, Metro shall coordinate with the California Department of Fish and Wildlife, Caltrans, the Santa Monica Mountains Conservancy/Santa Monica Mountains National Recreation Area, and species experts (as appropriate) to identify and implement appropriate minimization and avoidance measures to facilitate mountain lion and other vertebrate movement and connectivity across the Santa Monica Mountains. Performance standards for wildlife connectivity shall require that post-construction conditions maintain or improve wildlife movement. Specifically, the Project shall achieve a 0 percent increase in road mortality for mountain lions and other sensitive species in the*

Project Study Area, as measured through tracking and monitoring for at least five years post-construction.

- *Prior to any ground-disturbing activities, field surveys shall be conducted by a Qualified Biologist to survey for (1) confirm mountain lion presence or absence (2) identify known or potential mountain lion natal dens within suitable habitat with 600 feet of ground-disturbing activities during the breeding season (April through September), and (3) identify and document wildlife crossings in the Project vicinity. Surveys shall be conducted at dawn and dusk to increase probability of detection.*
- *If a mountain lion natal den is identified during the survey, the Qualified Biologist shall establish a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer where work shall cease until the den is no longer occupied or the cubs have successfully reared. The size of the buffer shall be determined based on characteristics of the den (e.g., distance, direction facing, observed behavior) and through consultation with species experts and California Department of Fish and Wildlife to ensure the buffer is of appropriate size to not adversely affect rearing of cubs.*
- *Vegetation removal shall be limited wherever possible, particularly within the Santa Monica Mountains.*
- *Vegetation restoration within temporarily disturbed areas adjacent to wildlife crossings shall be designed to facilitate wildlife movement. Installed vegetation patches shall be designed to act as "stepping stones" to provide cover for wildlife approaching crossings. All vegetation provided shall be consistent with any Habitat Restoration Plan required pursuant to MM BIO-9.*
- *A summary of survey results from presence/absence and den surveys shall include maps of the survey area and possible denning locations and shall be submitted to Metro and California Department of Fish and Wildlife. If a natal den or presence is confirmed, California Department of Fish and Wildlife shall be immediately informed, and additional coordination shall occur, as needed.*
- *Metro shall also develop a five-year monitoring plan, in coordination with California Department of Fish and Wildlife and species experts, to track wildlife movement across corridors during and after construction. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is negatively impacted, additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

MM BIO-15: ***Avoid and Minimize Construction-Related Impacts to Jurisdictional Aquatic Resources.*** *Potential impacts to drainages shall be avoided and/or minimized when working in or adjacent to aquatic resources as defined in the Aquatic Resources Delineation Report (Appendix A from the Sepulveda Transit Corridor Project Ecosystem and Biological Resources Technical Report) through incorporation of the following:*

- *A Qualified Biologist/Aquatic Specialist shall monitor construction activities adjacent to jurisdictional aquatic resources during vegetation clearing and/or initial ground-disturbance activities. Additionally, they shall support impact avoidance and minimization measures detailed in permits and approvals obtained for the Project.*
- *Limits of the Ground Disturbance Areas shall be designated with lathe staking or a similar method. All equipment and workers shall remain within approved work limits.*
- *Wherever possible, construction personnel shall utilize existing access roads or previously disturbed areas to reach the project area or stage their vehicles and equipment.*
- *Maintenance personnel shall also not leave any waste or debris behind which would impact natural habitats.*
- *To protect water quality:*
  - *Appropriate best management practices shall be installed to prevent erosion and guide runoff during rain events.*
  - *Equipment and materials shall be staged within the alignment and away from water drainages. Parked equipment shall have secondary containment to prevent any fluid leaks from coming into contact with the ground surface.*
  - *Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter into an aquatic resource.*
  - *Disposal or temporary placement of excess fill, brush, or other debris shall not be allowed in Waters of the United States, Waters of the State, and California Department of Fish and Wildlife streambeds or their banks.*

MM BIO-29: ***Avoid and Minimize Construction-Related Impacts to Overwintering Burrowing Owls.*** *To avoid and reduce impacts on overwintering burrowing owls from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, a Qualified Biologist familiar with the ecology of burrowing owls shall conduct the following field investigations:*
  - *A habitat assessment to map Project areas with potential to support overwintering burrowing owls. The habitat assessment shall follow the methodology outlined in Appendix C of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012) and shall include the Project footprint and a 150 meter buffer of these areas.*

- *One season of non-breeding season surveys, including at least four (4) visits spread evenly throughout the non-breeding season (defined as September 1 to January 31).*
- *Results of these investigations shall be summarized in writing and submitted to the California Department of Fish and Wildlife, and used to inform the need for pre-construction take avoidance surveys or additional permitted as needed.*

- *A Qualified Biologist shall conduct a pre-construction take avoidance survey in all areas of known or potentially suitable overwintering habitat, following the methodology outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012). The take avoidance survey shall be conducted no less than 14 days prior to initiating ground disturbance and may be repeated if work activities are paused for a period of 7 days or more during the non-breeding season (September 1 to January 31).*
  - *At the discretion of the Qualified Biologist, an additional pre-construction clearance survey shall be conducted no more than 24 hours prior to ground disturbance, to ensure that no burrowing owls have colonized the work areas or adjacent habitats.*
  - *If an occupied wintering burrow is located, an appropriate no-disturbance buffer shall be implemented. The width of the buffer shall be determined by the Qualified Biologist with consideration of the level of disturbance that is anticipated for the burrowing, following the recommended buffer distances outlined below.*
    - *Low level of disturbance: 50 meters*
    - *Medium level of disturbance: 100 meters*
    - *High level of disturbance: 500 meters*
  - *Results of the survey shall be summarized in writing and submitted to the California Department of Fish and Wildlife for review.*
  - *If an occupied burrow cannot be avoided, work in the vicinity of the burrow shall stop, the California Department of Fish and Wildlife shall be contacted, and additional coordination shall occur as needed in compliance with the California Endangered Species Act.*

6.4.2.2 General Construction Measures

The following general construction measures are proposed for implementation during construction activities:

MM BIO-16: *Prior to vegetation clearing, grading, and/or construction activities that may impact habitats of special-status species, a Qualified biologist(s) shall oversee installation of appropriate temporary Environmentally Sensitive Area fencing and/or flagging to delineate the limits of construction and the approved construction staging areas for protection of identified sensitive resources outside the approved construction/staging zones. All construction access and circulation shall be limited to designated construction/staging zones. Fencing shall be of a type that shall not entangle or*

otherwise detrimentally effect wildlife or the environment. Fencing shall be checked weekly to ensure it is intact and functioning as intended, to look for signs of degradation that might cause harm to wildlife or the environment, and to ensure fenced construction limits are not exceeded. This fencing shall be removed upon completion of construction activities.

MM BIO-17: *A Qualified Biologist(s) shall monitor project activities during vegetation clearing, grading, and/or construction within or adjacent to areas identified as sensitive habitat and/or jurisdictional aquatic resources. If special-status species and/or sensitive habitats adjacent to the project sites are inadvertently impacted by activities, then the Qualified Biologist(s) shall immediately inform the on-site construction supervisor who shall temporarily halt or redirect work away from the area of impact. If unanticipated impacts occur to occupied habitat for special-status species, the Project shall consult with the appropriate regulatory agencies.*

MM BIO-18: *A Worker Environmental Awareness Plan (WEAP) shall be developed and implemented prior to the start of construction. Environmental training shall be led by the Qualified Biologist(s) and shall cover the sensitive resources found on-site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. New workers added to construction after the initial training at work start shall be required to receive WEAP training before they may begin work on the Project. Documentation of personnel who have attended WEAP training shall be maintained and submitted to Metro. All information included in WEAP training shall be kept on Project sites to be readily accessible to any personnel in a form deemed appropriate for the Project (e.g., wallet cards, printed flyers, etc.).*

MM BIO-19: *Wildfires shall be prevented by exercising care when driving to prevent sparks and by not parking construction vehicles where catalytic converters could ignite dry vegetation. All construction vehicles shall carry water and shovels or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. Smoking shall take place within designated areas and away from vegetated areas.*

MM BIO-20: *Construction workers shall be prohibited from bringing pets and firearms to the site.*

MM BIO-21: *To prevent unnecessary erosion, runoff, and sedimentation, all construction activities within 100 feet of drainages or wetlands shall cease during Stormwater Pollution Prevention Plan-defined rain events and shall not resume until conditions are suitable for the movement of equipment and materials. Vehicle access along unpaved access routes shall not occur during saturated soil condition to avoid rutting or other soil disturbance.*

MM BIO-22: *If night work shall occur, all lighting used during night construction shall be temporary and shall be implemented to reduce lighting effects onto adjacent open space areas (i.e., downcast, away from habitat) and/or shall also be directed away from nests/roosting sites on man-made structures. Light shields shall be used to minimize light pollution adjacent to the Project.*

MM BIO-23: *Prior to entering the construction areas, equipment and personnel shall be free of mud, debris, or vegetation to prevent the introduction and spread of weeds or invasive species to the Project. If required, vehicle washing shall occur within designated areas within project construction areas where appropriate containment has been established, or at a suitable off-site facility.*

MM BIO-24: *Dust suppression measures shall be implemented during construction to minimize the creation of dust clouds and possible degradation of sensitive vegetation communities and special-status species suitable habitat. These measures shall include applying water at least once per day or as determined necessary by the Qualified Biologist(s) to prevent visible dust emissions from exceeding 100 feet in length in any direction. In addition, watering frequency shall be increased to four times per day if winds exceed 25 miles per hour. Nontoxic soil stabilizers may be used on access roads to control fugitive dust, as needed.*

MM BIO-25: *Vehicle speeds shall be restricted to posted speed limits on existing paved roads and to 15 miles per hour on dirt or gravel access roads during all phases of the Project. Speed limit signs shall be posted on dirt or gravel access roads throughout the site to remind workers of travel speed restrictions.*

MM BIO-26: *Trenches and excavations located within open areas shall be backfilled with earth at the end of each workday or have one edge sloped into an escape ramp with a less than 1:1 (45 degree) slope to prevent wildlife entrapment. A non-slip material may be used (e.g., wooden ramp with traction) when an earthen escape ramp cannot be created. For instances when these methods are not feasible (e.g., deep, long-term excavations for underground segments), temporary exclusion fencing can be installed around the perimeter of the work area to prevent animal entrapment. The Qualified Biologist shall ensure the temporary exclusion fencing is sufficiently supported to maintain integrity under all conditions and shall be checked daily to ensure integrity is maintained and inspect it daily while work is occurring. Fencing shall be repaired each day, as needed to ensure integrity is maintained. A Qualified Biologist shall inspect all trenches and excavations for trapped animals at the beginning and end of each day, as well as before excavations are backfilled. Should wildlife become trapped in any trenches or excavations, a Qualified Biologist(s) shall remove and relocate them outside the construction zone. When entrapped wildlife is a listed species with handling restrictions, relocation must be conducted by a biologist permitted to handle the species. Where trenches or excavations cannot be immediately backfilled or sloped, open excavations shall be covered and the end of each day with boards or plates. The edges of the boards shall be sealed with native spoils to prevent wildlife from entering the excavation in gaps at the board edges.*

MM BIO-27 *Spoils, trash, and any construction-generated debris shall be removed to an approved off-site disposal facility. Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*

6.4.3 Impacts After Mitigation

Implementation of the mitigation measures listed above shall reduce biological resources impacts related to project operations and construction to a level that is considered less than significant.

7 ALTERNATIVE 3

7.1 Alternative Description

Alternative 3 is an aerial monorail alignment that would run along the Interstate 405 (I-405) corridor and would include seven aerial monorail transit (MRT) stations and an underground tunnel alignment between the Getty Center and Wilshire Boulevard with two underground stations. This alternative would provide transfers to five high-frequency fixed guideway transit and commuter rail lines, including the Los Angeles County Metropolitan Transportation Authority's (Metro) E, Metro D, and Metro G Lines, the East San Fernando Valley Light Rail Transit Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 16.1 miles, with 12.5 miles of aerial guideway and 3.6 miles of underground configuration.

The seven aerial and two underground MRT stations would be as follows:

1. Metro E Line Expo/Sepulveda Station (aerial)
2. Santa Monica Boulevard Station (aerial)
3. Wilshire Boulevard/Metro D Line Station (underground)
4. UCLA Gateway Plaza Station (underground)
5. Getty Center Station (aerial)
6. Ventura Boulevard/Sepulveda Boulevard Station (aerial)
7. Metro G Line Sepulveda Station (aerial)
8. Sherman Way Station (aerial)
9. Van Nuys Metrolink Station (aerial)

7.1.1 Operating Characteristics

7.1.1.1 Alignment

As shown on Figure 7-1, from its southern terminus at the Metro E Line Expo/Sepulveda Station, the alignment of Alternative 3 would generally follow I-405 to the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor, except for an underground segment between Wilshire Boulevard and the Getty Center.

The proposed southern terminus station would be located west of the existing Metro E Line Expo/Sepulveda Station, east of I-405 between Pico Boulevard and Exposition Boulevard. Tail tracks would extend just south of the station adjacent to the eastbound Interstate 10 to northbound I-405 connector over Exposition Boulevard. North of the Metro E Line Expo/Sepulveda Station, a storage track would be located off of the main alignment north of Pico Boulevard between I-405 and Cotner Avenue. The alignment would continue north along the east side of I-405 until just south of Santa Monica Boulevard, where a proposed station would be located between the I-405 northbound travel lanes and Cotner Avenue. The alignment would cross over the northbound and southbound freeway lanes north of Santa Monica Boulevard and travel along the west side of I-405. Once adjacent to the U.S. Department of Veterans Affairs (VA) Hospital site, the alignment would cross back over the I-405 lanes and Sepulveda Boulevard, before entering an underground tunnel south of the Federal Building parking lot.

Figure 7-1. Alternative 3: Alignment

Source: LASRE, 2024; HTA, 2024

The alignment would proceed east underground and turn north under Veteran Avenue toward the proposed Wilshire Boulevard/Metro D Line Station located under the University of California, Los Angeles (UCLA) Lot 36 on the east side of Veteran Avenue north of Wilshire Boulevard. North of this station, the underground alignment would curve northeast parallel to Weyburn Avenue before curving north and traveling underneath Westwood Plaza at Le Conte Avenue. The alignment would follow Westwood Plaza until the underground UCLA Gateway Plaza Station in front of the Luskin Conference

Center. The alignment would then continue north under the UCLA campus until Sunset Boulevard, where the tunnel would curve northwest for approximately 2 miles to rejoin I-405.

The Alternative 3 alignment would transition from an underground configuration to an aerial guideway structure after exiting the tunnel portal located at the northern end of the Leo Baeck Temple parking lot. The alignment would cross over Sepulveda Boulevard and the I-405 lanes to the proposed Getty Center Station on the west side of I-405, just north of the Getty Center tram station. The alignment would return to the median for a short distance before curving back to the west side of I-405 south of the Sepulveda Boulevard undercrossing north of the Getty Center Drive interchange. After crossing over Bel Air Crest Road and Skirball Center Drive, the alignment would again return to the median and run under the Mulholland Drive Bridge, then continue north within the I-405 median to descend into the San Fernando Valley (Valley).

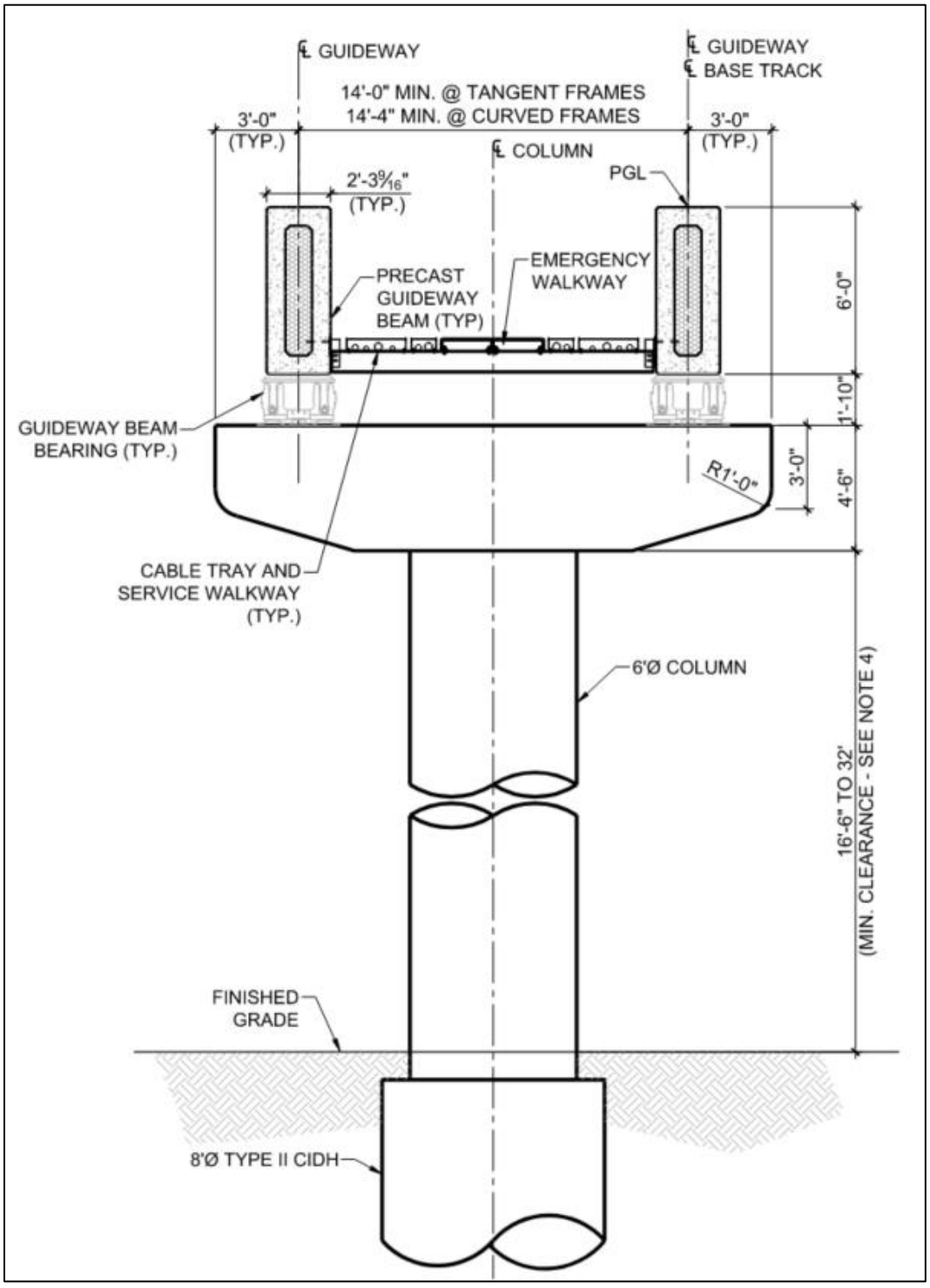
Near Greenleaf Street, the alignment would cross over the northbound freeway lanes and on-ramps toward the proposed Ventura Boulevard Station on the east side of I-405. This station would be located above a transit plaza and replace an existing segment of Dickens Street adjacent to I-405, just south of Ventura Boulevard. Immediately north of the Ventura Boulevard Station, the alignment would cross over the northbound I-405 to US-101 connector and continue north between the connector and the I-405 northbound travel lanes. The alignment would continue north along the east side of I-405—crossing over US-101 and the Los Angeles River—to a proposed station on the east side of I-405 near the Metro G Line Busway. A new at-grade station on the Metro G Line would be constructed for Alternative 3 adjacent to the proposed station. These proposed stations are shown on the Metro G Line inset area on Figure 7-1.

The alignment would then continue north along the east side of I-405 to the proposed Sherman Way Station. The station would be located inside the I-405 northbound loop off-ramp to Sherman Way. North of the station, the alignment would continue along the eastern edge of I-405, then curve to the southeast parallel to the LOSSAN rail corridor. The alignment would run elevated along Raymer Street east of Sepulveda Boulevard and cross over Van Nuys Boulevard to the proposed terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. Overhead utilities along Raymer Street would be undergrounded where they would conflict with the guideway or its supporting columns. Tail tracks would be located southeast of this terminus station.

7.1.1.2 Guideway Characteristics

Alternative 3 would utilize straddle-beam monorail technology, which allows the monorail vehicle to straddle a guide beam that both supports and guides the vehicle. Alternative 3 would operate on aerial and underground guideways with dual-beam configurations. Northbound and southbound trains would travel on parallel beams either in the same tunnel or supported by a single-column or straddle-bent aerial structure. Figure 7-2 shows a typical cross-section of the aerial monorail guideway.

Figure 7-2. Typical Aerial Monorail Guideway Cross-Section

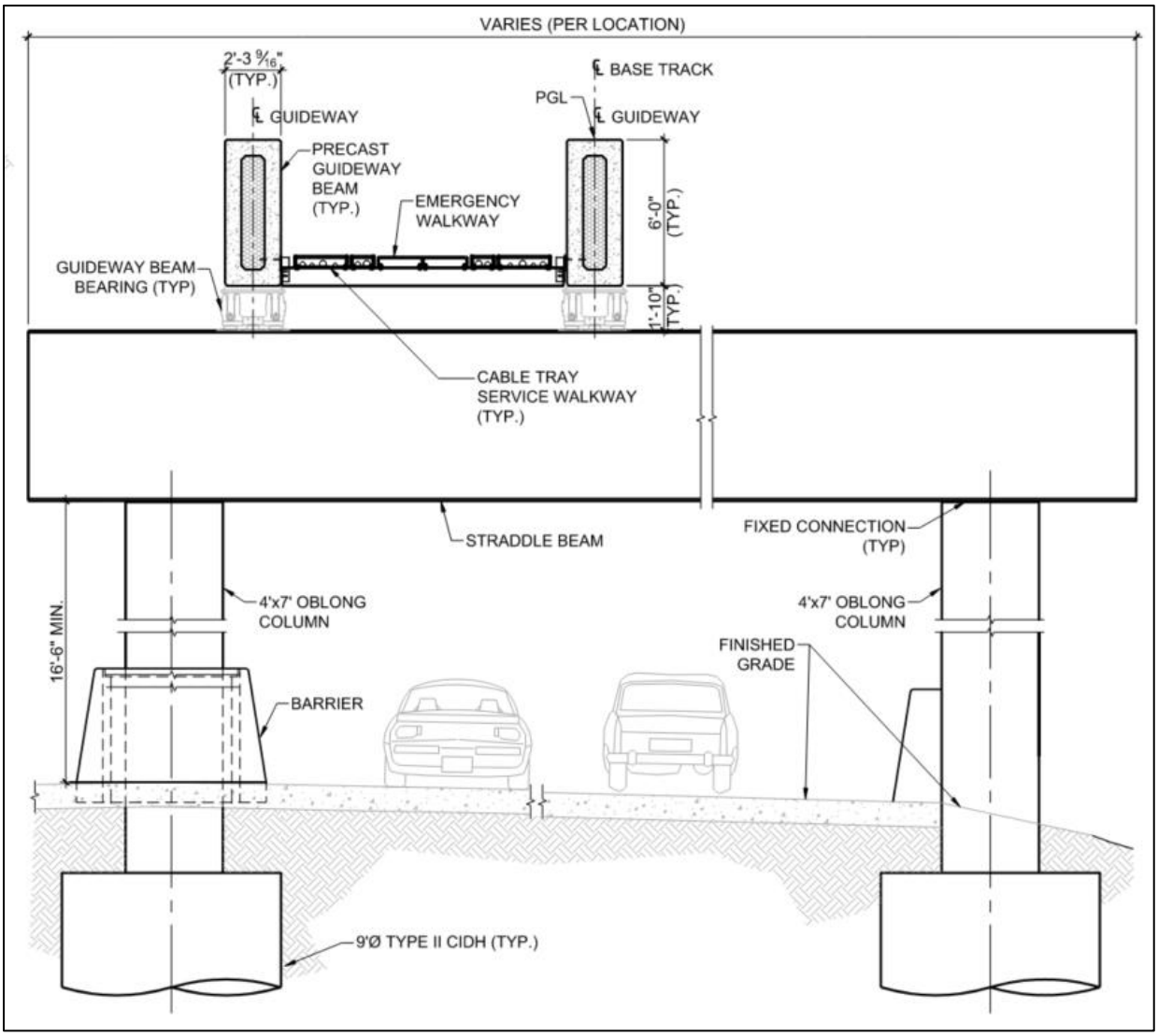


Source: LASRE, 2024

On a typical guideway section (i.e., not at a station), guide beams would rest on 20-foot-wide column caps (i.e., the structure connecting the columns and the guide beams), with typical spans (i.e., the distance between columns) ranging from 70 to 190 feet. The bottom of the column caps would typically be between 16.5 feet and 32 feet above ground level.

Over certain segments of roadway and freeway facilities, a straddle-bent configuration, as shown on Figure 7-3, consisting of two concrete columns constructed outside of the underlying roadway would be used to support the guide beams and column cap. Typical spans for these structures would range between 65 and 70 feet. A minimum 16.5-foot clearance would be maintained between the underlying roadway and the bottom of the column caps.

Figure 7-3. Typical Monorail Straddle-Bent Cross-Section



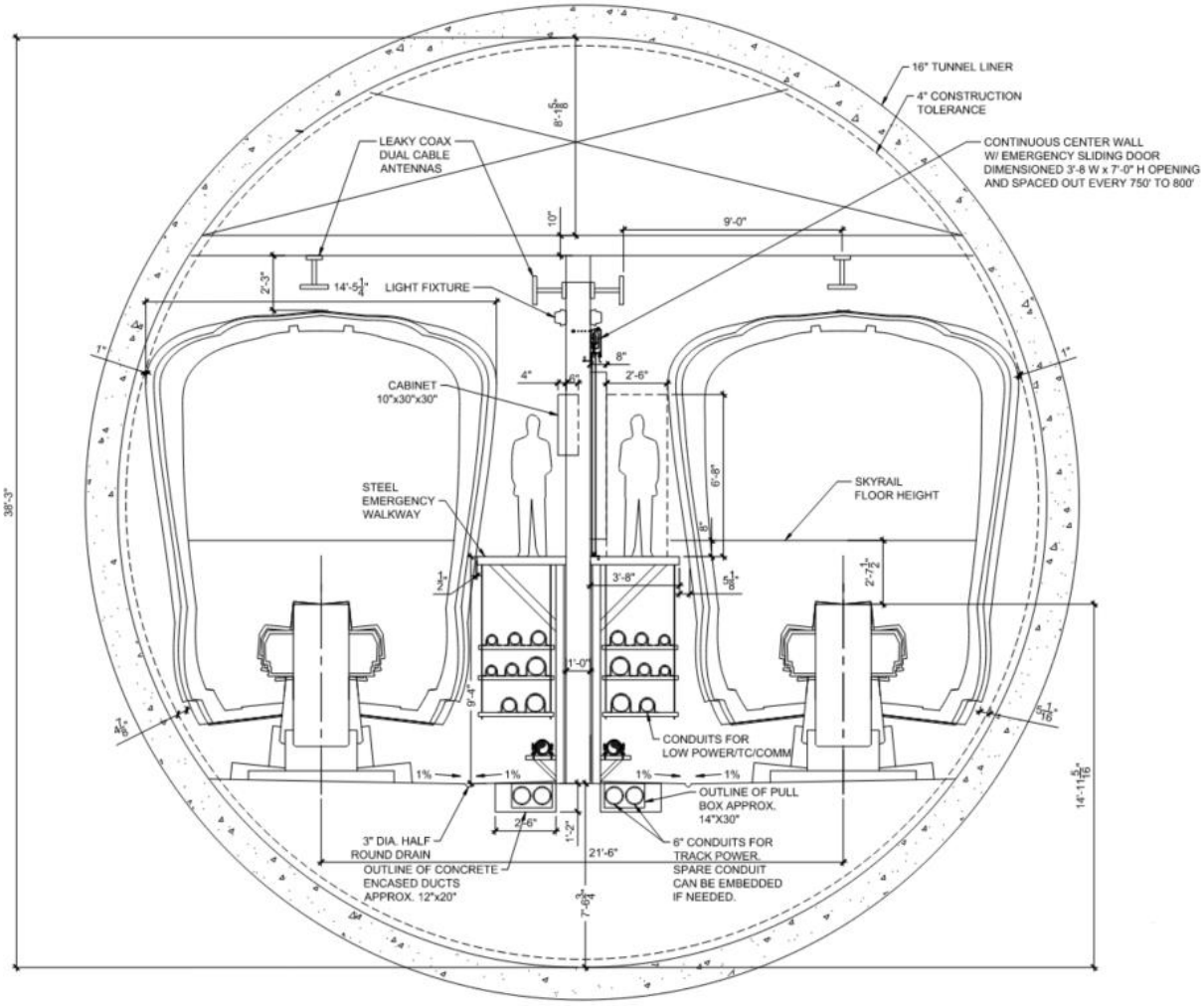
Source: LASRE, 2024

Structural support columns would vary in size and arrangement by alignment location. Columns would be 6 feet in diameter along main alignment segments adjacent to I-405 and be 4 feet wide by 6 feet long in the I-405 median. Straddle-bent columns would be 4 feet wide by 7 feet long. At stations, six rows of

dual 5-foot by-8-foot columns would support the aerial guideway. Beam switch locations and long-span structures would also utilize different sized columns, with dual 5-foot columns supporting switch locations and either 9-foot or 10-foot-diameter columns supporting long-span structures. Crash protection barriers would be used to protect the columns. All columns would have a cast-in-drilled-hole (CIDH) pile foundation extending 1 foot in diameter beyond the column width with varying depths for appropriate geotechnical considerations and structural support.

For underground sections, a single 40-foot-diameter tunnel would be needed to accommodate dual-beam configuration. The tunnel would be divided by a 1-foot-thick center wall dividing two compartments with a 14.5-foot-wide space for trains and a 4-foot-wide emergency evacuation walkway. The center wall would include emergency sliding doors placed every 750 to 800 feet. A plenum within the crown of the tunnel, measuring 8 feet tall from the top of the tunnel, would allow for air circulation and ventilation. Figure 7-4 illustrates these components at a typical cross-section of the underground monorail guideway.

Figure 7-4. Typical Underground Monorail Guideway Cross-Section



Source: LASRE, 2024

7.1.1.3 Vehicle Technology

Alternative 3 would utilize straddle-beam monorail technology, which allows the monorail vehicle to straddle a guide beam that both supports and guides the vehicle. Rubber tires would sit both atop and on each side of the guide beam to provide traction and guide the train. Trains would be automated and powered by power rails mounted to the guide beam, with planned peak-period headways of 166 seconds and off-peak-period headways of 5 minutes. Monorail trains could consist of up to eight cars. Alternative 3 would have a maximum operating speed of 56 miles per hour; actual operating speeds would depend on the design of the guideway and distance between stations.

Monorail train cars would be 10.5 feet wide, with two double doors on each side. End cars would be 46.1 feet long with a design capacity of 97 passengers, and intermediate cars would be 35.8 feet long and have a design capacity of 90 passengers.

7.1.1.4 Stations

Alternative 3 would include seven aerial and two underground MRT stations with platforms approximately 320 feet long. Aerial stations would be elevated 50 feet to 75 feet above the ground level, and underground stations would be 80 feet to 110 feet underneath the existing ground level. The Metro E Line Expo/Sepulveda, Santa Monica Boulevard, Ventura Boulevard/Sepulveda Boulevard, Sherman Way, and Van Nuys Metrolink Stations would be center-platform stations where passengers would travel up to a shared platform that would serve both directions of travel. The Wilshire Boulevard/Metro D Line, UCLA Gateway Plaza, Getty Center, and Metro G Line Sepulveda Stations would be side-platform stations where passengers would select and travel up or down to station platforms depending on their direction of travel. Each station, regardless of whether it has side or center platforms, would include a concourse level prior to reaching the train platforms. Each station would have a minimum of two elevators, two escalators, and one stairway from ground level to the concourse.

Aerial station platforms would be approximately 320 feet long and would be supported by six rows of dual 5-foot by- 8-foot columns. The platforms would be covered, but not enclosed. Side-platform stations would be 61.5 feet wide to accommodate two 13-foot-wide station platforms with a 35.5-foot-wide intermediate gap for side-by-side trains. Center-platform stations would be 49 feet wide, with a 25-foot-wide center platform.

Underground side platforms would be 320 feet long and 26 feet wide, separated by a distance of 31.5 feet for side-by-side trains.

Monorail stations would include automatic, bi-parting fixed doors along the edges of station platforms. These doors would be integrated into the automatic train control system and would not open unless a train is stopped at the platform.

The following information describes each station, with relevant entrance, walkway, and transfer information. Bicycle parking would be provided at each station.

Metro E Line Expo/Sepulveda Station

- This aerial station would be located near the existing Metro E Line Expo/Sepulveda Station, just east of I-405 between Pico Boulevard and Exposition Boulevard.
- A transit plaza and station entrance would be located on the east side of the station.
- An off-street passenger pick-up/drop-off loop would be located south of Pico Boulevard west of Cotner Avenue.

- An elevated pedestrian walkway would connect the concourse level of the proposed station to the Metro E Line Expo/Sepulveda Station within the fare paid zone.
- Passengers would be able to park at the existing Metro E Line Expo/Sepulveda Station parking facility, which provides 260 parking spaces. No additional automobile parking would be provided at the proposed station.

Santa Monica Boulevard Station

- This aerial station would be located just south of Santa Monica Boulevard, between the I-405 northbound travel lanes and Cotner Avenue.
- Station entrances would be located on the southeast and southwest corners of Santa Monica Boulevard and Cotner Avenue. The entrance on the southeast corner of the intersection would be connected to the station concourse level via an elevated pedestrian walkway spanning Cotner Avenue.
- No dedicated station parking would be provided at this station.

Wilshire Boulevard/Metro D Line Station

- This underground station would be located under UCLA Lot 36 on the east side of Veteran Avenue north of Wilshire Boulevard.
- A station entrance would be located on the northeast corner of the intersection of Veteran Avenue and Wilshire Boulevard.
- An underground pedestrian walkway would connect the concourse level of the proposed station to the Metro D Line Westwood/UCLA Station using a knock-out panel provided in the Metro D Line Station box. This connection would occur within the fare paid zone.
- No dedicated station parking would be provided at this station.

UCLA Gateway Plaza Station

- This underground station would be located beneath Gateway Plaza.
- Station entrances would be located on the northern end and southeastern end of the plaza.
- No dedicated station parking would be provided at this station.

Getty Center Station

- This aerial station would be located on the west side of I-405 near the Getty Center, approximately 1,000 feet north of the Getty Center tram station.
- An elevated pedestrian walkway would connect the proposed station's concourse level with the Getty Center tram station. The proposed connection would occur outside the fare paid zone.
- An entrance to the walkway above the Getty Center's parking lot would be the proposed station's only entrance.
- No dedicated station parking would be provided at this station.

Ventura Boulevard/Sepulveda Boulevard Station

- This aerial station would be located east of I-405, just south of Ventura Boulevard.

- A transit plaza, including two station entrances, would be located on the east side of the station. The plaza would require the closure of a 0.1-mile segment of Dickens Street between Sepulveda Boulevard and Ventura Boulevard, with a passenger pick-up/drop-off loop and bus stops provided south of the station, off Sepulveda Boulevard.
- No dedicated station parking would be provided at this station.

Metro G Line Sepulveda Station

- This aerial station would be located near the Metro G Line Sepulveda Station, between I-405 and the Metro G Line Busway.
- Entrances to the MRT station would be located on both sides of the new proposed Metro G Line bus rapid transit (BRT) station.
- An elevated pedestrian walkway would connect the concourse level of the proposed station to the proposed new Metro G Line BRT station outside of the fare paid zone.
- Passengers would be able to park at the existing Metro G Line Sepulveda Station parking facility, which has a capacity of 1,205 parking spaces. Currently, only 260 parking spaces are used for transit parking. No additional automobile parking would be provided at the proposed station.

Sherman Way Station

- This aerial station would be located inside the I-405 northbound loop off-ramp to Sherman Way.
- A station entrance would be located on the north side of Sherman Way, directly across the street from the I-405 northbound off-ramp to Sherman Way East.
- An on-street passenger pick-up/drop-off area would be provided on the north side of Sherman Way west of Firmament Avenue.
- No dedicated station parking would be provided at this station.

Van Nuys Metrolink Station

- This aerial station would be located on the east side of Van Nuys Boulevard, just south of the LOSSAN rail corridor, incorporating the site of the current Amtrak ticket office.
- A station entrance would be located on the east side of Van Nuys Boulevard just south of the LOSSAN rail corridor. A second entrance would be located to the north of the LOSSAN rail corridor with an elevated pedestrian walkway connecting to both the concourse level of the proposed station and the platform of the Van Nuys Metrolink/Amtrak Station.
- Existing Metrolink Station parking would be reconfigured, maintaining approximately the same number of spaces, but 180 parking spaces would be relocated north of the LOSSAN rail corridor. Metrolink parking would not be available to Metro transit riders.

7.1.1.5 Station-to-Station Travel Times

Table 7-1 presents the station-to-station distance and travel times for Alternative 3. The travel times include both running time and dwelling time. The travel times differ between northbound and southbound trips because of grade differentials and operational considerations at end-of-line stations.

Table 7-1. Alternative 3: Station-to-Station Travel Times and Station Dwell Times

From Station	To Station	Distance (miles)	Northbound Station-to-Station Travel Time (seconds)	Southbound Station-to-Station Travel Time (seconds)	Dwell Time (seconds)
Metro E Line Station					*30*
Metro E Line	Santa Monica Boulevard	0.9	123	97	—
Santa Monica Boulevard Station					*30*
Santa Monica Boulevard	Wilshire/Metro D Line	1.1	192	194	—
Wilshire/Metro D Line Station					*30*
Wilshire/Metro D Line	UCLA Gateway Plaza	0.9	138	133	—
UCLA Gateway Plaza Station					*30*
UCLA Gateway Plaza	Getty Center	2.6	295	284	—
Getty Center Station					*30*
Getty Center	Ventura Boulevard	4.7	414	424	—
Ventura Boulevard Station					*30*
Ventura Boulevard	Metro G Line	2.0	179	187	—
Metro G Line Station					*30*
Metro G Line	Sherman Way	1.5	134	133	—
Sherman Way Station					*30*
Sherman Way	Van Nuys Metrolink	2.4	284	279	—
Van Nuys Metrolink Station					*30*

Source: LASRE, 2024

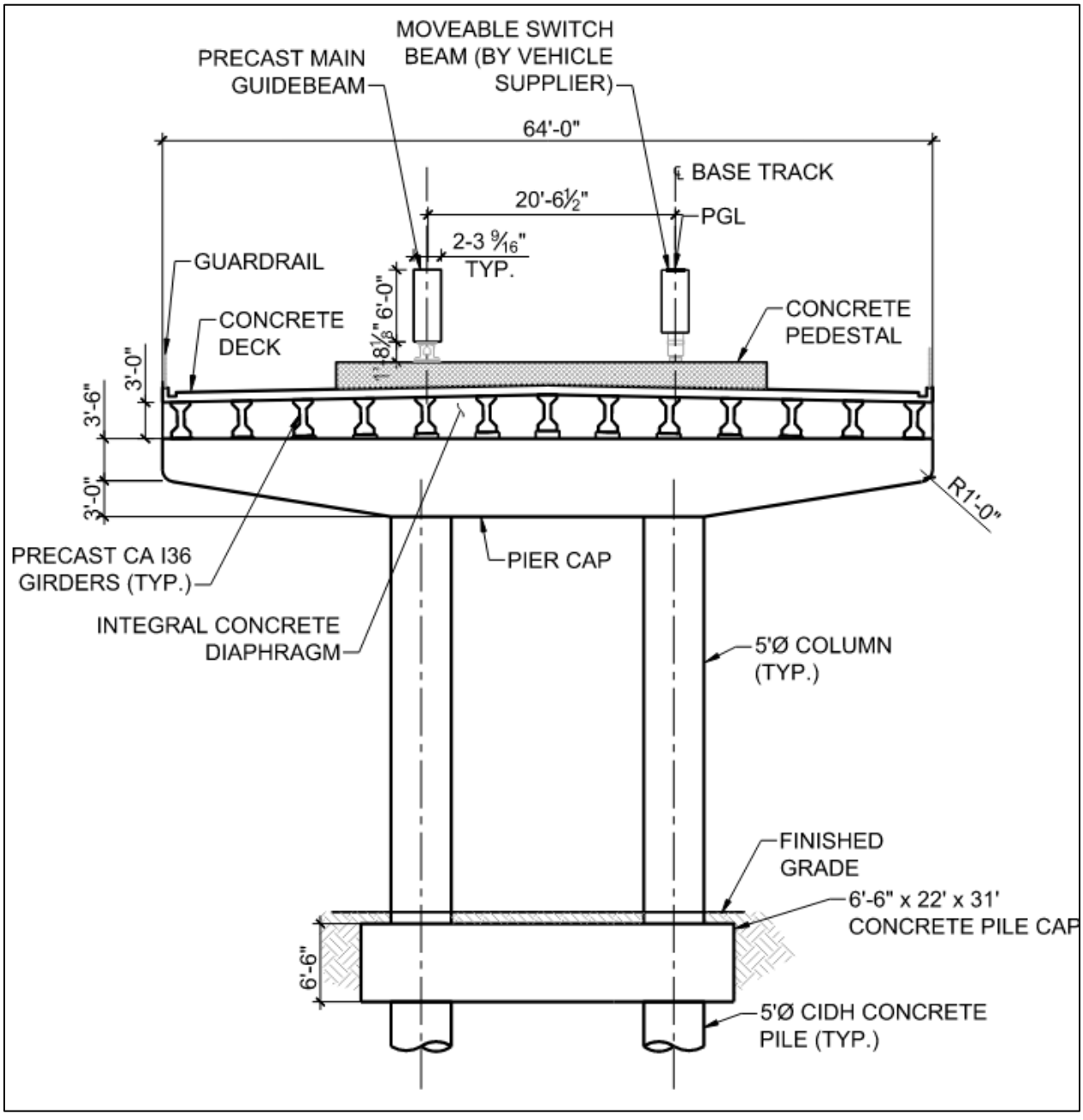
— = no data

7.1.1.6 Special Trackwork

Alternative 3 would include five pairs of beam switches to enable trains to cross over and reverse direction on the opposite beam. All beam switches would be located on aerial portions of the alignment of Alternative 3. From south to north, the first pair of beam switches would be located just north of the Metro E Line Expo/Sepulveda Station. A second pair of beam switches would be located on the west side of I-405, directly adjacent to the VA Hospital site, south of the Wilshire Boulevard/Metro D Line Station. A third pair of beam switches would be located in the Sepulveda Pass just south of Mountaingate Drive and Sepulveda Boulevard. A fourth pair of beam switches would be located south of the Metro G Line Station between the I-405 northbound lanes and the Metro G Line Busway. The final pair would be located near the Van Nuys Metrolink Station.

At beam switch locations, the typical cross-section of the guideway would increase in column and column cap width. The column cap width at these locations would be 64 feet, with dual 5-foot-diameter columns. Underground pile caps for additional structural support would also be required at these locations. Figure 7-5 shows a typical cross-section of the monorail beam switch.

Figure 7-5. Typical Monorail Beam Switch Cross-Section



Source: LASRE, 2024

7.1.1.7 Maintenance and Storage Facility

MSF Base Design

In the maintenance and storage facility (MSF) Base Design for Alternative 3, the MSF would be located on City of Los Angeles Department of Water and Power (LADWP) property east of the Van Nuys Metrolink Station. The MSF Base Design site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. The site would be bounded by the LOSSAN rail corridor

to the north, Saticoy Street to the south, and property lines extending north of Tyrone and Hazeltine Avenues to the east and west, respectively.

Monorail trains would access the site from the main alignment's northern tail tracks at the northwest corner of the site. Trains would travel parallel to the LOSSAN rail corridor before curving southeast to maintenance facilities and storage tracks. The guideway would remain in an aerial configuration within the MSF Base Design, including within maintenance facilities.

The site would include the following facilities:

- Primary entrance with guard shack
- Primary maintenance building that would include administrative offices, an operations control center, and a maintenance shop and office
- Train car wash building
- Emergency generator
- Traction power substation (TPSS)
- Maintenance-of-way (MOW) building
- Parking area for employees

MSF Design Option 1

In the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the LOSSAN rail corridor. The MSF Design Option 1 site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. The site would be bounded by I-405 to the west, Stagg Street to the south, the LOSSAN rail corridor to the north, and Orion Avenue and Raymer Street to the east. The monorail guideway would travel along the northern edge of the site.

Monorail trains would access the site from the monorail guideway east of Sepulveda Boulevard, requiring additional property east of Sepulveda Boulevard and north of Raymer Street. From the northeast corner of the site, trains would travel parallel to the LOSSAN rail corridor before turning south to maintenance facilities and storage tracks parallel to I-405. The guideway would remain in an aerial configuration within the MSF Design Option 1, including within maintenance facilities.

The site would include the following facilities:

- Primary entrance with guard shack
- Primary maintenance building that would include administrative offices, an operations control center, and a maintenance shop and office
- Train car wash building
- Emergency generator
- TPSS
- MOW building
- Parking area for employees

Figure 7-6 shows the locations of the MSF Base Design and MSF Design Option 1 for Alternative 3.

Figure 7-6. Alternative 3: Maintenance and Storage Facility Options

Source: LASRE, 2024; HTA, 2024

7.1.1.8 Traction Power Substations

TPSSs transform and convert high voltage alternating current supplied from power utility feeders into direct current suitable for transit operation. A TPSS on a site of approximately 8,000 square feet would be located approximately every 1 mile along the alignment. Table 7-2 lists the TPSS locations proposed for Alternative 3.

Figure 7-7 shows the TPSS locations along the Alternative 3 alignment.

Table 7-2. Alternative 3: Traction Power Substation Locations

TPSS No.	TPSS Location Description	Configuration
1	TPSS 1 would be located east of I-405, just south of Exposition Boulevard and the monorail guideway tail tracks.	At-grade
2	TPSS 2 would be located east of I-405 and Sepulveda Boulevard, just north of the Getty Center Station.	At-grade
3	TPSS 3 would be located west of I-405, just east of the intersection between Promontory Road and Sepulveda Boulevard.	At-grade
4	TPSS 4 would be located between I-405 and Sepulveda Boulevard, just north of the Skirball Center Drive Overpass.	At-grade
5	TPSS 5 would be located east of I-405, just south of Ventura Boulevard Station, between Sepulveda Boulevard and Dickens Street.	At-grade
6	TPSS 6 would be located east of I-405, just south of the Metro G Line Sepulveda Station.	At-grade
7	TPSS 7 would be located east of I-405, just east of the Sherman Way Station, inside the I-405 Northbound Loop Off-Ramp to Sherman Way westbound.	At-grade
8	TPSS 8 would be located east of I-405, at the southeast quadrant of the I-405 overcrossing with the LOSSAN rail corridor.	At-grade
9	TPSS 9 would be located east of I-405, at the southeast quadrant of the I-405 overcrossing with the LOSSAN rail corridor.	At-grade (within MSF Design Option)
10	TPSS 10 would be located between Van Nuys Boulevard and Raymer Street, south of the LOSSAN rail corridor.	At-grade
11	TPSS 11 would be located south of the LOSSAN rail corridor, between Tyrone Avenue and Hazeltine Avenue.	At-grade (within MSF Base Design)
12	TPSS 12 would be located southwest of Veteran Avenue at Wellworth Avenue.	Underground
13	TPSS 13 would be located within the Wilshire Boulevard/Metro D Line Station.	Underground (adjacent to station)
14	TPSS 14 would be located underneath UCLA Gateway Plaza.	Underground (adjacent to station)

Source: LASRE, 2024; HTA, 2024

Figure 7-7. Alternative 3: Traction Power Substation Locations

Source: LASRE, 2024; HTA, 2024

7.1.1.9 Roadway Configuration Changes

Table 7-3 lists the roadway changes necessary to accommodate the guideway of Alternative 3. Figure 7-8 shows the location of these roadway changes in the Sepulveda Transit Corridor Project (Project) Study Area, except for the I-405 configuration changes, which occur throughout the corridor.

Table 7-3. Alternative 3: Roadway Changes

Location	From	To	Description of Change
Cotner Avenue	Nebraska Avenue	Santa Monica Boulevard	Roadway realignment to accommodate aerial guideway columns
Beloit Avenue	Massachusetts Avenue	Ohio Avenue	Roadway narrowing to accommodate aerial guideway columns
Sepulveda Boulevard	Getty Center Drive	Not Applicable	Southbound right turn lane to Getty Center Drive shortened to accommodate aerial guideway columns
I-405 Northbound On-Ramp and Off-Ramp at Sepulveda Boulevard near I-405 Exit 59	Sepulveda Boulevard near I-405 Northbound Exit 59	Sepulveda Boulevard/I-405 Undercrossing (near Getty Center)	Ramp realignment to accommodate aerial guideway columns and I-405 widening
Sepulveda Boulevard	I-405 Southbound Skirball Center Drive Ramps (north of Mountaingate Drive)	Skirball Center Drive	Roadway realignment into existing hillside to accommodate aerial guideway columns and I-405 widening
I-405 Northbound On-Ramp at Mulholland Drive	Mulholland Drive	Not Applicable	Roadway realignment into the existing hillside between the Mulholland Drive Bridge pier and abutment to accommodate aerial guideway columns and I-405 widening
Dickens Street	Sepulveda Boulevard	Ventura Boulevard	Permanent removal of street for Ventura Boulevard Station construction Pick-up/drop-off area would be provided along Sepulveda Boulevard at the truncated Dickens Street
Sherman Way	Haskell Avenue	Firmament Avenue	Median improvements, passenger drop-off and pick-up areas, and bus pads within existing travel lanes
Raymer Street	Sepulveda Boulevard	Van Nuys Boulevard	Curb extensions and narrowing of roadway width to accommodate aerial guideway columns
I-405	Sepulveda Boulevard Northbound Off-Ramp (Getty Center Drive interchange)	Sepulveda Boulevard Northbound On-Ramp (Getty Center Drive interchange)	I-405 widening to accommodate aerial guideway columns in the median
I-405	Skirball Center Drive	U.S. Highway 101	I-405 widening to accommodate aerial guideway columns in the median

Source: LASRE, 2024; HTA, 2024

Figure 7-8. Alternative 3: Roadway Changes

Source: LASRE, 2024; HTA, 2024

In addition to the changes made to accommodate the guideway, as listed in Table 7-3, roadways and sidewalks near stations would be reconstructed, which would result in modifications to curb ramps and driveways.

7.1.1.10 Ventilation Facilities

For ventilation of the monorail's underground portion, a plenum within the crown of the tunnel would provide a separate compartment for air circulation and allow multiple trains to operate between

stations. Vents would be located at the southern portal near the Federal Building parking lot, Wilshire/Metro D Line Station, UCLA Gateway Plaza Station, and at the northern portal near the Leo Baeck Temple parking lot. Emergency ventilation fans would be located at the UCLA Gateway Plaza Station and at the northern and southern tunnel portals.

7.1.1.11 Fire/Life Safety – Emergency Egress

Continuous emergency evacuation walkways would be provided along the guideway. Walkways along the alignment's aerial portions would typically consist of structural steel frames anchored to the guideway beams to support non-slip walkway panels. The walkways would be located between the two guideway beams for most of the aerial alignment; however, where the beams split apart, such as entering center-platform stations, short portions of the walkway would be located on the outside of the beams. For the underground portion of Alternative 3, 3.5-foot-wide emergency evacuation walkways would be located on both sides of the beams. Access to tunnel segments for first responders would be through stations.

7.1.2 Construction Activities

Construction activities for Alternative 3 would include constructing the aerial guideway and stations, underground tunnel and stations, and ancillary facilities, and widening I-405. Construction of the transit facilities through substantial completion is expected to have a duration of 8½ years. Early works, such as site preparation, demolition, and utility relocation, could start in advance of construction of the transit facilities.

Aerial guideway construction would begin at the southern and northern ends of the alignment and connect in the middle. Constructing the guideway would require a combination of freeway and local street lane closures throughout the working limits to provide sufficient work area. The first stage of I-405 widening would include a narrowing of adjacent freeway lanes to a minimum width of 11 feet (which would eliminate shoulders) and placing K-rail on the outside edge of the travel lanes to create outside work areas. Within these outside work zones, retaining walls, drainage, and outer pavement widenings would be constructed to allow for I-405 widening. The reconstruction of on- and off-ramps would be the final stage of I-405 widening.

A median work zone along I-405 for the length of the alignment would be required for erection of the guideway structure. In the median work zone, demolition of existing median and drainage infrastructure would be followed by the installation of new K-rails and installation of guideway structural components, which would include full directional freeway closures when guideway beams must be transported into the median work areas during late-night hours. Additional night and weekend directional closures would be required for installation of long-span structures over I-405 travel lanes where the guideway would transition from the median.

Aerial station construction is anticipated to last the duration of construction activities for Alternative 3 and would include the following general sequence of construction:

- Site clearing
- Utility relocation
- Construction fencing and rough grading
- CIDH pile drilling and installation
- Elevator pit excavation
- Soil and material removal

- Pile cap and pier column construction
- Concourse level and platform level falsework and cast-in-place structural concrete
- Guideway beam installation
- Elevator and escalator installation
- Completion of remaining concrete elements such as pedestrian bridges
- Architectural finishes and mechanical, electrical, and plumbing installation

Underground stations, including the Wilshire Boulevard/Metro D Line Station and the UCLA Gateway Plaza Station, would use a "cut-and-cover" construction method whereby the station structure would be constructed within a trench excavated from the surface that is covered by a temporary deck and backfilled during the later stages of station construction. Traffic and pedestrian detours would be necessary during underground station excavation until decking is in place and the appropriate safety measures are taken to resume cross traffic.

A tunnel boring machine (TBM) would be used to construct the underground segment of the guideway. The TBM would be launched from a staging area on Veteran Avenue south of Wilshire Boulevard, and head north toward an exit portal location north of Leo Baeck Temple. The southern portion of the tunnel between Wilshire Boulevard and the Bel Air Country Club would be at a depth between 80 to 110 feet from the surface to the top of the tunnel. The UCLA Gateway Plaza Station would be constructed using cut-and-cover methods. Through the Santa Monica Mountains, the tunnel would range between 30 to 300 feet deep.

Alternative 3 would require construction of a concrete casting facility for columns and beams associated with the elevated guideway. A specific site has not been identified; however, it is expected that the facility would be located on industrially zoned land adjacent to a truck route in either the Antelope Valley or Riverside County. When a site is identified, the contractor would obtain all permits and approvals necessary from the relevant jurisdiction, the appropriate air quality management entity, and other regulatory entities.

TPSS construction would require additional lane closures. Large equipment, including transformers, rectifiers, and switchgears would be delivered and installed through prefabricated modules where possible in at-grade TPSSs. The installation of transformers would require temporary lane closures on Exposition Boulevard, Beloit Avenue, and the I-405 northbound on-ramp at Burbank Boulevard.

Table 7-4 and Figure 7-9 show the potential construction staging areas for Alternative 3. Staging areas would provide the necessary space for the following activities:

- Contractors' equipment
- Receiving deliveries
- Storing materials
- Site offices
- Work zone for excavation
- Other construction activities (including parking and change facilities for workers, location of construction office trailers, storage, staging and delivery of construction materials and permanent plant equipment, and maintenance of construction equipment)

Table 7-4. Alternative 3: Construction Staging Locations

No.	Location Description
1	Public Storage between Pico Boulevard and Exposition Boulevard, east of I-405
2	South of Dowlen Drive and east of Greater LA Fisher House
3	Federal Building Parking Lot
4	Kinross Recreation Center and UCLA Lot 36
5	North end of the Leo Baeck Temple Parking Lot (tunnel boring machine retrieval)
6	At 1400 N Sepulveda Boulevard
7	At 1760 N Sepulveda Boulevard
8	East of I-405 and north of Mulholland Drive Bridge
9	Inside of I-405 Northbound to US-101 Northbound Loop Connector, south of US-101
10	ElectroRent Building south of G Line Busway, east of I-405
11	Inside the I-405 Northbound Loop Off-Ramp at Victory Boulevard
12	Along Cabrito Road east of Van Nuys Boulevard

Source: LASRE, 2024; HTA, 2024

Figure 7-9. Alternative 3: Construction Staging Locations

Source: LASRE, 2024; HTA, 2024

7.2 Existing Conditions

7.2.1 General Characterization of the Resource Study Area

The northern and southern portions of the Resource Study Area (RSA), depicted on Figure 7-10, comprise highly developed and urbanized neighborhoods. These urbanized areas contain limited biological resources generally restricted to parks and other undeveloped areas consisting of

predominantly non-native landscape vegetation. Occasional patches of native vegetation are present, typically as plantings rather than naturally occurring vegetation. Habitat under these conditions is primarily suitable for species that can tolerate at least some level of urbanization and are acclimated to human influence including numerous bird species protected under the Migratory Bird Treaty Act (MBTA) and wildlife (e.g., raccoon, striped skunk, Virginia opossum, and coyote).

The Los Angeles River flows west to east through the Alternative 3 RSA, within a concrete box channel that lacks riparian vegetation (Figure 7-18 and Appendix A). I-405 is a major arterial freeway running north-south through the middle of the Project Study Area, connecting communities in the San Fernando Valley with the Los Angeles Basin through the Sepulveda Pass in the Santa Monica Mountains. The freeway is presently regarded as a barrier for wildlife movement within the Santa Monica Mountains, as roads in urban areas are known as a primary threat to wildlife and act as barriers to movement through increased mortality, reduced habitat quality and connectivity, changes in behavior, and restrictions to genetic flow (Riley et al., 2014; Coffin, 2007; Riley et al., 2006).

The middle portion of the Alternative 3 RSA includes the Santa Monica Mountains which run east-west through the Alternative 3 RSA. This area is less developed and is composed of steep slopes covered by remnant native chaparral habitats and non-native grasslands. Native habitat is interspersed with upscale single-family residences along north-south–oriented roadways atop ridge lines and through canyons and valleys. Portions of the SMMNRA are within the Santa Monica Mountains in the Alternative 3 RSA; the SMMNRA consists of approximately 150,000 acres and provides habitats to more than 1,000 different plant and 500 wildlife species (National Park Conservation Association, 2023). For Alternative 3, 32.0 acres of the SMMNRA are within the RSA (Figure 7-27).

Figure 7-10. Alternative 3: Resource Study Area Location Map

Source: HTA, 2024

7.2.2 Elevations and Topography

Elevations range within the Alternative 3 RSA from approximately 800 feet above mean sea level (amsl) at the northern end to 1,600 feet amsl in the middle, and approximately 160 feet amsl at the southern end of the Alternative 3 RSA. The general topography of the Alternative 3 RSA includes several, parallel, north-to-south–oriented inland valleys that run through the Santa Monica Mountains. The Santa Monica

Mountains, including the Sepulveda Pass, are composed of rugged steep mountain terrain with narrow canyons that are located between two flat urbanized valleys.

7.2.3 Climate

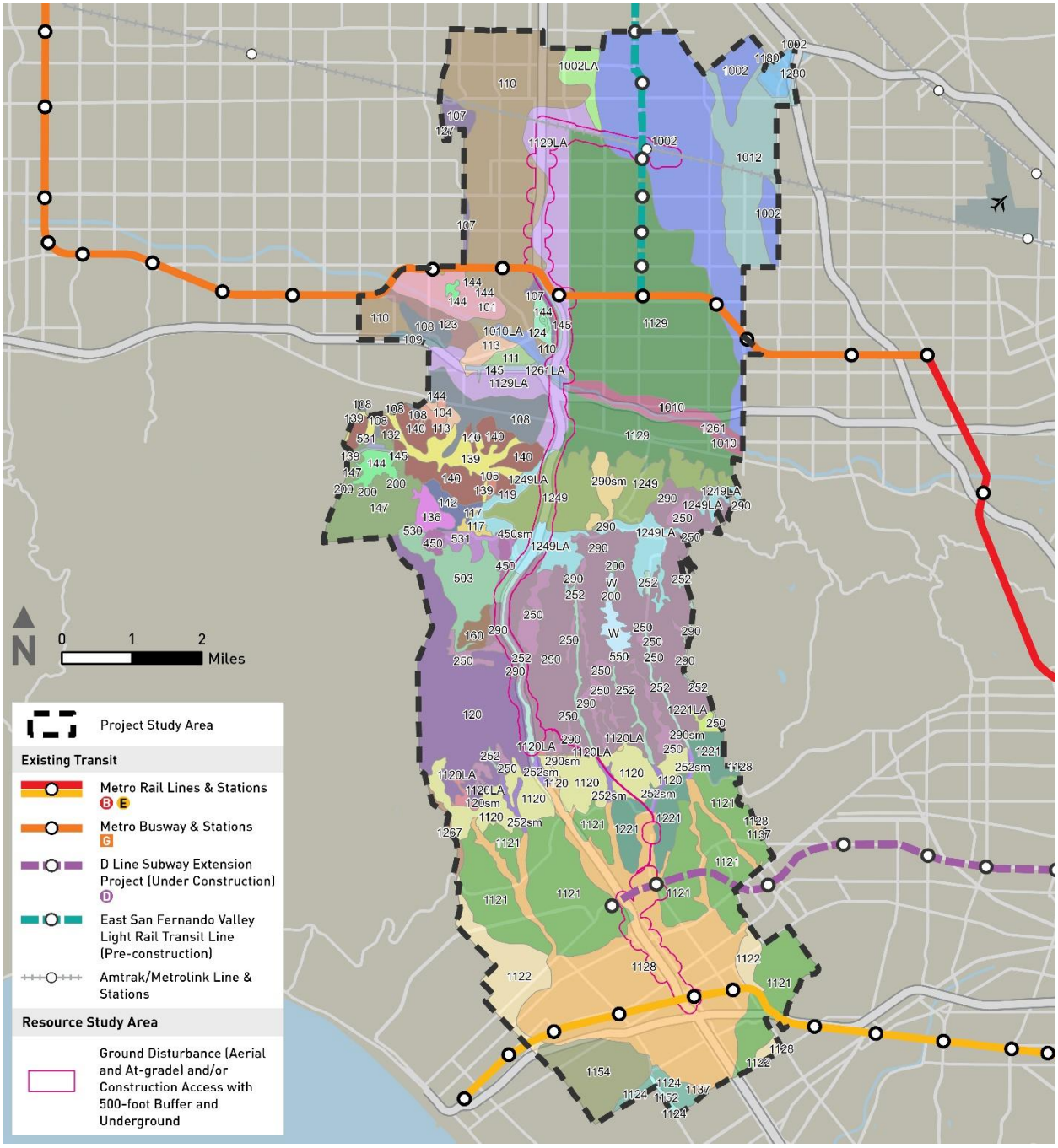
Precipitation in Los Angeles County is derived from frontal low-pressure systems that originate over the Pacific Ocean and generally travel southeast into southern California. Precipitation normally occurs during the cooler months of the year from November through March and is infrequent during the summer months. As throughout southern California, rainfall in the Los Angeles River Watershed and the Ballona Creek Watershed alternates between wet and dry periods. The average annual precipitation in the Alternative 3 RSA is approximately 13 to 18 inches. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the region. The Project Study Area is located within a Mediterranean climate zone, characterized by dry, warm summers and mild, wet winters. The mean temperature range for the months of November through April is 41 degrees Fahrenheit (°F) to 73°F. The mean temperature range for the months of May through October is 58°F to 79°F.

During the 2023 water year (October 2022 through September 2023), approximately 26.46 inches of precipitation was recorded at Los Angeles International Airport (LAX) approximately 6 miles south of the Alternative 3 RSA; 88 percent of the precipitation occurred between November and March. Compared to the 30-year average for this location, the 2023 water year was 206 percent above normal (NOAA, 2023). The combination of timing and total precipitation indicates the 2023 biological and wetlands and waters surveys were conducted during a rainfall season adequate and appropriate for detection of potential resources.

7.2.4 Soils

The RSA comprises several soil types that serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. Soil analysis was included in the Aquatic Resources Delineation (Appendix A) to evaluate for presence or absence of hydric soils that would form under anerobic conditions, such as those that occur in wetlands. An in-depth detailed analysis of subsurface components including soils is presented in the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* (Metro, 2025a). According to the US Department of Agriculture, Natural Resources Conservation Service Soils Report for Los Angeles County, California, part of the Alternative 3 RSA falls in the Los Angeles County, California, Southeastern soil survey area, as well as the West San Fernando Valley soil survey area and the SMMNRA soil survey area (USDA-NRCS, 2023a, 2023b). Soil types in these soil survey areas are fine-loamy smectitic alluvial fan soils in the northern portion of the alignment, loamy-mixed mountain and hillslopes in the mid-portion and fine-loamy-mixed soils in the southern portion of the alignment. Soil types are shown on Figure 7-11 with the figure legend on Figure 7-12.

Figure 7-11. Alternative 3: Soils Map



Source: USDA-NRCS, 2023a

Figure 7-12. Alternative 3: Soils Map Legend

Source: USDA-NRCS, 2023a

7.2.5 Biological Resources within the Resource Study Area

This section describes biological resources known or with potential to occur within the Alternative 3 RSA associated with Alternative 3. The search area for biological resources with potential to occur was defined as all USGS 7.5-minute quadrangles that co-occur with the Alternative 3 RSA, and all adjacent quadrangles when the Alternative 3 RSA was within 2 miles of the boundary. For Alternative 3, database searches were conducted within four quads: Beverly Hills and Van Nuys where the Alternative 3 RSA is located and Topanga and Canoga Park due to the Alternative 3 RSA's proximity to the quadrangle boundary.

Wildlife, vegetation communities, plant species, and jurisdictional features within this area are described below.

7.2.5.1 Wildlife

Wildlife expected in the urbanized areas of the Alternative 3 RSA such as the San Fernando Valley to the north and the City of Los Angeles to the south, are mostly regionally common species adapted to human disturbances. These common species include birds (most of which are protected by the MBTA), reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, bats), and larger mammals such as coyotes.

One of the major drivers of wildlife distribution within the Alternative 3 RSA is the location of permanent and ephemeral water sources. Overall, there are few water sources within the Alternative 3 RSA, which limits the diversity of species that occur within the Alternative 3 RSA. Water is present in the Los Angeles River within a concrete-lined drainage. Additional water is located adjacent to the Alternative 3 RSA within the Sepulveda Basin in Haskell, Woodley and Bull Creeks and human-made lakes including Lake Balboa, Wildlife Lake, and several smaller ponds. These water bodies provide foraging, breeding, migrating, and wintering habitat for a variety of wildlife species such as amphibians, birds, bats, and others.

The middle portion of the Alternative 3 RSA coincides with the Santa Monica Mountains, which has greater wildlife diversity than the developed urban areas of the Alternative 3 RSA. Native habitats present in larger areas of undeveloped land provide suitable conditions for additional local, native species compared to urban environments, as well as potential for less common local, native species to exist. Approximately 450 wildlife species occur across the Santa Monica Mountains (NPS, 2019a), although not all species are expected to occur within the Alternative 3 RSA. The Santa Monica Mountains provide important core habitat for wildlife species to reproduce and connect to other open space areas essential for wildlife dispersal. Additionally, avian species migrate into the Santa Monica Mountains during the summer for breeding and during the fall to overwinter. A list of wildlife species recorded during the spring 2023 field surveys is included in Appendix D*, Wildlife and Plant Species Observed*; the list is comprehensive for biological surveys across alternatives because general wildlife observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Special-Status Wildlife Species

Of the 66 special-status wildlife species identified with potential to occur in the Project Study Area, 25 were identified as having potential to occur within the Alternative 3 RSA based on database searches of California Natural Diversity Database (CNDDB), Information for Planning and Consultation (IPaC), iNaturalist, and eBird (CDFW, 2023a; USFWS, 2024a; iNaturalist, 2024a to 2024n; iNaturalist, 2024y to

2024aa; eBird, 2024a through 2024k). These species are listed in Table 7-5 with an assessment of their potential to occur within the Alternative 3 RSA.

Twenty-four of the wildlife species were concluded to be known or have potential to occur within the Alternative 3 RSA (Table 7-5); the remaining one was determined to have no potential to occur and is not discussed further for Alternative 3. The six species with low potential to occur are considered unlikely to be detected within the Alternative 3 RSA or impacted by Alternative 3 due to the lack of known recent occurrences and suitable habitat within the Alternative 3 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 7-5. Within Table 7-5, rows discussing species that were determined to be present or to have a high potential to occur within the Alternative 3 RSA are highlighted blue.

Table 7-5. Alternative 3: Special-Status Wildlife Species Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC	Occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Is a dietary generalist but often prefers to forage in grasslands and shrublands with abundant milkweeds, wild buckwheat, dusty maidens, lupines, medics, and sages.	**Present**. Suitable habitat and one recent 2023 observation occur within the southern portion of the Alternative 3 RSA. Additionally, observations from 2023 are present within 0.5 mile of the Alternative 3 RSA in the northern portion (iNaturalist, 2024a) and several historical observations within 1 mile of the Alternative 3 RSA from the mid-1900s (CDFW, 2023a).
Danaus plexippus	Monarch	FC	Two subpopulations within the United States; within California, monarchs are considered *Danaus plexippus* pop 1, California overwintering population (CDFW, 2023a). Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress; occasionally western sycamore and coast live oak), with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico; small aggregations also observed inland in Inyo and Kern Counties. Typically within 1.5 miles of the Pacific Ocean.	**Low**. Suitable habitat such as eucalyptus tree groves occur within the Alternative 3 RSA; however, the species normally overwinters in dense groves along the coastal plain near the Pacific Ocean. There are no known overwintering locations within the Alternative 3 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
			Fish	
Catostomus santaanae	Santa Ana sucker	FT	Endemic to Southern California and only found within the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. This species was once historically present throughout the Los Angeles and Santa Ana basins in southern California but is now restricted to three geographically separate populations. Specifically within the Los Angeles River Watershed, known populations occur at Big Tujunga Creek in the Hansen Reach, two tributaries in the Hansen Reach, and one tributary in either the Big Tujunga Reach or Los Angeles Reach (potentially including but not limited to Fall Creek, Mill Creek, Arroyo Seco Creek, and Bell Creek) (USFWS, 2017).	**Low.** The Alternative 3 RSA falls within the geographic range for Santa Ana sucker and suitable habitat in the form of the Los Angeles River is present. However, the portion of this body of water that occurs within the Alternative 3 RSA demonstrates common habitat degradation symptoms characteristic of urban areas, including degraded water quality and hydrological modifications. Within the Alternative 3 RSA, the river is a concrete-lined channelized river and therefore does not provide the habitat characteristics preferred by this species (i.e., substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of algae) (USFWS, 2010). The combination of limited known population extent, poor habitat quality, and presence of movement barriers within the Alternative 3 RSA greatly limit potential for this species to occur.
Gila orcuttii	Arroyo chub	SSC	Prefers slow-moving sections of permanent, small to moderate-sized streams with sand or mud substrate with more than half of the habitat as runs and pools ~10 cm deep and reaches of permanent water more than 2 km long.	**No Potential.** No suitable habitat is present in the Alternative 3 RSA.
			Reptiles	
Actinemys pallida	Southwestern pond turtle	FP/SSC	Found in marshes, rivers, streams, ponds, and similar water sources, usually with aquatic vegetation.	**Present.** Suitable habitat within the Alternative 3 RSA is fragmented and limited in size. Recent observations from 2018 are present within the Alternative 3 RSA on UCLA's campus and in 2021 along I-405 in the south (iNaturalist, 2024b).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
Anniella stebbinsi	Southern California legless lizard	SSC	Habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. May occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Lives mostly underground, burrowing in loose sandy soil.	**Moderate**. Suitable habitat within the Alternative 3 RSA is of marginal quality. Recent observations include a 2024 detection located 1.5 miles south of the southern terminus and a 2016 observation approximately 4 miles south of the Alternative 3 RSA in Kenneth Hahn State Recreation Area (iNaturalist, 2024c).
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC	A variety of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	**Present**. Suitable habitat is present. Recent observations include a 2016 detection within the Alternative 3 RSA and a 2007 California Natural Diversity Data Base (CNDDB) occurrence that places two adults within 0.5 mile west of I-405 (iNaturalist, 2024d; CDFW, 2023a).
Phrynosoma blainvillii	Coast horned lizard	SSC	Occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation throughout the central and Southern California coast. Ants are the main food source but also spiders, beetles, and termites. Forages on the ground in open areas, usually between shrubs and often near ant nests.	**Present**. Suitable habitat is present, and several recent observations exist within the Alternative 3 RSA, predominantly along I-405 in the Sepulveda Pass (iNaturalist, 2024e). Additionally, one historical CNDDB occurrence (1947) is located within 1 mile of the northern boundary (CDFW, 2023a).
Thamnophis hammondii	Two-striped garter snake	SSC	Ranges from near Salinas in Monterey County south along the coast, mostly west of the Southern Coast Ranges, to southern California where it ranges east through the Transverse Ranges and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather.	**Moderate.** Suitable habitat is present within the Alternative 3 RSA. There are recent sightings from 2017 and 2020 within 2 miles of the Alternative 3 RSA (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence with an obscured location present over 1 mile west of I-405 in the Alternative 3 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
			Birds	
Agelaius tricolor	Tricolored blackbird	ST/SSC	Historically breeds in freshwater marshes with cattails and other emergent vegetation; increasingly breeds in agricultural fields when traditional wetlands are not present. Forages in wetlands, cultivated fields, grasslands, and at dairies and feedlots.	**High**. No suitable breeding habitat is present within the Alternative 3 RSA; foraging habitat is present within the Sepulveda Basin. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.25 mile of the Alternative 3 RSA (iNaturalist, 2024g; eBird, 2024b).
Aquila chrysaetos	Golden eagle	CFP	Nests on cliff ledges and trees on steep slopes. Hunting grounds include nearby grasslands, sage scrub, or broken chaparral. Require very large territories.	**Low**. Suitable nesting habitat is not present in the Alternative 3 RSA. However, this species has potential to fly over or forage locally while in transit to preferred habitat and/or during migration in the isolated grasslands or sparsely vegetated hillsides within the Alternative 3 RSA. There are no historical records of this species within the Alternative 3 RSA (iNaturalist, 2024y; CDFW, 2023a).
Athene cunicularia	Burrowing owl	SC, SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows.	**High.** Isolated patches of suitable habitat are present within the Alternative 3 RSA. This species has been recently observed within 0.15 mile west of the Alternative 3 RSA in the northern (2016), middle (2019), and southern (2021) portions of the Alternative 3 RSA (iNaturalist, 2024z); observations were documented during the non-breeding season.
Buteo swainsoni	Swainson's hawk	ST	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**Present**. Suitable migration habitat is present within Alternative 3 RSA; suitable breeding habitat is not present. The species may move through during migration; migrating individuals were recently observed within the Alternative 3 RSA along I-405 near the Getty Museum (iNaturalist, 2024aa; eBird, 2024d).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
Circus hudsonius	Northern harrier	SSC	Breeds predominantly in wetland habitats but will also use upland habitats. Prefers grasslands and agricultural fields during migration and in winter. The species occurs year-round in Los Angeles County.	**High**. Suitable migration habitat is present within the Alternative 3 RSA; suitable breeding habitat is not present. The species has potential to transit through the Alternative 3 RSA during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed 0.25 mile west of the Alternative 3 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).
Contopus cooperi	Olive-sided flycatcher	SSC	Breeds in coniferous forests throughout California from sea level to high mountain elevations.	**Present.** Suitable migration habitat is present within the Alternative 3 RSA; breeding habitat is not present. This species can briefly use areas in the Alternative 3 RSA as stopover habitat during migration. Individuals have been observed within the Alternative 3 RSA in 2016 at the West Los Angeles VA Medical Center and 0.25 mile from the Alternative 3 RSA in 2013, 2018 and 2021 (iNaturalist, 2024i).
Haliaeetus leucocephalus	Bald eagle	SE/CFP	Nests in old growth trees near the coast or other bodies of water where fish or other prey sources are available.	**High**. No suitable breeding habitat is present, although potential to fly over the Alternative 3 RSA exists. This species is known to occur adjacent to the Alternative 3 RSA with observations in 2021 and 2023 within 0.25 mile of the RSA in Sepulveda Basin Wildlife Reserve (eBird, 2024g). The closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).
Lanius ludovicianus	Loggerhead shrike	SSC	Uncommon year-round resident of southern California. Found in grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for concealing and protecting nests.	**High.** Suitable habitat is present within the Alternative 3 RSA. This species is known to occur nearby, with 2022 observations in Sepulveda Basin Wildlife Reserve located 0.25 mile west of the Alternative 3 RSA (eBird, 2024h).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
Polioptila californica	Coastal California gnatcatcher	FT/SSC	Prefers Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). Generally avoids steep slopes above 25% and dense, tall vegetation.	**Low**. While the Alternative 3 RSA is located within the species range, suitable breeding habitat is generally absent. Low quality chaparral habitat is present in small patches in the Alternative 3 RSA that may be used for dispersal. There are species records as recent as 2023 over 3 miles south of the Alternative 3 RSA in the Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve (eBird, 2023). Since the species is a short distance disperser and suitable habitat is lacking north of the Alternative 3 RSA, individuals are unlikely to occur within the Alternative 3 RSA. Additionally, the species appears to be rare within the Santa Monica Mountains with few recent records, all located over 5 miles away (CDFW, 2023a; iNaturalist, 2024j; eBird, 2024i).
Pyrocephalus obscurus	Vermilion flycatcher	SSC	Inhabits a variety of habitats associated with open country and stream systems including, deserts, farmlands, scrublands, parks, and cemeteries.	**Present.** Suitable habitat is present within the Alternative 3 RSA. This species is known to occur within the Alternative 3 RSA as recently as 2024 at the Los Angeles National Cemetery (eBird, 2024j).
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Migrate into California in late March/early April and depart for their winter grounds in September. Nest in low, dense riparian thickets along water or along intermittent streams. Forages in riparian and adjacent shrubland in the nesting season.	**Present**. This species has been documented in 2015 and 2022 along I-405 within the Sepulveda Pass within the Alternative 3 RSA; precise locations are obscured (iNaturalist, 2024k). Occupied nesting and foraging habitat are present adjacent to the Alternative 3 RSA within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek; observations within this area are present as close as 0.25 mile of the Alternative 3 RSA (iNaturalist, 2024k).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
			Mammals	
Euderma maculatum	Spotted bat	SSC/WBWG – High Priority	Occurs in foothills, mountains, grasslands, and deserts in Southern California. Requires large, isolated cliffs for roosting (Luce and Keinath 2007). Distribution is patchy, likely due to roosting habitat requirements.	**No Potential**. No suitable habitat is present in the Alternative 3 RSA.
Eumops perotis californicus	Western mastiff bat	SSC/WBWG – High Priority	Open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**Low**. Suitable habitat is present in the Alternative 3 RSA. One recent observation from 2021 is located approximately 4 miles east of the Alternative 3 RSA (iNaturalist, 2024l) and two historical records (1921 and 1925) without precise locations exist within approximately 2 miles of the Alternative 3 RSA (CDFW, 2023a).
Lasionycteris noctivagans	Silver-haired bat	WBWG – Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Present.** Suitable foraging and roosting habitat are present in the Alternative 3 RSA. Two observations from 1985 are within or adjacent to the Alternative 3 RSA (CDFW, 2023a).
Lasiurus frantzii	Western red bat	SSC/WBWG – High Priority	Generally associated with stands of riparian habitat consisting of mature sycamores and cottonwoods. Forages over grasslands, shrublands, open woodlands, forests, croplands, and occasionally urban settings. Roosts primarily in trees.	**Low**. Suitable habitat is present in the Alternative 3 RSA. One recent observation from 2019 was made 7 miles east of the Alternative 3 RSA (iNaturalist, 2024m) and a second from 2007 was made approximately 10 miles west of the Alternative 3 RSA (CDFW, 2023a).
Lasiurus cinereus	Hoary bat	WBWG – Medium Priority	Most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. Prefers open habitats or habitat mosaics; requires water. Spends winter months in warmer habitats such as Southern California, Mexico, and Central America while summer is typically spent in the northern portions of California and north into Canada (Bolster, 1998). Roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat with large mature trees.	**High.** Portions of the Alternative 3 RSA provide suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. Two observations are adjacent to the Alternative 3 RSA: the first from 2022 is near Sherman Oaks in the Santa Monica Mountains (iNaturalist, 2024n) and the second from 1986 is in Van Nuys (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 3 RSA
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Sparsely vegetated areas with alluvial deposits of sandy soils.	**Low**. Suitable habitat is present in the Alternative 3 RSA; however, the species has only been found historically in the San Fernando Valley which is now highly urbanized. One historical observation from 1903 of a collected male specimen was located approximately 2.5 miles east of the Alternative 3 RSA (CDFW, 2023a).
Puma concolor	Mountain lion	SC	Generally found throughout California in temperate coniferous/deciduous forest, coastal chaparral, foothills, and mountains. Often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Within the Santa Monica Mountains, mule deer make up the bulk of mountain lions' diet (87% of 700 kills analyzed by NPS), although smaller prey can supplement when opportunity arises, preferentially coyotes then raccoons (NPS, 2023).	**Present.** Mountain lions are known to occur within the Alternative 3 RSA, specifically in the Santa Monica Mountains where an estimated population of 10 to 15 adult individuals is well documented by the National Park Service (NPS, 2023). Several GPS-collared mountain lions have been tracked within the Alternative 3 RSA, predominantly west of I-405 throughout the Sepulveda Pass (NPS, 2023). Lion movement is hindered by I-405 and mortality has been documented on the freeway (NPS, 2023). In July 2019, NPS documented one collared mountain lion (P-61) successfully crossed I-405 in the Sepulveda Pass area for the first time in the 17 years of study (NPS, 2019b); this lion was struck and killed on I-405 two months later (NPS, 2022). An uncollared mountain lion was found deceased on northbound I-405 near The Getty Museum on July 4, 2024 (Darling, 2024).

Source: HTA, 2024

[a]Special-status wildlife species identified during reviews of the California Natural Diversity Database (CNDDB) (CDFW, 2023a), IpaC (USFWS, 2024a), eBird, and iNaturalist for the Beverly Hills, Van Nuys, Canoga Park, and Topanga quadrangles.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE –=Federally Endangered

State Status Designations:
CFP = CDFW Fully Protected
SC = State Candidate Species for Listing

FT = Federally Threatened
FP = Federally Proposed
SE = State Endangered
SSC = Species of Special Concern designated by CDFW
ST – State Threatened

Western Bat Working Group (WBWG) Priority Levels:

WBWG-High = Designated by the WBWG as High Priority – species that are imperiled or are at high risk of imperilment.

WBWG-Medium = Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, eBird, iNaturalist, or another database as occurring in the Alternative 3 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 3 RSA; however, no records occur directly within the Alternative 3 RSA. Species has been detected within 1 mile of the Alternative 3 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 3 RSA is of marginal quality. No records occur within RSA, but the species has been documented over 1 mile from the Alternative 3 RSA.

Low = Suitable habitat within the Alternative 3 RSA is of low quality. There are no known recent within or near the Alternative 3 RSA.

No Potential = Suitable habitat is not present for the species.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate species that is known to occur within Alternative 3 RSA. This species of bumble bee occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Crotch's bumble bee is found in a wide variety of natural and disturbed habitat types; they are dietary generalists and are often found foraging in grasslands and shrublands on a wide variety of plant species with strong preferences for native sage species, milkweed, and species within the pea family (*Fababcea*) including lupines, vetches, and deerweed. On June 12, 2019, the California Fish and Game Commission voted to add Crotch's bumble bee as a Candidate Endangered species under the California Endangered Species Act (CESA) (Hatfield and Jepsen, 2021). Suitable habitat including chaparral is found in the middle of the Alternative 3 RSA in the Santa Monica Mountains. One recent observation from 2023 is within the Alternative 3 RSA (iNaturalist, 2024a). Additionally, observations from 2023 are present within 0.5 mile of the Alternative 3 RSA in the northern portion (iNaturalist, 2024a) and several historical observations within 1 mile of the Alternative 3 RSA from the mid-1900s (CDFW, 2023a).

Southern California Legless Lizard

The southern California legless lizard (*Anniella stebbinsi*) is a CDFW SSC and has moderate potential to occur within the Alternative 3 RSA. It is a fossorial lizard potentially present in suitable habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. The southern California legless lizard may occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Marginally suitable habitat for the species occurs along the Sepulveda Pass within the Alternative 3 RSA, where a mixture of chaparral and coastal scrub habitat types were observed during the field survey. The species has been detected in the Kenneth Hahn State Recreation Area to the southeast of the Alternative 3 RSA (approximately 3.5 miles), and approximately 1.5 miles south of the southern terminus in Culver City in 2024 (iNaturalist, 2024c).

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFWSSC that is known to occur within the Alternative 3 RSA. This subspecies occurs in Southern California and as far south as Baja California and is often observed in a variety of habitats including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats. Suitable habitat including chaparral and coastal sage scrub is present within the Alternative 3 RSA, and there are recent observations of the species throughout the Sepulveda Pass in the Santa Monica Mountains. In 2018, an individual was observed 1,000 feet east of I-405 (iNaturalist, 2024d) and in 2007, two adults were observed 0.5 mile west of I-405 (CDFW, 2023a).

Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys pallida*) is listed as a CDFW SSC and is known to occur within the Alternative 3 RSA. In October 2023, this species has also been proposed for listing as Federally Threatened bythe USFWS. While proposed species are not protected from take prohibitions under ESA until the rule to list is finalized, consultation with USFWS is required under Section 7 if actions will risk the continued existence of a proposed species. As of 2014, western pond turtle (*Actinemys marmorata*) was recognized as two distinct species: northwestern (which remained *A. marmorata*) and southwestern pond turtle (*A. pallida*) based on geographic range. The range of the southwestern pond turtle extends from central and southern California south into Baja California, Mexico. This includes areas of the central Coast Range from near northern Monterey County, California, portions of the Transverse Range into the Mojave River watershed, and areas south into Baja California, Mexico (50 CFR Part 17; Federal Register / Vol. 88, No. 190 / Tuesday, October 3, 2023 / Proposed Rules). This species occurs in ponds, marshes,

rivers, streams and irrigation ditches with aquatic vegetation, basking sites, and suitable upland habitat for egg-laying. The southwestern pond turtle's population is in decline due to disease, habitat destruction and alteration, and the introduction of predators such as the American bullfrog (*Lithobates catesbeianus*) and striped bass (*Morone saxatilis*) (USFWS, 2024c). Suitable habitat for the species occurs within the Alternative 3 RSA. Records for either *A. marmorata* or *A. pallida* were included in database searches as records of the former would be misidentifications of the latter based on geographic range for each species. The species has been observed on UCLA's campus within (2018) or adjacent (2018 and 2021) to the Alternative 3 RSA at the Mildred E. Mathias Botanical Garden (0.72 mile to the east of RSA). Additional observations adjacent to the Alternative 3 RSA include at the Sepulveda Basin Wildlife Reserve in 2021 (0.24 mile to the west of the RSA), the Sepulveda Pass in 2021 (0.23 mile to the west of the RSA), and the Getty Center in 2021 (500 feet to the west of the RSA) (iNaturalist, 2024b).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvilli*) is a CDFW SSC and is known to occur within the Alternative 3 RSA. This species occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation. It occurs throughout the central and southern California coast. The coast horned lizard's main food source consists primarily of ants but also includes spiders, beetles, and termites. It forages on the ground in open areas, usually between shrubs and often near ant nests. Suitable habitat for the species occurs in the Santa Monica Mountains specifically in the Sepulveda Pass in the form of chaparral and coastal sage scrub. The CNDDB occurrences are historical 1916 and 1947 (CDFW, 2023a). However, there have been several recent observations of the species within and adjacent to the Alternative 3 RSA in the Sepulveda Pass (observed in the years 2015, 2016, 2019, 2020, iNaturalist, 2024e); therefore, the species is assumed extant in the Alternative 3 RSA.

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW SSC and has high potential to occur within the Alternative 3 RSA. The two-striped garter snake ranges from near Salinas in Monterey County south along the coast mostly west of the south Coast Ranges, to southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather. The loss of wetland habitats has contributed to a reduction in the range of this snake (California Herps, 2023) and declines in population of the species have been attributed to human impacts, including urban development and flood control in the southern part of its range, as well as habitat modification by livestock, drought, loss of native prey, and predation by invasive species in its northern range (Jennings and Hayes, 1994). Suitable habitat for the species occurs within the Alternative 3 RSA and recent sightings of the species to the west of the Alternative 3 RSA near Will Rogers State Historic Park and to the east in Beverly Glen near Stone Canyon Reservoir have been recorded (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence of two-striped garter snake within 1 mile of I-405, west of the Alternative 3 RSA, in a flood control debris basin (CDFW, 2023a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as state threatened and CDFW SSC and has high potential to occur within the Alternative 3 RSA. A resident songbird of California that shares its limited range with Washington, Oregon, and a short distance into Baja California, Mexico. Populations are in decline mainly due to the loss of preferred breeding habitats consisting of native wetlands and marshes where it can form nesting colonies that include thousands of breeding individuals. It feeds on available insects, snails,

grains, and a variety of other locally abundant resources. Suitable foraging habitat is present within the Alternative 3 RSA; breeding habitat is not. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 3 RSA (iNaturalist, 2024g; eBird, 2024b). This species also has potential to forage in the grassland parcels to the northwest of the Alternative 3 RSA.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is CDFW SSC that has high potential to occur within the Alternative 3 RSA. In addition, this species was petitioned for protection as threatened or endangered under CESA in March 2024 (CBD et al., 2024); in August 2024, CDFW's evaluation report determined that there was sufficient evidence to indicate listing of burrowing owl may be warranted (CDFW, 2024e). On October 10, 2024, the Fish and Game Commission approved the petition and the western burrowing owl became a candidate for listing as threatened under CESA (CDFW, 2024f). As a candidate species, burrowing owl will receive protections under CESA while a full status review occurs over a 12- to 18-month-long review period. It is a semi-colonial owl found in open grasslands, prairies, farmlands, deserts, scrubland, and other disturbed areas with low-growing vegetation. In coastal southern California, burrowing owl is found mainly in grassland and open scrub from the coast to the foothills and is strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows. It has been nearly extirpated as a breeding species from coastal San Luis Obispo, Santa Barbara, Ventura, Los Angeles, and Orange Counties (Shuford and Gardali, 2008). Isolated areas of suitable habitat are present within the Alternative 3 RSA. Burrowing owl has been recorded within 0.15 mile west of the Alternative 3 RSA in the northern (2016), middle (2019), and southern (2021) portions of the Alternative 3 RSA (iNaturalist, 2024z); however, observations were from the late fall and winter season, outside of the breeding season.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state threatened and known to occur as a migrant within the Alternative 3 RSA. Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Swainson's hawk breed in stands with few trees within grasslands, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands in the Central Valley. This species requires suitable foraging areas adjacent to breeding habitat which includes grasslands, grain or alfalfa fields, or livestock pastures that support rodent populations. Along with rodents, they feed on amphibians, reptiles, and large arthropods. Suitable breeding habitat for this species is not present within the Alternative 3 RSA as it falls outside of the breeding range typical for Swainson's hawk. However, this species may transit through during migration; migrating individuals have been recently observed within the Alternative 3 RSA along I-405 near the Getty Museum (iNaturalist, 2024aa; eBird, 2024d).

Northern Harrier

Northern harrier (*Circus hudsonius*) is a CDFW SSC (when nesting) that has high potential to occur as a migrant within the Alternative 3 RSA. Los Angeles lies at the southwestern vicinity of the species breeding range in the United States. This species is low-flying and typically prefers grasslands, weedy agricultural fields, marshes, and other flat areas with large tracts of dense, low-growing vegetation, preferably undisturbed. As a ground-nesting species, northern harriers prefer to nest in tall, dense vegetation along the coastal slope and in inland valleys. In Los Angeles County, this species is found year-round but is more common as a winter visitor than as a resident breeder per records research in CNDDB (CDFW, 2023a), eBird (eBird, 2024e), and iNaturalist (iNaturalist, 2024h). There is no suitable

breeding habitat within the Alternative 3 RSA, but the species has potential to transit through during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed within 0.25 mile west of the Alternative 3 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is a CDFW SSC that is known to occur as a migrant within the Alternative 3 RSA. Olive-sided flycatcher is found in coniferous forests throughout California from sea level to high mountain elevations. This species breeds in coniferous forests and uses meadows and open areas adjacent to forests to forage. Olive-sided flycatchers feed on a variety of insects, most of which are caught in flight. Suitable breeding habitat for this species is not present within the Alternative 3 RSA; however, this species may briefly use areas in the Alternative 3 RSA as stopover habitat during migration. Individuals have been observed within the Alternative 3 RSA in 2016 at the West Los Angeles VA Medical Center and 0.25 mile from the Alternative 3 RSA in 2013, 2018 and 2021 (iNaturalist, 2024i).

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is state endangered and a CDFW Fully Protected (CFP) species that has high potential to occur as a flyover within the Alternative 3 RSA. It ranges throughout North America and inhabits forests and open grasslands nearby to a water source to forage. The bald eagle's main source of prey is fish, although they will forage on a variety of prey that may include reptiles, mammals, amphibians, and carrion. The population was once in serious decline due to hunting and pesticides; however, with protections put in place, this species has successfully rebounded with a continually increasing population evidenced in databases searches. This species is known to occur as recently as 2024 adjacent (within 0.25 mile) to the Alternative 3 RSA at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024g). However bald eagles do not breed within the vicinity of the Alternative 3 RSA; the closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC (when nesting) that has high potential to occur within the Alternative 3 RSA. This songbird ranges throughout North America, inhabiting open country with short vegetation and lower sized shrubs and trees sparsely spaced throughout the landscape. Loggerhead shrikes are found throughout deserts, agriculture lands, grasslands, cemeteries, and golf courses. While they eat a variety of prey items similar to a raptor including insects, amphibians, reptiles, small mammals, and other songbirds, they lack the talons of a raptor. Instead, shrikes impale and/or wedge prey items on shrubs, trees, cacti, barbed wire fencing, and other similar features for caching and consumption. Suitable habitat is present within the Alternative 3 RSA. This species is known to occur nearby with observations from 2022 in Sepulveda Basin Wildlife Reserve located 0.25 mile of the Alternative 3 RSA (eBird, 2024h).

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus obscurus*) is a CDFW SSC (when nesting) that is known to occur within the Alternative 3 RSA. The species is a small songbird in the tyrant flycatcher family, named for the adult males' bright vermilion red and contrasting black coloration. The southwestern United States is the northern extent of its typical range, which extends up from Central and South America. Vermilion flycatchers are found within a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, golf courses, parks, and cemeteries. Suitable habitat is present within the Alternative 3 RSA; this species is known to occur within the Alternative 3 RSA as recently as

2024 and breeding was confirmed with dependent fledglings observed at Los Angeles National Cemetery in 2023 (eBird, 2024j).

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is federally and state endangered and is known to occur within the Alternative 3 RSA. Least Bell's vireo occurs in spring and summer in southern California to breed; they arrive to California in late March/early April and depart for their winter grounds in September. This species builds nests in low, dense riparian thickets along water or along intermittent streams. During the nesting season, they forage in riparian and adjacent shrubland habitats. Individuals have been detected within the Alternative 3 RSA in 2015 and 2022 along I-405 within the Sepulveda Pass; precise locations are obscured (iNaturalist, 2024k). Suitable nesting and foraging habitat are present adjacent to the Alternative 3 RSA within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek; observations within this area are present within 0.25 mile of the Alternative 3 RSA (iNaturalist, 2024k).

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a WBWG Medium Priority Species that is known to occur throughout the Alternative 3 RSA. This species occurs throughout much of North America into northern Mexico primarily in coastal and montane forests, especially within old growth forests. Roosts are located in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. While preferring to roost in old growth forest, they forage over disturbed areas, clearings, roadways, forested riparian areas along rivers and streams, and various other water sources. Suitable foraging and roosting habitat are present in the Alternative 3 RSA. Two observations from 1985 are within or adjacent to the Alternative 3 RSA (CDFW, 2023a).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a WBWG Medium Priority Species with high potential to occur in the Alternative 3 RSA. This species is the most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. This species spends winter months in warmer winter habitats such as Southern California, Mexico, and Central America and summer is typically spent, in the northern portions of California and north into Canada (Bolster, 1998), concealed in the foliage of deciduous and coniferous trees, typically neat the edge of a clearing. Roosting habitat consists of dense foliage associated with medium to large trees situated in open or mosaic habitat; roosting habitat is present within the Alternative 3 RSA in areas with large mature trees, specifically along the Sepulveda Pass and the Sepulveda Basin Wildlife Preserve. Portions of the Alternative 3 RSA provide both suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. There is a CNDDB occurrence from 1986 (CDFW, 2023a), where a female hoary bat was collected in Van Nuys approximately 1 mile to the east of the Alternative 3 RSA. In 2022, an observation was made in the Santa Monica Mountains near Sherman Oaks, 300 feet east of the Alternative 3 RSA (iNaturalist, 2024n).

Mountain Lion

The mountain lion (*Puma concolor*) is a "specially protected" species in California following the passage of the California Wildlife Protection Act of 1990 (Proposition 117), which makes it illegal to possess transport, sell, and hunt the species (CDFW, 2023d). Mountain lions (*Puma concolor*) within the evolutionary significant unit (ESU) located in Southern California and along the central coast were accepted as a candidate for state listing under CESA in April 2020 (CDFW, 2023d). Under CESA, species classified as a candidate species are afforded the same protection as listed species while they undergo a

review process (CDFW, 2023d). Mountain lions are generally found throughout the state where suitable habitat such as temperate coniferous/deciduous forest, coastal chaparral, foothills and mountains occurs. They are often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Mountain lions are known to occur within the Alternative 3 RSA, specifically in the Santa Monica Mountains (NPS, 2023). There is high potential for the species to occur within the Alternative 3 RSA due to the potential habitat and recent sightings (NPS, 2023). Mountain lions are well documented throughout the Sepulveda Pass, in the Santa Monica Mountains by the NPS, and their population is estimated at around 10 to 15 adult individuals (NPS, 2023). Several GPS-collared mountain lions have been tracked to occur within the Alternative 3 RSA throughout the Sepulveda Pass, east of the I-405 freeway (NPS, 2023).

Bats

There are 24 species of bats found in Los Angeles County, 18 of which are considered rare or sensitive by a variety of entities (NHMLA, 2023). In particular, the WBWG identifies several species as Medium or High Priority for consideration of conservation measures. Bat species responses to anthropogenic disturbances differ, with some responding positively and some negatively. Anthropogenic disturbances that can affect bats include the following (Caltrans, 2019):

- Habitat loss, fragmentation, and degradation
- Chemical pollution to drinking water from construction waste and to air from construction vehicle emissions
- Light pollution resulting from artificial lighting
- Noise pollution from construction activities
- Increased predation
- Introduced diseases, such as white-nose syndrome
- Climate change
- Vehicular collisions

The RSA provides habitat for day and night roosting for bats such as trees, bridges, culverts, buildings, and other structures. The tree-lined streets found throughout the Alternative 3 RSA could potentially support roosting bats, such as the hoary bat and western mastiff bat. Large bridges spanning the Los Angeles River may provide suitable bat roosting habitat and foraging habitat for species such as Mexican free-tailed bat and Myotis species. However, no sign of bats, including individuals, guano (i.e., scat), staining on walls from urine, or vocalizations, were detected during the spring 2023 reconnaissance-level field surveys.

Wildlife Corridors

Within the heavily urbanized areas that comprise the northern and southern portions of the Project, opportunities for wildlife movement are limited. No landscape habitat linkages were identified within the Alternative 3 RSA by the SCW but the City of Los Angeles has identified a regional wildlife movement pathway through the central portion of the RSA in the Santa Monica Mountains. Within this highly urbanized area, animal movement will be facilitated by remnant riparian habitat, underpasses, culverts and stretches of contiguous or semi-contiguous habitat. Ornamental vegetation may provide some opportunities for cover, resting, foraging, and nesting to localized bird and wildlife populations; however, such areas do not function as major wildlife movement corridors. Evaluation of wildlife movement for species with large home size ranges, like the mountain lion, are more appropriate for a larger scale than the Alternative 3 RSA to better inform existing patterns for these species. Discussions at both the RSA and a larger scale are included herein.

The Santa Monica Mountains intersect with the middle of the Alternative 3 RSA and serve as both a regional and local wildlife movement corridor. The Santa Monica Mountains are lacking connection with other mountain ranges in the area, largely due to urbanization. However, they retain open areas and native habitats that provide east-west movement opportunities; to the west are large undeveloped areas of natural vegetation and to the east are the Verdugo Mountains and San Gabriel Mountains. The City of Los Angeles has identified a regional pathway within this mountain range that is not represented by one single route but instead incorporates multiple options through natural and developed areas: Wildlife Movement Pathway 13—Santa Monica Mountains-Griffith Park. Within the mountain range, natural, open spaces are interspersed with areas of development. While the majority of the Santa Monica Mountain range within the Project Study Area contains scattered residential development, 44 percent of the Santa Monica Mountain range is considered non-developed (as defined by removing "urban" classified categories from the SMMNRA vegetation mapping, see Section 3.3.1 for details; Figure 7-27). Habitat fragmentation poses a threat to species due to lack of space and movement (i.e., habitat to travel between) and threatens wildlife survival from increased risk of inbreeding and loss of genetic diversity.

Mammals including mule deer (*Odocoileus hemionus*), mountain lions, and bobcats (*Lynx rufous*) can have large territorial ranges that span many miles; these species are documented as present in the Santa Monica Mountains. In their current state, I-405 and other major roads in the Alternative 3 RSA act as a functional barrier to wildlife movement for most terrestrial wildlife. If wildlife is able to successfully cross I-405, small-scale refugia are present east of the freeway and outside of the Alternative 3 RSA within Stone Canyon Reservoir (32 acres) and Franklin Canyon Park (MRCA land, 605 acres) or Griffith Park (4,210 acres). Within the Alternative 3 RSA, west-to-east wildlife movement is aided by native habitat on both sides of I-405, providing shelter and cover to approach and exit the freeway corridor, but vehicle presence and speed on the freeway are major impediments to crossings. There are limited opportunities for wildlife to move north to south due to the urban landscape surrounding the mountains in both directions. Currently, the permeability of I-405 and other major roads in the Alternative 3 RSA is limited for most terrestrial wildlife, contributing to habitat fragmentation and restricted breeding and hunting opportunities, especially for large mammals. Impacts to gene flow resulting from movement barriers and subsequent signs of inbreeding depression have been observed in Southern California mountain lions (Huffmeyer et al., 2022), decreasing overall population health.

The SMMC's Eastern Santa Monica Natural Resource Protection Plan states habitat connectivity, particularly leading up to and east of I-405, is in danger (ESMM-NRPP, 2021). The SMMC has published a habitat linkage map indicating the presence of four wildlife corridors that cross I-405 in the Santa Monica Mountains: Mulholland Drive Bridge, Skirball Center bridge, Bel Air Crest Drive underpass, and Sepulveda Boulevard underpass by the Getty Center (SMMC, 2021); they are also identified as wildlife movement pathways by the City of Los Angeles (DCP, 2021). NPS research before, during, and after the I-405 Freeway Widening Project studied the use of these potential corridors and found that while wildlife used all four during the preconstruction and early construction phases, fewer individual animals and species used them post-construction (NPS, 2024a). Species that were observed most during construction included raccoon, Virginia opossum, coyote, mule deer, and fox squirrel. Cameras placed in the vicinity of the crossings showed that the species who were no longer observed crossing were still present in the area; this includes mountain lions, although they were not observed at any of the crossings during the study. On January 22, 2025, a wildfire began east of I-405, adjacent to the Sepulveda Boulevard underpass and burned through adjacent vegetation, reducing cover for wildlife attempting to cross here. It is likely that wildlife movement in this area will be temporarily altered until the habitat recovers.

Mountain lions utilize the Santa Monica Mountains as a major linkage corridor between the surrounding mountain ranges in Southern California. Freeways, roads, buildings, and fencing have created barriers to mountain lion, along with other wildlife, movement, causing the remaining undeveloped land becoming highly fragmented habitat (CLAW, 2023). The major causes of death among mountain lions are vehicle collisions, rodenticide poisoning, depredation permits, and mountain lions killing other mountain lions.

I-405 creates a major barrier to mountain lion movement. At present time, I-405 is generally considered impermeable to mountain lions inhabiting land east of I-405, preventing their movement to the western portion of the Santa Monica Mountains (NPS, 2023). However, a few mountain lions have made it across I-405 successfully. Examples of mountain lions crossing I-405 include mountain lions P-22, P-61, and P-97. P-22 was born in the Santa Monica Mountains and was determined to have crossed both the I-405 and US-101 freeways to make his way to Griffith Park; he was not collared at the time of his crossing (NPS, 2019b). The NPS also documented one collared mountain lion (P-61) crossing I-405 in the Sepulveda Pass successfully on July 19, 2019. However, these examples are few and far between since many mountain lions who attempt to cross I-405 are unsuccessful, such as P-97 who was struck and killed on I-405 in the Sepulveda Pass near Getty Center Drive in 2022(NPS, 2023), and an uncollared lion that was killed off Sepulveda Boulevard near The Getty Museum in July 2024 (Darling, 2024). As of December 2022, at least 32 mountain lions have been documented as struck and killed by vehicles in the SMMNRA in the last 20 years (NPS, 2023). Mountain lions have been documented traveling up to the edge of I-405 and not crossing (NPS, 2019b), further indicating freeways and other physical barriers are affecting wildlife behavior. Mountain lions in the Santa Monica Mountains are experiencing exacerbated impacts of edge effects and limited habitat for mountain lions and are suffering from territorial fighting, low genetic diversity, and low prey populations. Furthermore, escape routes during wildfires may be blocked and migration into previously burned areas may be restricted due to roads and other urban development. A study conducted by University of California (UC) Davis and partners concluded the Santa Monica Mountains lion population is at risk of becoming locally extinct within the next 50 years. The study recommended increases in landscape connectivity to maintain healthy lion populations in the greater Los Angeles metropolitan area (Benson et al., 2019).

In general, wildlife species are likely to use habitat within the Alternative 3 RSA for local movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover) versus regional movements due to the highly urbanized nature of most of the Project and the barrier created by I-405. Based on the Alternative 3 RSA running north-south and including both urban and native vegetation, it is likely to be part of the home range of many species, which may use it at different times of the year depending on available resources.

Within the Alternative 3 RSA, water is present in the Los Angeles River in a concrete-lined channel. Adjacent to the Alternative 3 RSA, water is present in a human-made stream within the Mathias Botanical Garden on UCLA's campus and in several large waterbodies (creeks, human-made lakes, and the Los Angeles River) are located immediately west of the Alternative 3 RSA in the Sepulveda Basin. Where present, waterbodies provide resting, foraging, and nesting opportunities for wildlife species and collectively they provide some habitat for wildlife species to move through the Los Angeles Basin and San Fernando Valley. Furthermore, several species of warblers, sparrows, and raptors that breed in northern latitude, spend the winter months in the Alternative 3 RSA. This includes species protected by the MBTA such as the yellow-rumped warbler (*Setophaga coronata*), white-crowned (*Zonotrichia leucophrys*) and golden-crowned sparrows (*Zonotrichia atricapilla*), and several raptor species.

The RSA occurs along the Pacific Flyway, a major north-south flyway for migratory birds moving between breeding grounds and overwintering sites or following food sources. Potential stopover locations for

migratory birds are often correlated with vegetation cover and adjacent water and are particularly important for migrating waterfowl. Within the Alternative 3 RSA, one potential location is present at the Sepulveda Basin Recreation Area. Within the Sepulveda Basin, the Los Angeles flows west to east through the Alternative 3 RSA; while the majority of the river within Los Angeles is a concrete-lined channelized river, portions within the Sepulveda Basin are earthen and vegetated. The narrow riparian corridor along the Los Angeles River includes a variety of plant and habitat layers (i.e., mature trees, shrubs, and herbaceous vegetation) that facilitate bird movement along the river. While only the eastern edge of the Sepulveda Basin Recreation Area is within the Alternative 3 RSA, Lake Balboa, Woodley Creek, Japanese Garden Lake, and Wildlife Lake all occur within the Sepulveda Basin and provide, resting, foraging, and nesting opportunities that support wildlife movement through the Alternative 3 RSA.

7.2.5.2 Plants

Vegetation Communities

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Alternative 3 RSA are generally absent and consist mainly of the land cover class developed. Developed, ruderal, and cleared land classifications are generally considered to provide lower quality habitat due to absent or sparse vegetation, limited plant diversity, and regular disturbance associated with human activities. Special-status wildlife species may use these areas for activities such as foraging or while in transit and special-status plants could be present, but they are more likely to be found in vegetated habitats subject to less disturbance.

Vegetation communities in the Santa Monica Mountains, which are less developed and run east-west through the middle of RSA, include ceanothus chaparral, laurel sumac shrubland, toyon shrubland, and various other native vegetation communities. Within a mapped vegetation group, patches of differing communities may be present in smaller sizes than the minimum mapping unit (0.5 hectare) (NPS, 2004-2019). Where present, these areas would be refined in the future after a preferred alternative is selected.

Vegetation communities are presented below in descending order of abundance within the Alternative 3 RSA; acreages per vegetation community within the Alternative 3 RSA are presented in Table 7-6; and spatial representation of their locations are provided on Figure 7-13 through Figure 7-25. A list of plant species observed during the field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general plant observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Table 7-6. Alternative 3: Vegetation Community Acreage within Resource Study Area

Vegetation Community/Land Cover Type [a]	Sensitive Natural Vegetation Community (Authority)	Acres [b]	Percent of Total Vegetation
Developed	Not applicable	2,019.0	81.4
Post Fire Shrub Regeneration and Undifferentiated Categories including Artificial Cuts/Embankments and Exotic Vegetation	Not applicable	243.9	9.8
Ceanothus Chaparral	Not applicable	84.5	3.4
Laurel Sumac Shrubland	Potentially depending on codominant species (CDFW)	57.5	2.3

Vegetation Community/Land Cover Type [a]	Sensitive Natural Vegetation Community (Authority)	Acres [b]	Percent of Total Vegetation
Toyon Shrubland	Potentially depending on codominant species (CDFW)	16.6	0.7
California Walnut Woodland	Yes (CDFW)	9.9	0.4
California Annual Grassland	Not applicable	8.1	0.3
Coast Live Oak Woodland	Not applicable	7.2	0.3
Scrub Oak Shrubland	Potentially depending on codominant species (CDFW)	5.5	0.2
Cleared Land	Not applicable	4.0	0.2
Sugar Bush Shrubland	Yes (CDFW)	4.0	0.2
California Buckwheat Shrubland	Potentially depending on codominant species (CDFW)	3.6	0.1
California Sagebrush Shrubland	Potentially depending on codominant species (CDFW)	3.2	0.1
Black Sage Shrubland	Potentially depending on codominant species (CDFW)	3.2	0.1
Ruderal	Not applicable	3.0	0.1
California Sycamore Woodland	Potentially depending on codominant species (CDFW)	2.5	0.1
Open Water	Not applicable	1.8	0.1
Coyote Brush Shrubland	Potentially depending on codominant species (CDFW)	1.1	<0.1
Undifferentiated Riparian Vegetation	Potentially depending on codominant species (CDFW)	1.1	<0.1
Mexican Elderberry Shrubland	Not applicable	0.9	<0.1
Total		**2,480.5**	**100.0**

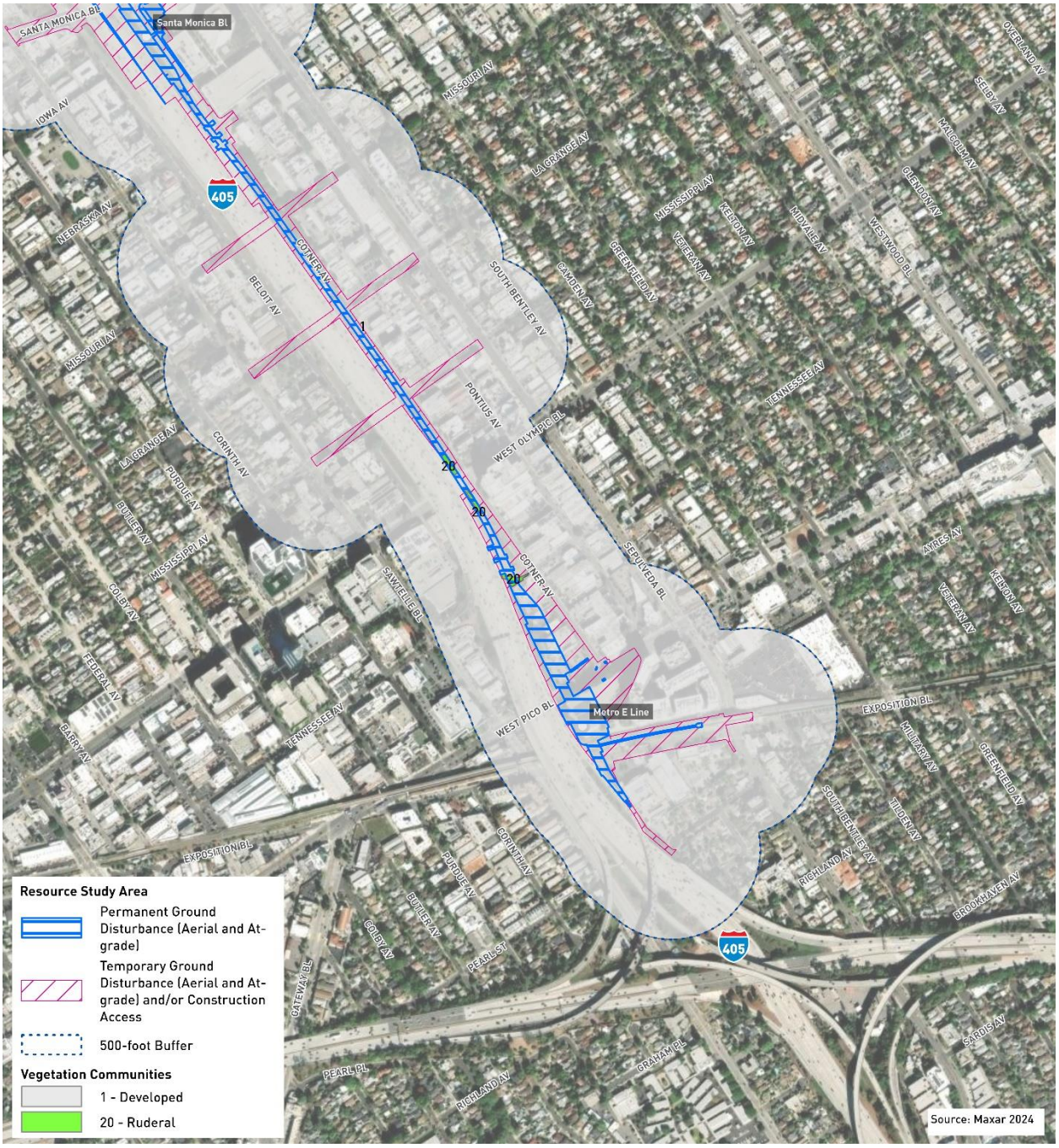
Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in total calculation due to rounding errors.

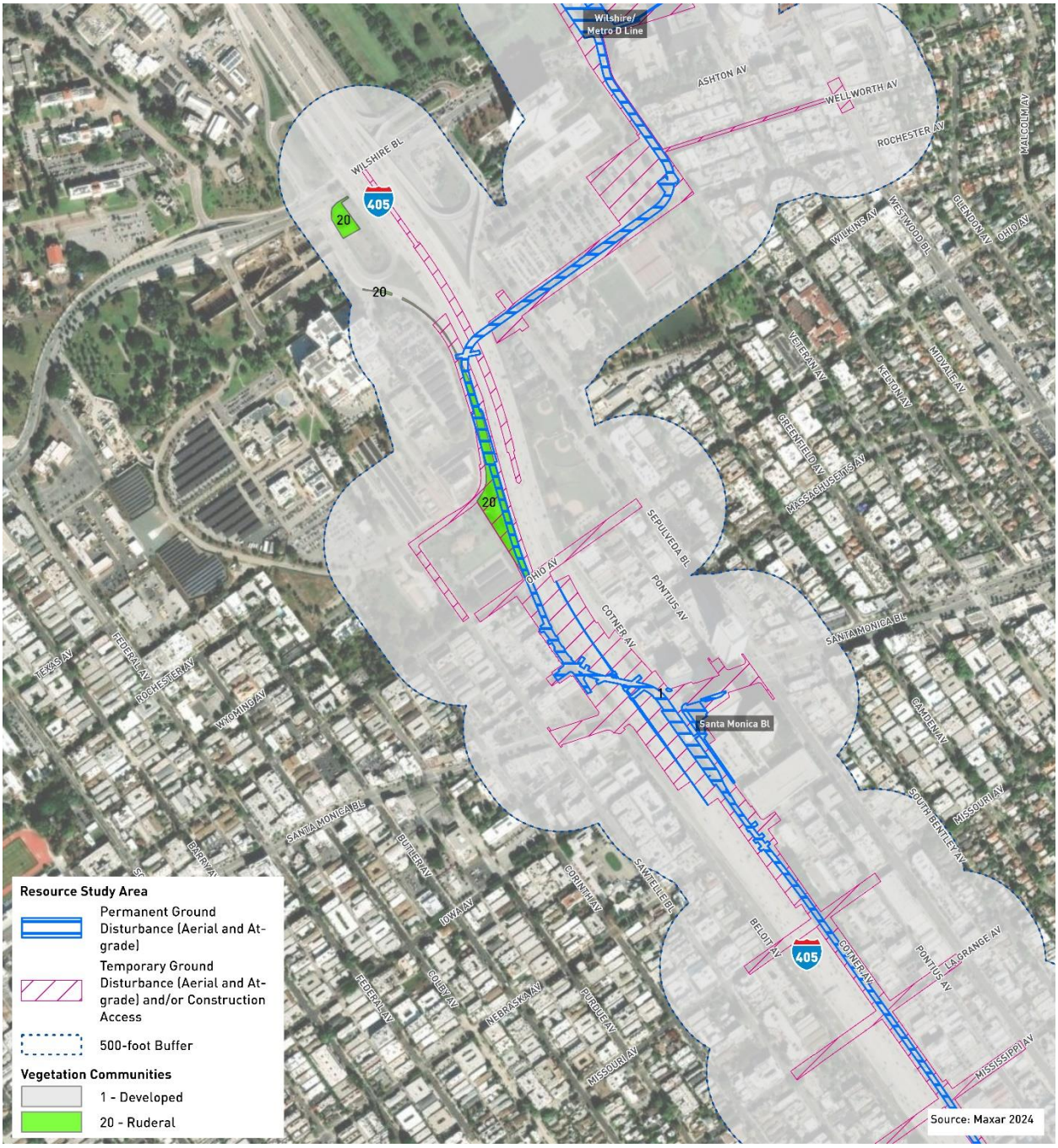
CDFW = California Department of Fish and Wildlife

Figure 7-13. Alternative 3: Vegetation Communities, Map 1 of 13



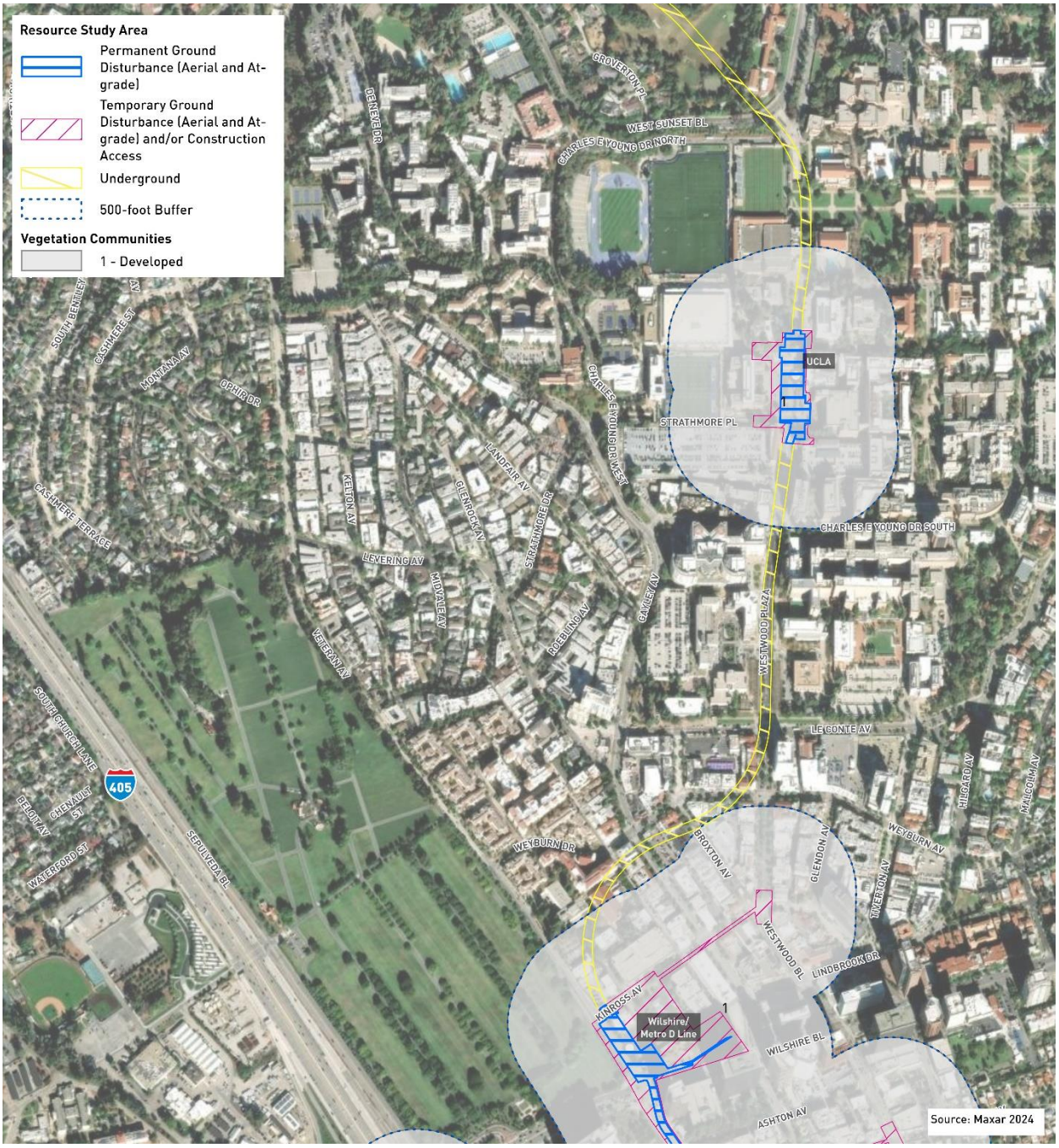
Source: HTA, 2024

Figure 7-14. Alternative 3: Vegetation Communities, Map 2 of 13



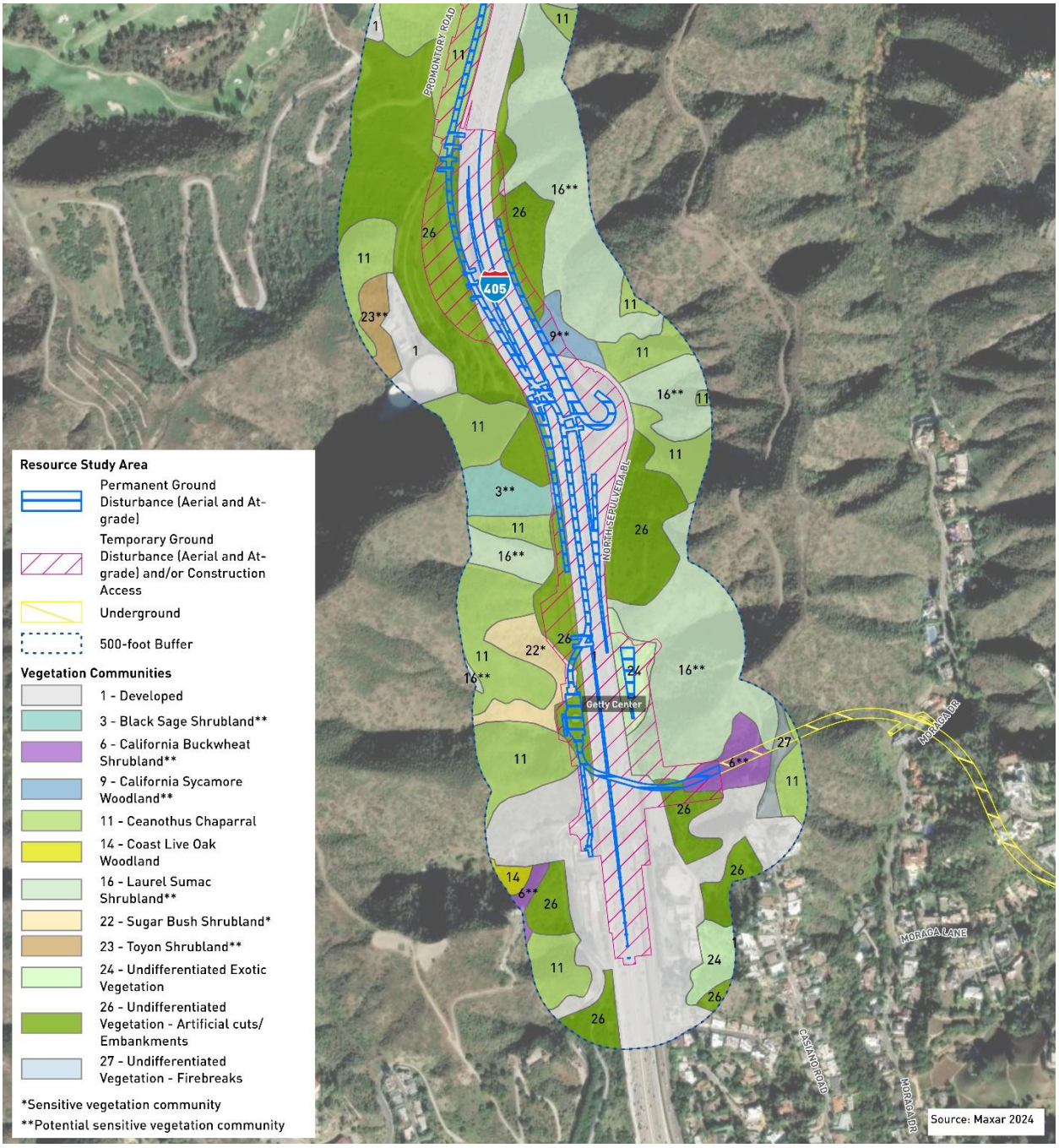
Source: HTA, 2024

Figure 7-15. Alternative 3: Vegetation Communities, Map 3 of 13



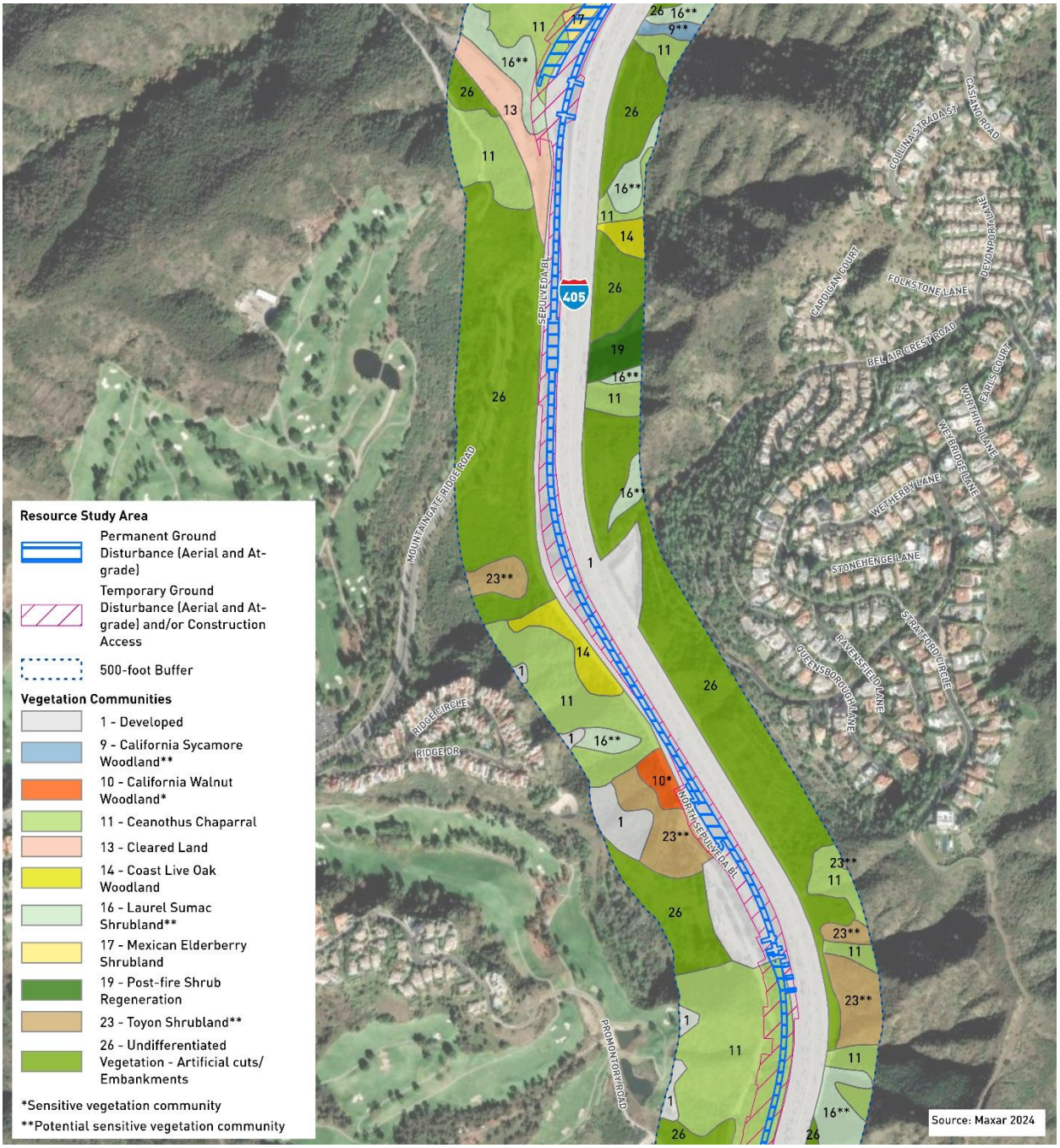
Source: HTA, 2024

Figure 7-16. Alternative 3: Vegetation Communities, Map 4 of 13



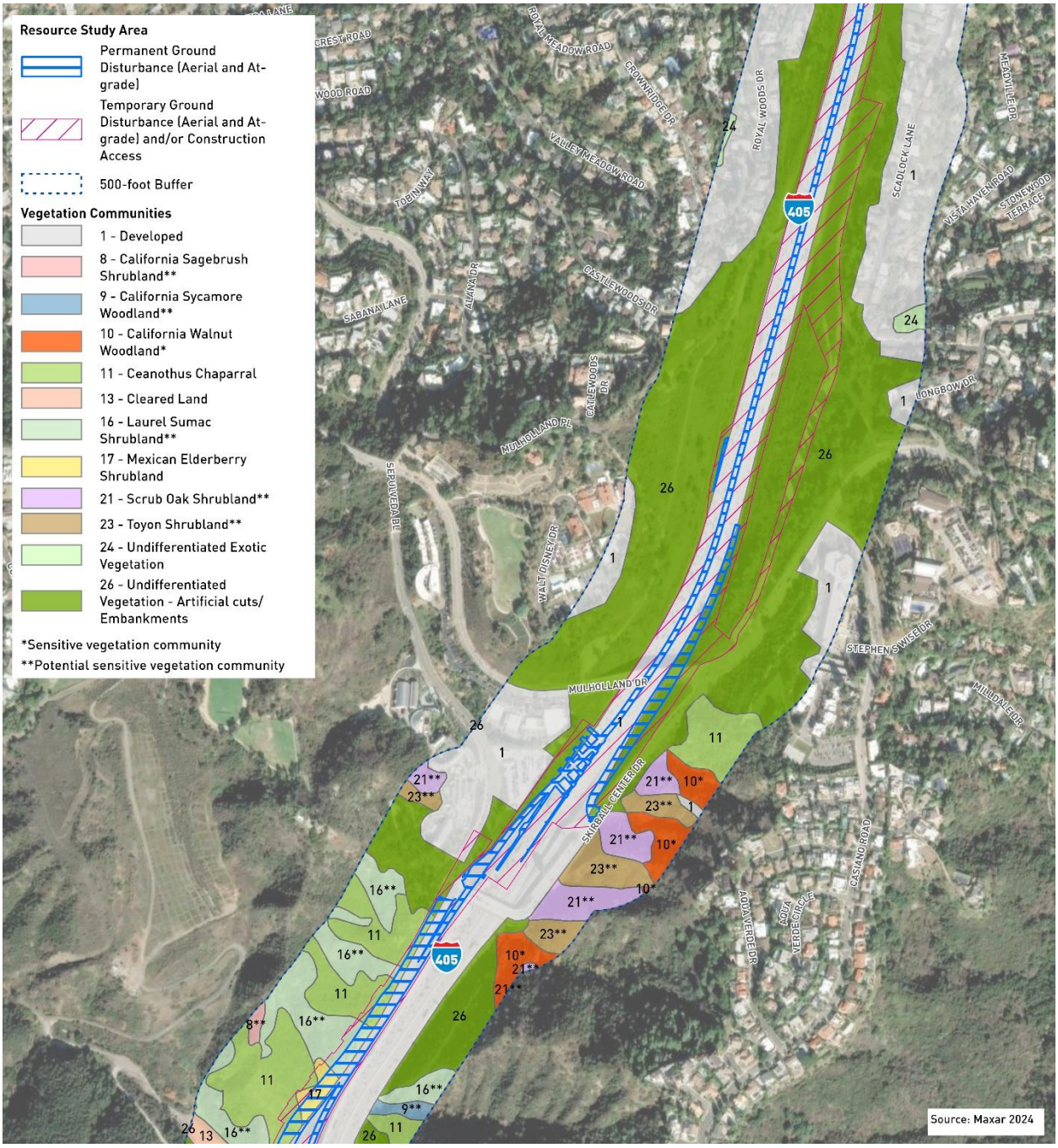
Source: HTA, 2024

Figure 7-17. Alternative 3: Vegetation Communities, Map 5 of 13



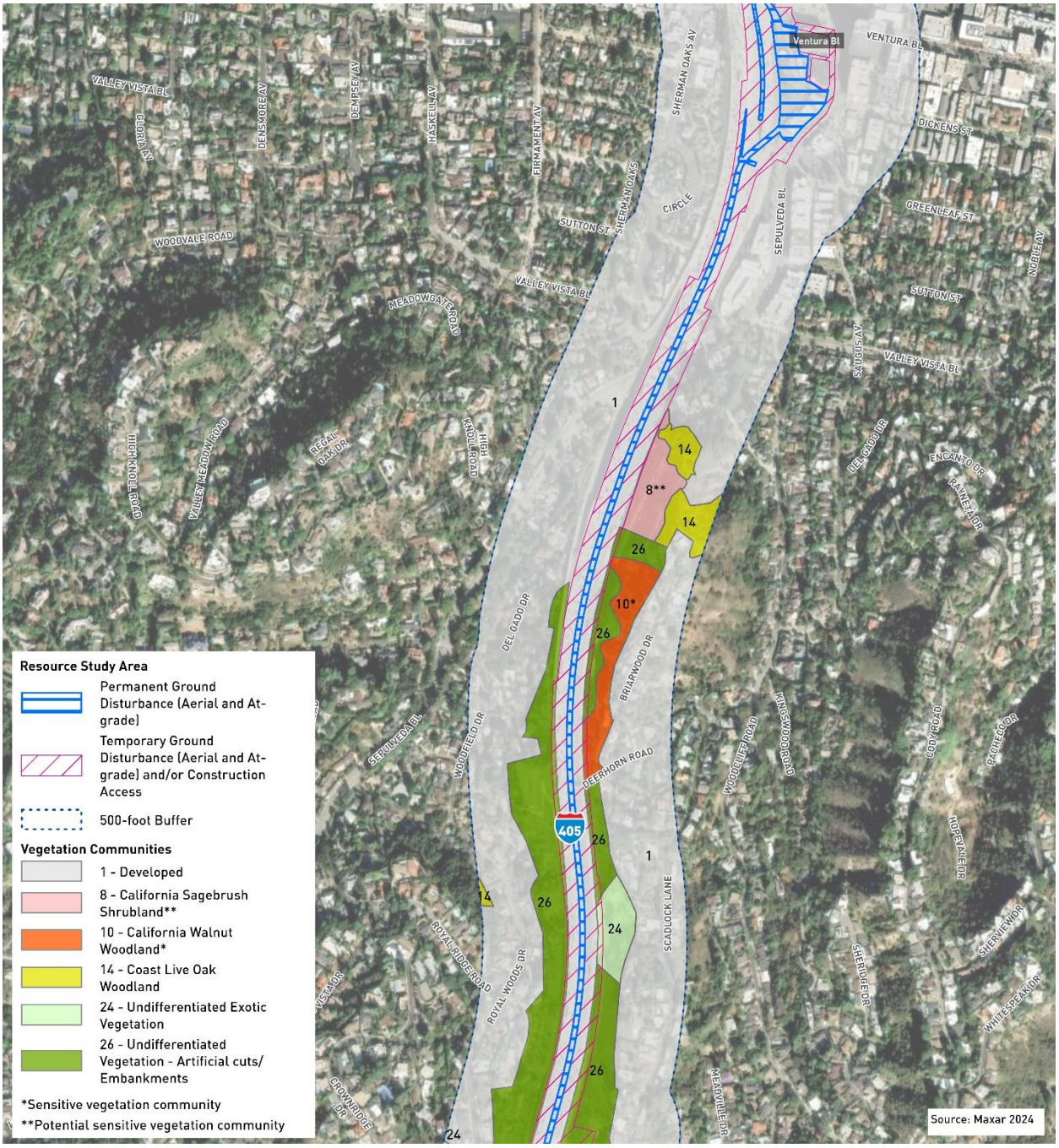
Source: HTA, 2024

Figure 7-18. Alternative 3: Vegetation Communities, Map 6 of 13



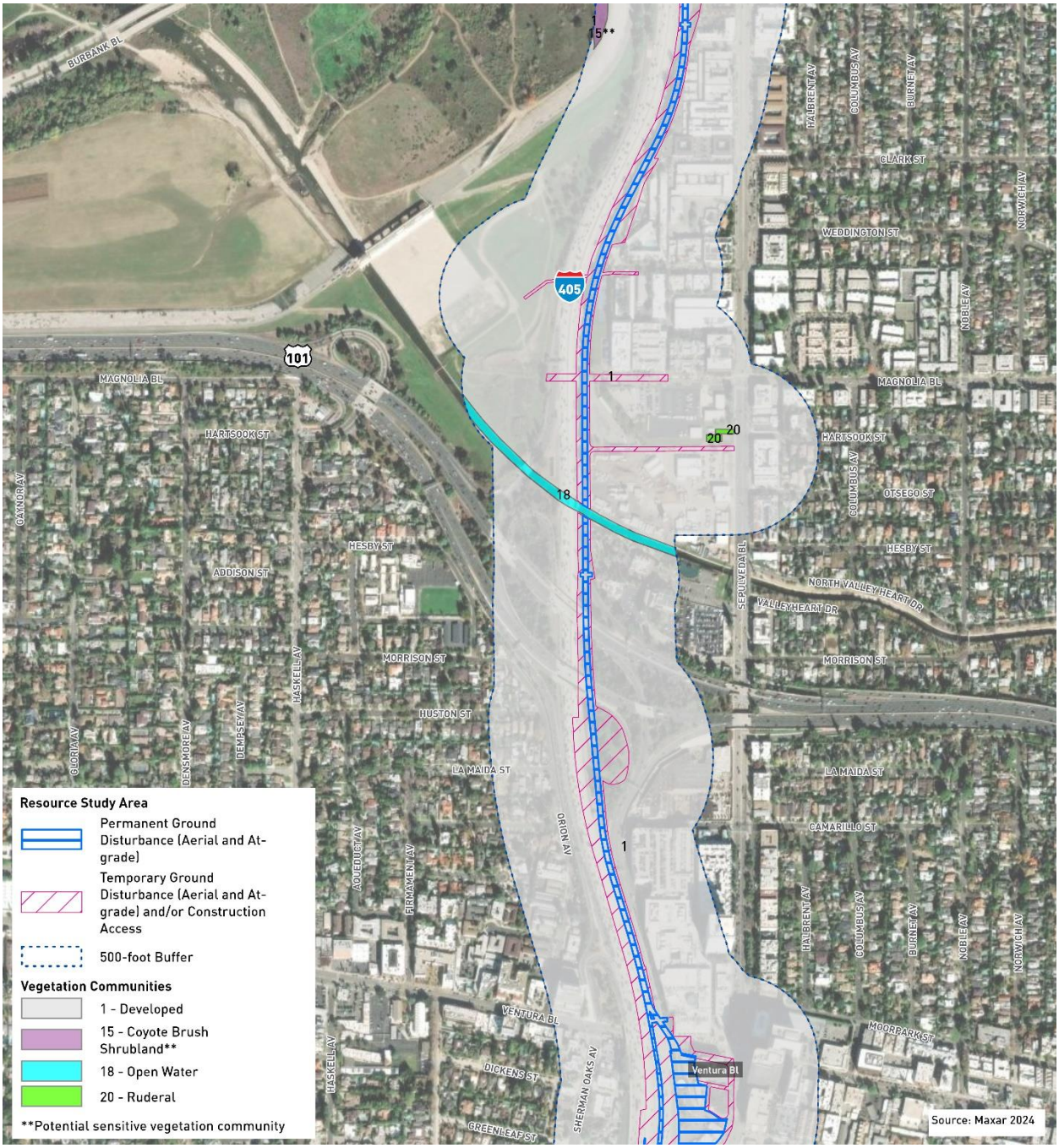
Source: HTA, 2024

Figure 7-19. Alternative 3: Vegetation Communities, Map 7 of 13



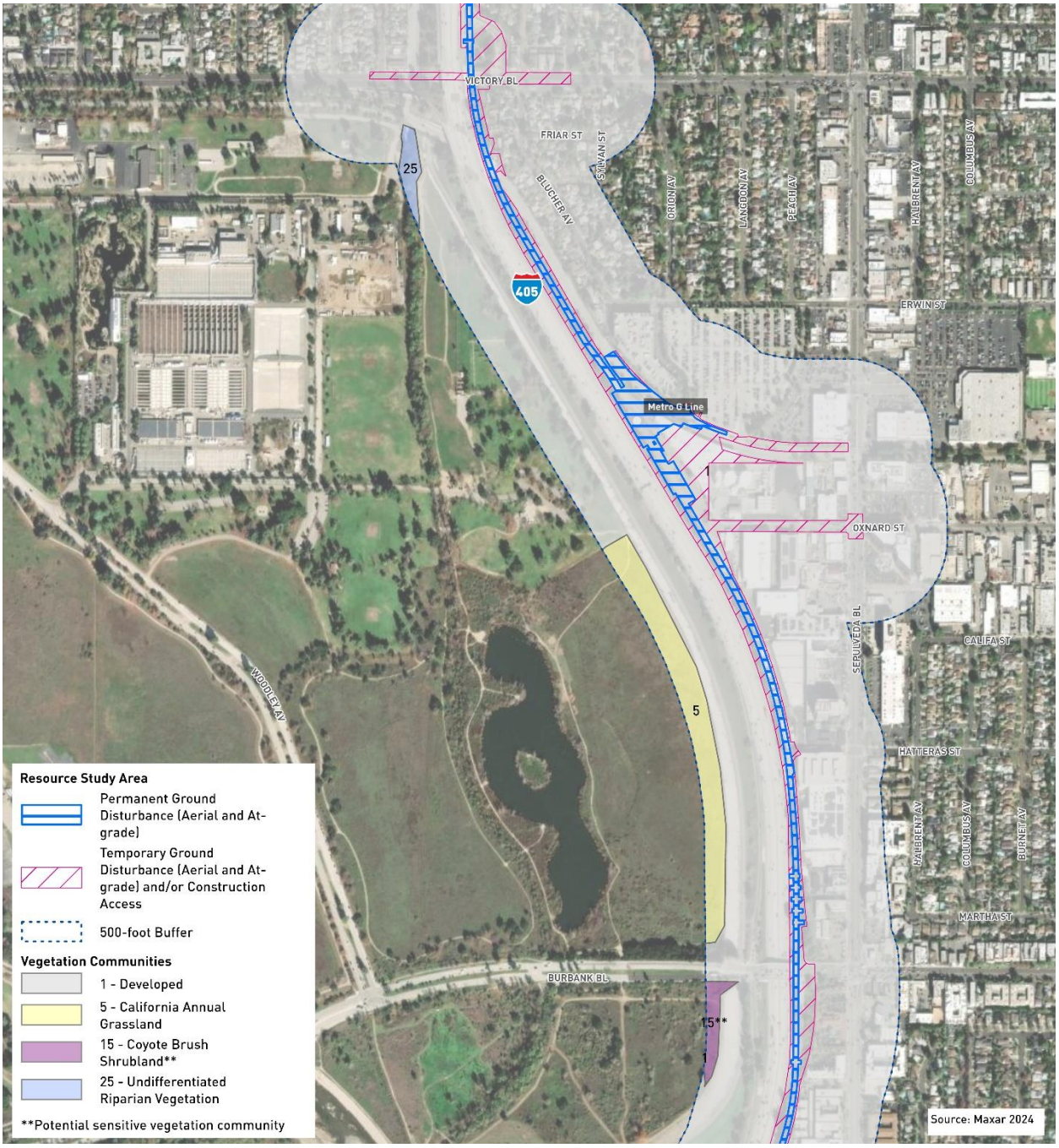
Source: HTA, 2024

Figure 7-20. Alternative 3: Vegetation Communities, Map 8 of 13



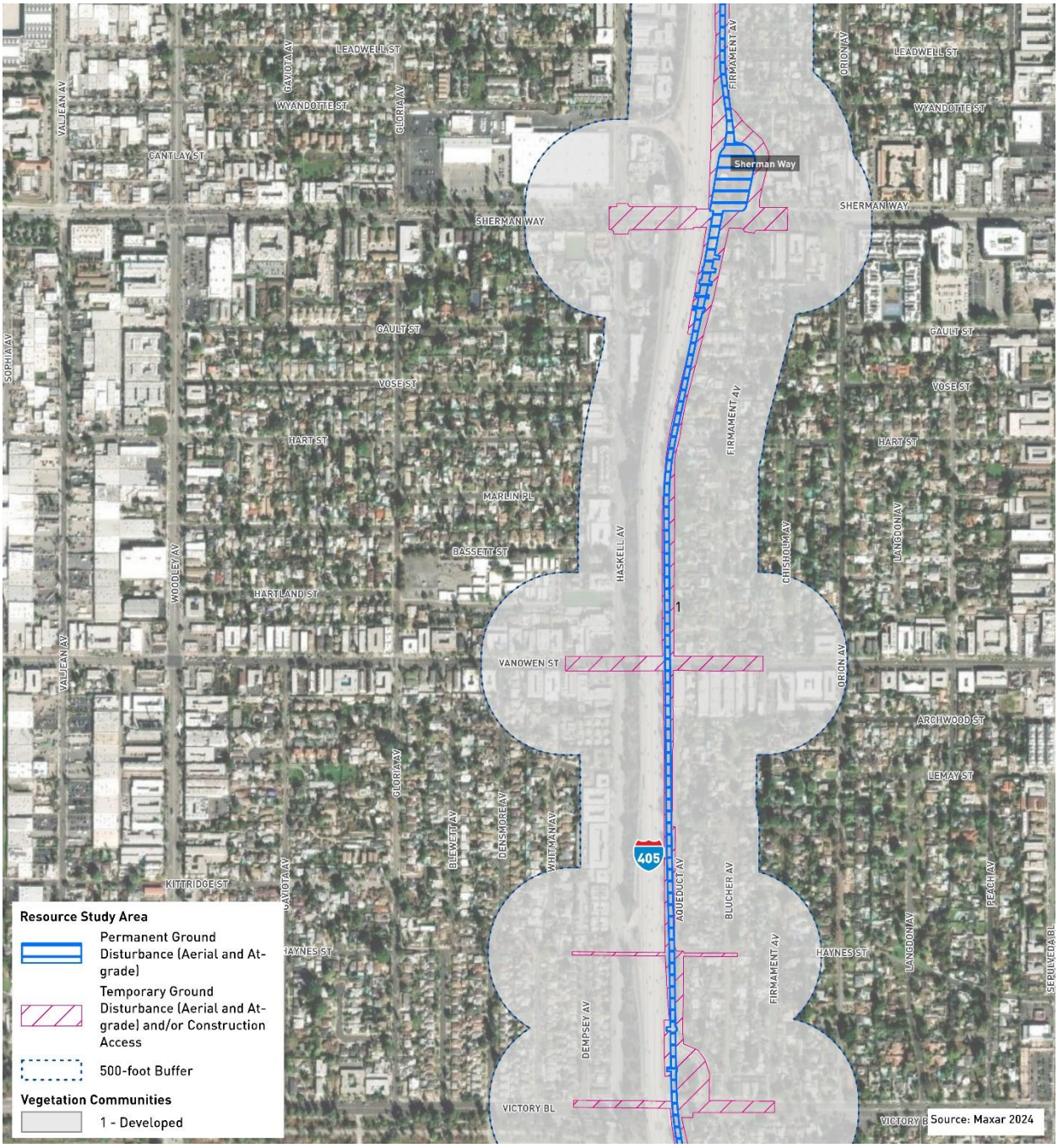
Source: HTA, 2024

Figure 7-21. Alternative 3: Vegetation Communities, Map 9 of 13



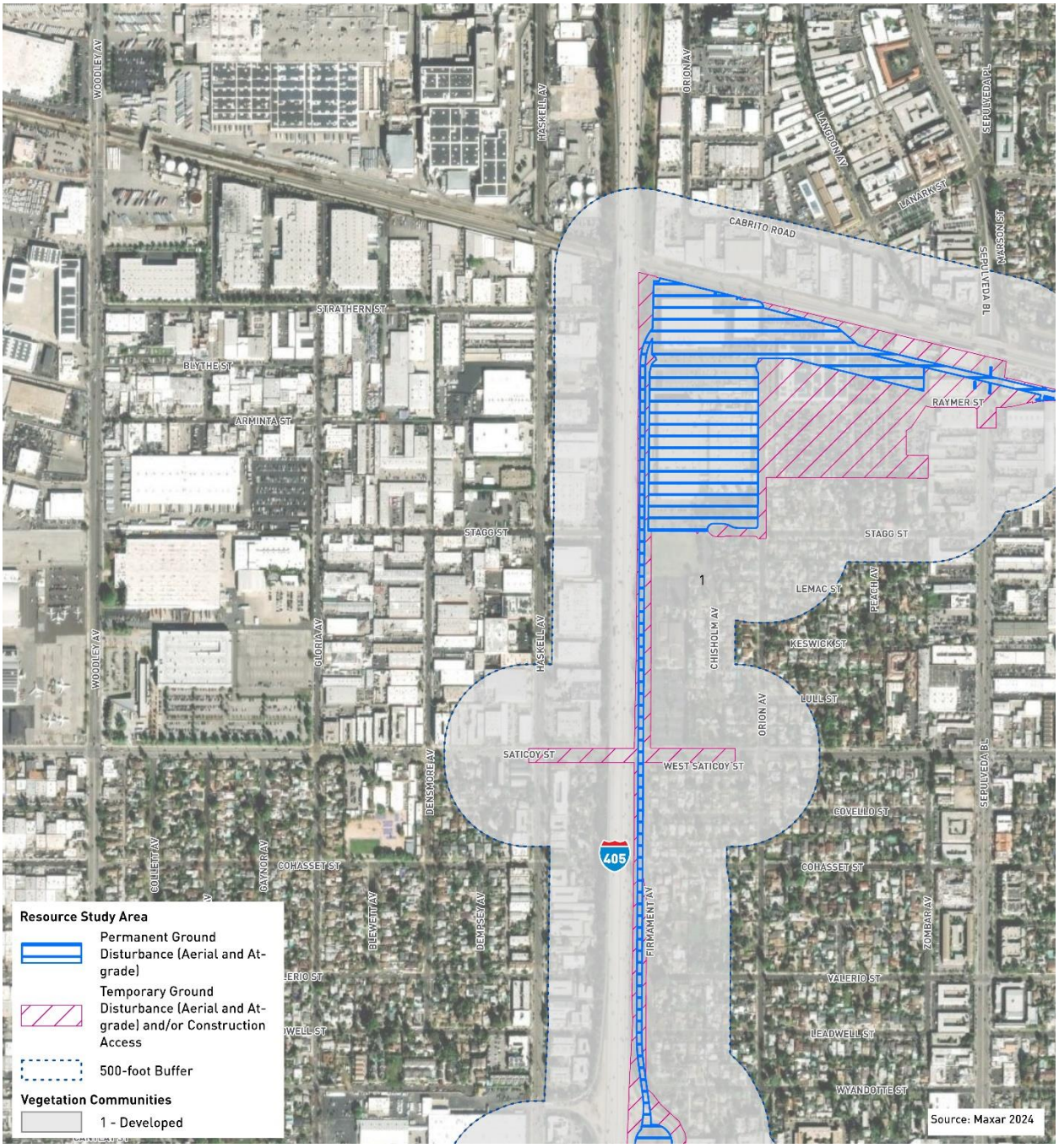
Source: HTA, 2024

Figure 7-22. Alternative 3: Vegetation Communities, Map 10 of 13



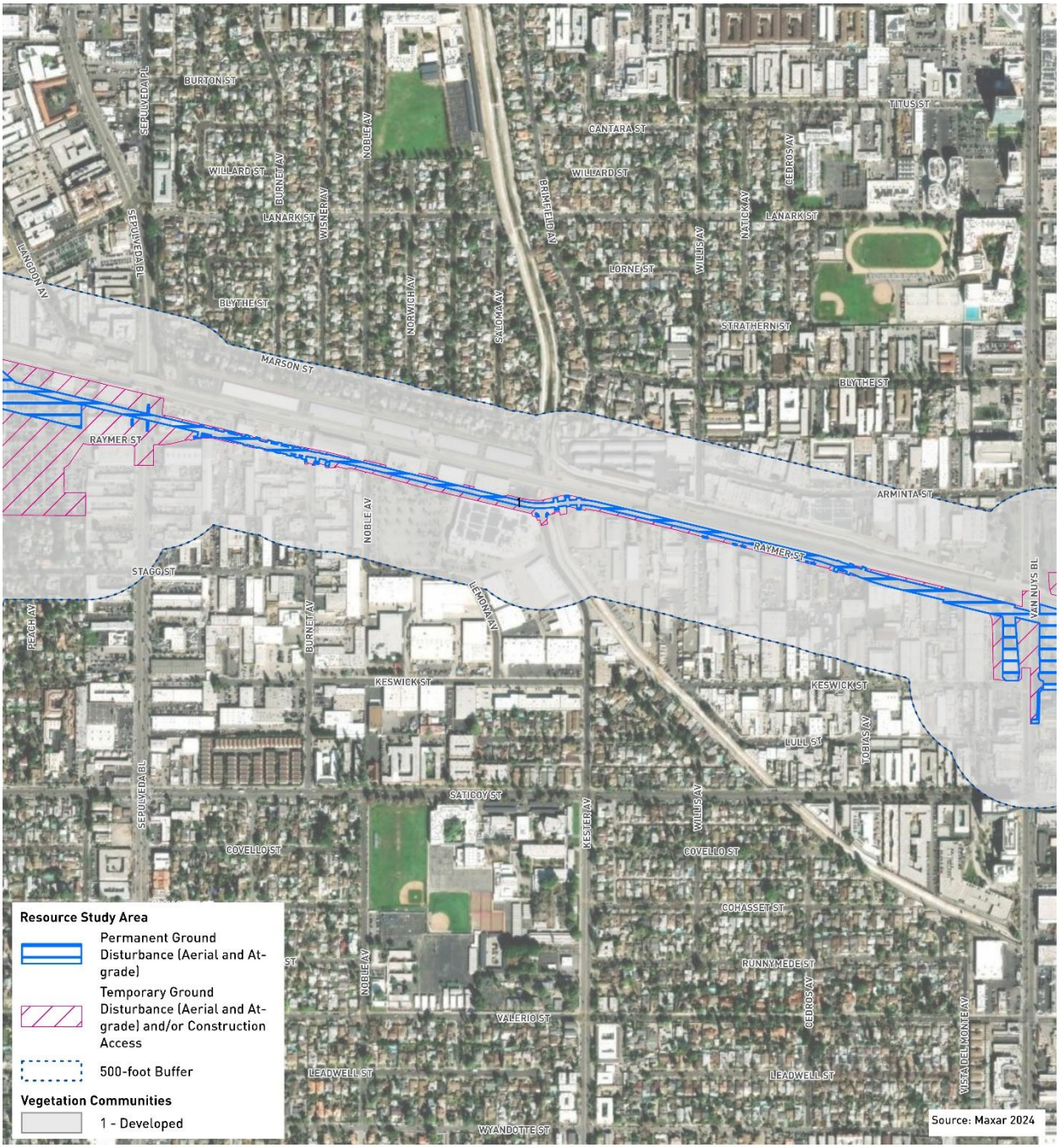
Source: HTA, 2024

Figure 7-23. Alternative 3: Vegetation Communities, Map 11 of 13



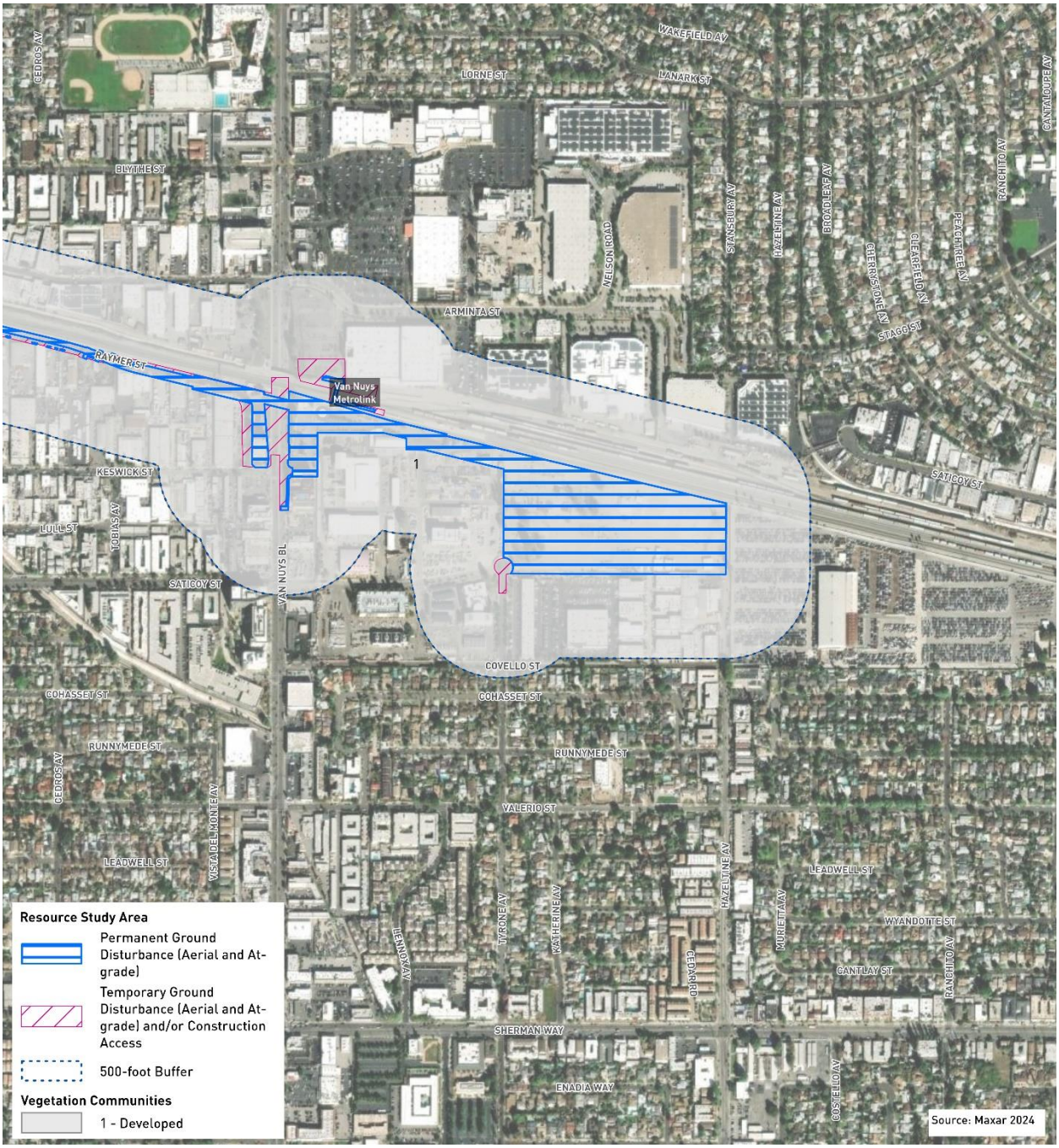
Source: HTA, 2024

Figure 7-24. Alternative 3: Vegetation Communities, Map 12 of 13



Source: HTA, 2024

Figure 7-25. Alternative 3: Vegetation Communities, Map 13 of 13



Source: HTA, 2024

Developed

The developed cover class consists of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or minimal ornamental landscaping. Ornamental landscaping was demarcated during the tree and shrub inventory as a subset of the developed cover class. The ornamental landscaping subcategory is characterized by developed areas dominated by ornamental trees, shrubs, grasses, and herbs, with some areas including native species. The dominant ornamental trees include carob tree (*Ceratonia siliqua*), Chinese banyan (*Ficus microcarpa*), shamel ash (*Fraxinus uhdei*), Chinese elm (*Ulmus parvifolia*), jacaranda (*Jacaranda mimisifolia*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Mexican fan palm (*Washingtonia robusta*), and several species of eucalyptus trees (*Eucalyptus* sp.). Dominant native trees found in this subcategory include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus erfoliaa*), and southern California black walnut (*Juglans californica*). This cover class represents 81 percent of the Alternative 3 RSA and occurs throughout it.

Post Fire Shrub Regeneration and Undifferentiated Categories- Artificial cuts/Embankments and Exotic Vegetation

These designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided; combined they represent 9.8 percent of the Alternative 3 RSA. Areas of undifferentiated vegetation will be further refined upon future analysis and field surveys prior to initiation of construction. The post fire shrub regeneration classification refers to areas that have experienced wildlife where shrub root bases survived the fire and resprouting has begun. Undifferentiated areas categorized as artificial cuts/embankments are subject to anthropogenic disturbance where vegetation is periodically altered through removal along roadways. Within this group of classifications, approximately 95 percent of acreage is within the artificial cuts/embankments, 3 percent is undifferentiated exotic vegetation, 1.5 percent is within post fire shrub regeneration, and the final 0.5 percent is within firebreaks. Undifferentiated exotic vegetation and undifferentiated vegetation-artificial cuts/embankments occur throughout the Alternative 3 RSA. Post fire shrub regeneration occurs in the central portion of the Alternative 3 RSA where the Santa Monica Mountains intersect the RSA. Undifferentiated vegetation-firebreaks occurs on the southern end of the Alternative 3 RSA near the Getty Center.

Ceanothus Chaparral

Ceanothus chaparral is characterized by a dominance of ceanothus (*Ceanothus* sp.). Laurel sumac (*Malosma laurina*) and toyon (*Heteromeles arbutifolia*) can also be present but at much lower cover. Other species typically found in the shrub layer of this community include chamise (*Adenostoma fasciculatum*), sugar bush (*Rhus ovata*), and black sage (*Salvia mellifera*) (NPS, 2006). The tree layer is emergent and open and may include coast live oak, California black walnut and/or California bay (*Umbellularia californica*) with low levels of canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes chilicothe (*Marah macrocarpa*), foxtail brome (*Bromus madritensis*), coast range melic (*Melica imperfecta*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), giant wild rye (*Elymus condensatus*) and black mustard (*Brassica nigra*) (NPS, 2006). Ceanothus chaparral represents 3.4 percent of the Alternative 3 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

Laurel Sumac Shrubland

Laurel sumac shrubland occurs on gentle to very steep southeast- to northwest- facing slopes at low elevations between approximately 0 to 1,750 feet (NPS, 2006). Laurel sumac is primarily the dominant

shrub species within this vegetation community (NPS, 2006). Codominant and co-occurring species include coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), Menzies' goldenbush (*Isocoma menziesii*), lemonade berry (*Rhus integrifolia*), sugar bush, greenbark ceanothus (*Ceanothus spinosus*), Mexican elderberry (*Sambucus mexicana*), hollyleaf cherry (*Prunus ilicifolia*), toyon, hollyleaf redberry (*Rhamnus ilicifolia*), scrub oak (*Quercus berberidifolia*), and mountain mahogany (*Cercocarpus betuloides*). Non-native species such as tobacco tree (*Nicotiana glauca*), castor bean (*Ricinus communis*), and fountain grass (*Pennisetum setaceum*) are common in disturbed areas within this vegetation community. Laurel sumac shrubland represents 2.3 percent of the Alternative 3 RSA ad occurs in the central portion where the Santa Monica Mountains intersect the Alternative 3 RSA.

Toyon Shrubland

Toyon shrubland is characterized by the dominance of toyon. Laurel sumac, hollyleaf cherry, and ceanothus can be codominant species within this vegetation community. Other species that may be present include Mexican elderberry, southern California black walnut, and coast live oak. Toyon shrubland represents 0.7 percent of the Alternative 3 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

California Walnut Woodland

California walnut woodland is characterized by the dominance of California black walnut. Other species that co-dominate within the tree layer include white alder (*Alnus rhombifolia*), two-petaled ash (*Fraxinus dipetala*), toyon, coast live oak, valley oak (*Quercus lobata*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Mexican elderberry, and California bay (Sawyer et al., 2009). The shrub layer is sparse to intermittent, and the herbaceous layer is sparse or grassy (Sawyer et al., 2009). California walnut woodland represents 0.4 percent of the Alternative 3 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

California Annual Grassland

California annual grassland includes wild oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut brome, prickly lettuce (*Lactuca seriola*), black mustard, and the occasional mulefat (*Baccharis salicifolia*) and/or coyote brush. California annual grassland represents 0.3 percent of the Alternative 3 RSA and occurs on the northern end of the RSA, east of the Sepulveda Basin.

Coast Live Oak Woodland

Coast live oak woodland is an open to dense tree community with coast live oak as the dominant overstory species and Engelmann oak (*Quercus engelmannii*) as an occasional associate. The shrub understory of this community is well developed in undisturbed sites and may include Mexican elderberry, gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), and toyon (Beauchamp, 1986; Holland, 1986). An herbaceous stratum is usually present including miner's lettuce (*Claytonia erfoliatea* var. *erfoliatea*), chickweed (*Stellaria media*), and non-native grasses. Coast live oak woodland represents 0.3 percent of the Alternative 3 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA.

Scrub Oak Shrubland

Scrub oak shrubland occurs on gentle to very steep northwest- and northeast-facing slopes at low to middle elevations between approximately 400 to 2,550 feet (NPS, 2006). Scrub oak is dominant in the shrub layer with toyon often occurring as well. Other species that occasionally occur within the shrub layer of this community include chamise, sugar bush, purple sage (*Salvia leucophylla*), greenbark ceanothus, poison oak, and laurel sumac (NPS, 2006). The tree layer is open and emergent and

sometimes includes coast live oak, California black walnut, and valley oak (NPS, 2006). The herbaceous layer is diverse and sometimes includes tocalote, foxtail brome, black mustard, ripgut brome, chilicothe, clustered tarweed (*Hemizonia fasciculata*), coast range melic, and mustard (NPS, 2006). Scrub oak shrubland represents 0.2 percent of the Alternative 3 RSA and occurs on the northern end of the intersection of the Santa Monica Mountains and the Alternative 3 RSA.

Cleared Land

Cleared land has had native vegetation eliminated by grading, agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of another plant association. The vegetation is sparse when present, and typically includes non-native weed species including mustard, Russian thistle, fountain grass, and horseweed (*Erigeron canadensis*), among others. Cleared land represents 0.2 percent of the Alternative 3 RSA and occurs on the west side of I-405 on the northern end of the intersection of the Santa Monica Mountains and the Alternative 3 RSA.

Sugar Bush Shrubland

Sugar bush shrubland occurs on somewhat steep to steep southwest- and northwest-facing slopes at low elevations between approximately 600 to 1,700 feet (NPS, 2006). The shrub layer is dominated by sugar bush (SMMNRA 2006). Other species that occur within this community include bush-mallow, black sage, toyon, and laurel sumac (NPS, 2006). The herbaceous layer is generally open with a varying mixture of native and non-native species that can sometimes include black mustard, tocalote, mustard, and giant wild rye (NPS, 2006). The emergent tree layer includes coast live oak and California black walnut but is usually absent (NPS, 2006). Sugar bush shrubland represents 0.2 percent of the Alternative 3 RSA and occurs on the southern portion, adjacent to the Getty Center.

California Buckwheat Shrubland

California buckwheat shrubland occurs on gentle to very steep slopes of variable aspect at low elevations between approximately 15 to 1,850 feet (NPS, 2006). California buckwheat is dominant in the shrub layer. Other species found in the shrub layer include deerweed, California sagebrush, and laurel sumac (NPS, 2006). The herbaceous layer is largely a sparse mix of non-native species and can include foxtail brome, ripgut brome, black mustard, and tocalote (NPS, 2006). The emergent tree layer is largely absent (NPS, 2006). California buckwheat shrubland represents 0.1 percent of the Alternative 3 RSA and occurs on the southern portion, south of the Getty Center.

California Sagebrush Shrubland

California sagebrush shrubland occurs on gentle to steep slopes of variable aspect at low elevations between approximately 0 to 2,000 feet (NPS, 2006). California sagebrush is dominant in the shrub layer (NPS, 2006). Other species that can be found in the shrub layer of this community include laurel sumac, purple sage, coyote brush, and black sage (NPS, 2006). The tree layer is emergent and open and infrequently includes coast live oak, California black walnut, and Peruvian pepper tree at low canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, black mustard, tocalote, mustard, giant wild rye, and ripgut brome (NPS, 2006). California sagebrush shrubland represents 0.1 percent of the Alternative 3 RSA and occurs on the northern portion of the Alternative 3 RSA.

Black Sage Shrubland

Black sage shrubland occurs on moderate to very steep southeast- and southwest-facing slopes at low elevations between approximately 50 to 2,550 feet (NPS, 2006). Black sage is the dominant shrub within

this community (NPS, 2006). Other species often included in the shrub layer include chaparral yucca (*Yucca whipplei*), chamise, and California sagebrush (*Artemisia californica*) (NPS, 2006). Trees often found within this community include California black walnut, coast live oak, and Peruvian pepper tree (*Schinus molle*) (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, tocalote, and black mustard (NPS, 2006). Other herbs present may include mustard (*Hirschfeldia incana*), giant wild rye, coast range melic, and foothill needle grass (*Stipa lepida*) (NPS, 2006). Black sage shrubland represents 0.1 percent of the Alternative 3 RSA and occurs on the southern end of the RSA, north of the Getty Center.

Ruderal

The ruderal cover class consists of areas that are dominated by bare ground or invasive non-native forbs (herbaceous, non-grass species) that are adapted to a regime of frequent disturbances. Non-native annual grasses will occur in low abundance and typically contribute less than 50 percent to the entire herbaceous cover. Species typically found in this cover class include non-native grasses and forbs such as wild oats, bromes, mustards, thistles, tumbleweed (*Salsola* sp.), tobacco tree and castor bean. Ruderal land often contains trash and rubble, such as fragments of concrete or asphalt, and is dominated by invasive species. This cover class represents 0.1 percent of the Alternative 3 RSA and occurs on the northern and southern ends of the RSA.

California Sycamore Woodland

California sycamore woodland is characterized by the dominance of western sycamore. Coast live oak can sometimes be codominant within the tree layer. Other species that may be present within this community include white alder, California black walnut, Fremont cottonwood (*Populus fremontii*), valley oak, narrowleaf willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), red willow, arroyo willow, (*Salix lutea*), Peruvian pepper tree, and California bay. California sycamore woodland represents 0.1 percent of the Alternative 3 RSA and occurs in the central portion where the Santa Monica Mountains intersect the Alternative 3 RSA.

Open Water

This community consists of any open body including lakes, reservoirs, bays, flowing water within a river channel, and small ponds along stream courses. Open water represents 0.1 percent of the Alternative 3 RSA and occurs on the northern end, southeast of the Sepulveda Basin within the Los Angeles River.

Coyote Brush Shrubland

This community is dominated by coyote brush with a codominant of mulefat. Coyote brush shrubland is found in native shrubland areas with a history of anthropogenic disturbance. This community represents less than 0.1 percent of the Alternative 3 RSA and occurs on the northern end of the Alternative 3 RSA, on the east side of the Sepulveda Basin.

Undifferentiated Riparian Vegetation

Undifferentiated designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Undifferentiated riparian vegetation has the potential to be sensitive depending on species present within the community; this will be further refined upon future analysis and field surveys prior to initiation of construction. Undifferentiated riparian vegetation represents less than 1 percent of the Alternative 3 RSA and occurs on the northern end in the Sepulveda Basin. For this analysis, Metro is conservatively considering impacts to this community to be significant pending further analysis and refinement of vegetation mapping.

Mexican Elderberry Shrubland

Mexican elderberry shrubland is characterized by the dominance of Mexican elderberry. Species that can be codominant within this community include giant wild rye and toyon (NPS, 2006). Mexican elderberry shrubland represents less than 0.1 percent of the Alternative 3 RSA and occurs on the northern end of the intersection of the Santa Monica Mountains and the Alternative 3 RSA.

7.2.5.3 Trees Within Proposed Construction Areas

Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. Numerous trees occur within the Alternative 3 RSA. The northern and southern portions of the Alternative 3 RSA are highly urbanized and dominated by non-native, ornamental trees planted within residential, commercial, and roadside ornamental landscapes. Native trees, such as coast live oak, western sycamore, and southern California black walnut, occur in smaller numbers in various locations throughout the northern and southern portions of the Alternative 3 RSA. In the central, less developed portion of the Alternative 3 RSA, native trees are more frequent, especially to the east and west of I-405 from Valley Vista Boulevard to Getty Center Drive, where Alternative 3 would transition from an aerial monorail to an underground configuration that runs from the Getty Center to Wilshire Boulevard. Appendix B, *Initial Protected Tree and Shrub Inventory Memorandum*, describes the protected trees and shrubs that were mapped within the Alternative 3 RSA.

Of the six local ordinances, plans, or policies with potential to protect trees or shrubs within combined Tree Survey Area (detailed in Section 2.3), the Los Angeles County Oak Woodlands Conservation Management Plan does not have jurisdiction since inventoried trees did not meet the requirements (i.e., there were no native oak tree stands on unincorporated County land with current or historical canopy cover greater than 10 percent). Therefore, the County Plan will not be discussed further in this report.

Within SMMNRA, trees within the Tree Survey Area were located on lands owned or managed by the County of Los Angeles and the MRCA within the Sepulveda Pass Open Space, Mission Canyon Open Space, and the MRCA Mountaingate Conservation Easement.

7.2.5.4 Sensitive Natural Vegetation Communities

Based on vegetation community mapping, two sensitive communities, California walnut woodland (S3) and sugar bush shrubland (S3), are present within the Alternative 3 RSA. An additional seven identified communities and one undifferentiated category have the potential to be considered sensitive depending on the associated plant species present, i.e., associations (see Section 3.2.2). For these communities, classification of vegetation associations is required to determine sensitivity, since not all associations within the community are sensitive. Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping. The identified communities include laurel sumac shrubland, black sage shrubland, toyon shrubland, California buckwheat shrubland, California sagebrush shrubland, California sycamore woodland, and scrub oak woodland. One additional community, undifferentiated riparian, also has potential to be sensitive depending on species present within the community, which was not defined in SMMNRA mapping. For the purposes of this analysis, these communities will be marked as potentially sensitive and will be included in acreage calculations of impacts to sensitive communities. Additional sensitive vegetation communities may be present within the Alternative 3 RSA but were not captured in the vegetation mapping effort if their extent is smaller than the minimum mapping unit for the SMMNRA mapping (0.5 hectare).

7.2.5.5 Special-Status Plant Species

Of the 49 special-status plant species with potential to occur within the Project Study Area, 19 were identified as having a potential to occur within the Alternative 3 RSA from CNDDB, California Native Plant Society (CNPS), IpaC, and iNaturalist database searches (CDFW, 2023a; CNPS, 2024; USFWS, 2023a; iNaturalist, 2024p through 2024x). These species are listed in Table 7-7 with an assessment of their potential to occur within the Alternative 3 RSA.

Seventeen of the special-status plant species were concluded to be known or have potential to occur within the Alternative 3 RSA (Table 7-7); the remaining two were determined to have no potential to occur and are not discussed further for Alternative 3. The 12 species with low potential are considered unlikely to be detected within the Alternative 3 RSA or impacted by Alternative 3 due to the lack of known recent occurrences and suitable habitat within the Alternative 3 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 7-7. Within Table 7-7, rows discussing species that were determined to be present or to have a high potential to occur within the Project Study Area are highlighted blue.

Table 7-7. Alternative 3: Special-Status Plant Species with Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in RSA
Astragalus brauntonii	Braunton's milk-vetch	FE 1B.1	Fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum*), yucca (*Yucca whipplei*), and the rare Tecate cypress (*Cupressus forbesii*).	**High**. Suitable habitat occurs within the Alternative 3 RSA. Recent observations of the species have been made 0.15 mile east of the Alternative 3 RSA in Bel Air Crest and within Fossil Ridge Park approximately 1.5 miles east of the Alternative 3 RSA (2019) (iNaturalist, 2024o).
Atriplex coulteri	Coulter's saltbush	1B.2	Associated with areas of saline and alkaline soils, such as ocean bluffs.	**No Potential.** Suitable habitat is not present in the Alternative 3 RSA. Only historical observations exist within 10 miles of the Alternative 3 RSA (1881 and 1902) (CDFW, 2023a).
Baccharis malibuensis	Malibu baccharis	1B.1	Chaparral, coastal sage scrub, and oak woodlands.	**Low.** Suitable habitat is present in the Alternative 3 RSA in the Santa Monica Mountains; however, the closest records are approximately 11 miles west of the Alternative 3 RSA (CDFW, 2023a). The plant is only known from 10 occurrences (CNPS, 2024).
Berberis nevinii	Nevin's barberry	FE/SE 1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian scrub. Found in gravelly or sandy micro habitats. Blooms from February (March) – June at elevations ranging from 230 to 2,750 feet.	**Low**. Suitable habitat is present within the Alternative 3 RSA; however, the closest non-ornamental observations are over 3 miles east of the Alternative 3 RSA (iNaturalist, 2024p).
Calochortus clavatus var. *gracilis*	Slender mariposa lily	1B.2	Chaparral, coastal scrub, and valley and foothill grasslands, on shaded foothill canyons within the Transverse Ranges and the San Gabriel Mountains. Occurs between 1,050 and 3,280 feet.	**Moderate**. Suitable habitat is present within the Alternative 3 RSA and the species was observed approximately 6 miles west of the Alternative 3 RSA in Topanga Canyon in 2017 (CDFW, 2023a) and at the Hansen Dam Golf Course 4.5 miles northeast of the Alternative 3 RSA in 2023 (iNaturalist, 2024q).
Centromadia parryi ssp. *australis*	Southern tarplant	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Blooms from May to November at elevations ranging from 0 to 1,575 feet.	**Low.** Suitable habitat is present in the Alternative 3 RSA. One recent record from 2022 is located in Kenneth Hahn State Recreation Area, 4.5 miles southeast of the southern terminus of the Alternative 3 RSA (iNaturalist, 2024r). One historical record from 1957 located on a brushy hill east of the Getty is within the Alternative 3 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in RSA
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	SE 1B.1	Sandy portions of coastal scrub, valley and foothill grassland, between 490 and 4,005 feet. Blooms April to July.	**Low.** Suitable habitat is present within the Alternative 3 RSA although only historical occurrences from the early 1900s are within 7 miles of the Alternative 3 RSA (CDFW, 2023a).
Dodecahema leptoceras	Slender-horned spineflower	FE/SE 1B.1	Found in sandy sites within chaparral, cismontane woodland, or alluvial fans within coastal scrub. Occurs between 655 and 2,495 feet.	**Low.** Suitable habitat is present within the Alternative 3 RSA. Two recent sightings in 2022 (iNaturalist, 2024t) and one historical observation (1906) (CDFW, 2023a) is located approximately 3 miles east of the Alternative 3 RSA.
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT 1B.1	Chaparral, coastal sage scrub, on shaded, rocky slopes.	**Low.** Suitable habitat is present in the Alternative 3 RSA, although the plant is only currently known from 10 total locations. The nearest location is over 6 miles to the west in Topanga State Park, reported in 1987 and 2012 (CDFW, 2023a).
Horkelia cuneata var. *puberula*	Mesa horkelia	1B.1	Sandy or gravelly sites within chaparral, cismontane woodland, coastal scrub. Blooms from February to July at elevations ranging from 225 to 2,655 feet.	**Low.** Suitable habitat is present in the Alternative 3 RSA and an observation from 1956 is reported from Sepulveda Bl near the Getty within the Alternative 3 RSA, although it is listed as possibly extirpated. (CDFW, 2023a).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Blooms from February to June at elevations ranging from 0 to 4,005 feet.	**Low.** Suitable habitat is present in the Alternative 3 RSA; two historical records from 1934 and 1966 are within 7 miles of the Alternative 3 RSA (CDFW, 2023a).
Malacothamnus davidsonii	Davidson's bushmallow	1B.2	On slopes of chaparral, oak woodland, and other habitats.	**High**. Suitable habitat is present in the Alternative 3 RSA. An observation from 2021 is located 0.25 mile west of the Alternative 3 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021).
Monardella hypoleuca ssp. *hypoleuca*	White-veined monardella	1B.3	Chaparral and cismontane woodlands. Known only from the Santa Monica, Santa Ynes, and Sierra Madre Mountains.	**Low.** Suitable habitat is present in the Alternative 3 RSA. The nearest observation is from 2008 and is approximately 5 miles west of the Alternative 3 RSA near the Santa Ynez Canyon Trailhead (CDFW, 2023a).
Nama stenocarpa	Mud nama	2B.2	Marshes and swamps. Blooms from January to July at elevations ranging from 15 to 164 feet.	**Low.** Suitable habitat is present in the Alternative 3 RSA. The last known occurrence within the Alternative 3 RSA is from 1902 around the VA Hospital Site (CDFW, 2023a); the area is now highly developed.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in RSA
Nolina cismontana	Chaparral nolina	1B.2	Coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone substrates.	**High**. Suitable habitat is present, and species was detected within 1 mile of the Alternative 3 RSA in Deervale-Stone Canyon Park in 2020 (iNaturalist, 2024u).
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	2B.2	Wetlands, meadows, and seeps between 165 and 2,000 feet.	**No Potential.** No suitable habitat is present in Alternative 3 RSA.
Quercus dumosa	Nuttall's scrub oak	1B.1	Generally found on sandy soils near the coast, often found in chaparral and coastal sage scrub communities between 50 and 1,300 feet.	**High**. Suitable habitat is present in the Alternative 3 RSA. An individual was observed in 2024 approximately 0.50 mile outside the Alternative 3 RSA, east of the UCLA Gateway Plaza Station (iNaturalist, 2024v) and in 2009, a multi-stemmed individual was observed 3 miles southeast of the Alternative 3 RSA in Kenneth Hahn State Recreation Area (CDFW, 2023a).
Sagittaria sanfordii	Sanford's arrowhead	1B.2	Freshwater wetlands. Occurs between 0 and 2,135 feet. Blooms May to October (November).	**Low.** Suitable habitat is present in the Sepulveda Basin Recreation Area, adjacent to the Alternative 3 RSA. One recent observation (2021) was 1.5 miles west of the Alternative 3 RSA within the Los Angeles River (CDFW, 2023a). However, the observation was within the earthen bottom part of the river, while it is only within a concrete channel within the Alternative 3 RSA.
Symphyotrichum greatae	Greata's aster	1B.3	Within mesic microhabitats in chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Occurs between 985 to 6,595 feet. Blooms June to October.	**Low**. Suitable habitat is present in the Alternative 3 RSA. One historical, undated sample from Benedict Canyon in the Santa Monica Mountains is 2 miles east of the Alternative 3 RSA (CDFW, 2023a). No recent observations are present.

Source: HTA, 2024

[a]Special-status plant species identified during reviews of the CNDDB (CDFW, 2023a), CNPS database (CNPS, 2024), and iNaturalist (iNaturalist, 2024p through 2024x) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; and a review of IpaC (USFWS, 2024a) for the Alternative 3 RSA.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened

State Status Designations:
SC = State Candidate Species for Listing
SE = State Endangered
SR = State Rare

ST = State Threatened

California Native Plant Society Ranks:

1A. — Presumed Extirpated in California and either rare or extinct elsewhere.
1B. – Rare or Endangered in California and elsewhere.
1B.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) and elsewhere.
1B.2 – Fairly endangered in California (20-80 percent occurrences threatened) but more common elsewhere.
2A. – Presumed extirpated in California but common elsewhere.
2B. – Rare, Threatened, or Endangered in California but more common elsewhere.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, CNPS, iNaturalist, or another database as occurring in the Alternative 3 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 3 RSA; however, no records occur directly with the Alternative 3 RSA. Species has been detected within 1 mile of the Alternative 3 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 3 RSA is of marginal quality. No records occur in RSA, but the species has been documented over 1 mile from the Alternative 3 RSA.

Low = Suitable habitat within the Alternative 3 RSA is of low quality. There are no known recent occurrences within or near the Alternative 3 RSA.

No Potential = Suitable habitat is not present for the species.

Braunton's Milk-Vetch

Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb that is native to California and has high potential to occur within the Alternative 3 RSA. The species has the California Rare Plant Rank (CRPR) of 1B.1 (rare, threatened, or endangered in California and elsewhere) and is federally listed as endangered. Braunton's milk-vetch occurs in valleys and foothill grasslands, limestone, coastal scrub, and chaparral habitats. It is often found in recent burns or disturbed areas, usually sandstone with carbonate layers. Braunton's milk-vetch typically blooms from January to August at elevations from 15 to 2,100 feet. Suitable habitat occurs within the Alternative 3 RSA and recent records of the species have been observed 0.15 mile east of I-405 in Bel Air Crest and in Fossil Ridge Park approximately 1.5 miles east of I-405, 1 mile south of US-101 (iNaturalist, 2024o).

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) is a perennial herb that is native, and endemic to California and is a CRPR 1B.2 rare species in California. This species has moderate potential to occur within the Alternative 3 RSA and grows in shaded, foothill canyons in Southern California, primarily in the Transverse Range region. It tends to grow on rocky slopes and open areas at elevations from 0 to 5,900 feet and typically blooms from March to June. Suitable habitat is present within the Alternative 3 RSA and recent records of the species occur in Topanga Canyon, approximately 6 miles west of the Alternative 3 RSA (CDFW, 2023a), and in 2017 and at the Hansen Dam Golf Course in 2023, approximately 4.5 miles northeast of the Alternative 3 Base Design MSF (iNaturalist, 2024q).

Davidson's Bushmallow

Davidson's bushmallow (*Malacothamnus davidsonii*) is a shrub that is native and endemic to California and is a CRPR 1B.2 rare species. This species has high potential to occur within the Alternative 3 RSA; an observation from 2021 is located 0.25 mile west of the Alternative 3 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021). This species typically grows in chaparral, oak woodland, and other habitats on slopes within three California regions: the southern San Francisco Bay Area, in Monterey County in the Santa Lucia Mountains, and in Los Angeles County in the eastern San Fernando Valley and the Transverse Ranges including the Santa Monica Mountains. Suitable habitat for this species is present in the Alternative 3 RSA particularly along I-405 on the Sepulveda Pass in the Santa Monica Mountains.

Chaparral Nolina

Chaparral nolina (*Nolina cismontana*) is a CRPR 1B.2 rare shrub species native to California with high potential to occur in the Alternative 3 RSA. An individual was observed in 2020 within 1 mile of the Alternative 3 RSA, in Deervale-Stone Canyon Park located west of the Alternative 3 RSA (iNaturalist, 2024u). This species occurs in coastal sage scrub and open chaparral habitats in foothills from Ventura County south to San Diego County and typically blooms from May to June. Suitable habitat for chaparral nolina is present within the Alternative 3 RSA, mainly in the central portion of the Alternative 3 RSA within the Santa Monica Mountains.

Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 perennial evergreen shrub species with high potential to occur that is native to the South Coast, Peninsular Ranges, and San Jacinto Mountains of California. This species occurs in coastal sage scrub and chaparral habitats with sandy, clay or loam soils between 50 and 1,300 feet. Recent observations include one individual located 0.5 mile outside of the Alternative 3 RSA, east of the UCLA Gateway Plaza (iNaturalist, 2024v), and a second in Kenneth Hahn State Recreation Area, less than 2 miles southeast of RSA (CDFW, 2023a). The former is likely to be a

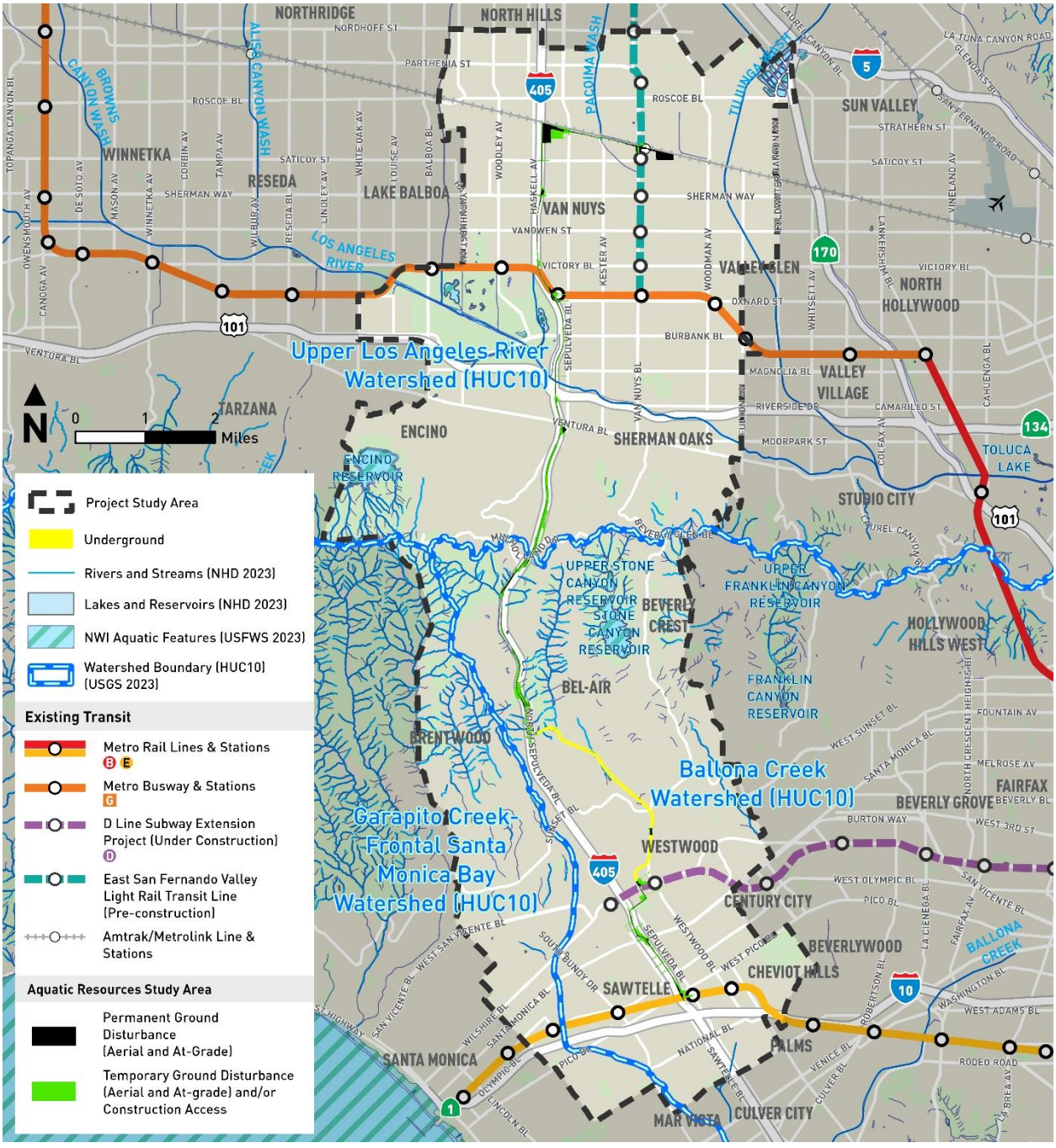
landscaped plant due to its location in a yard; the latter was described as a multi-stemmed, wind-cropped, very old individual with other chapparal relic species present.

7.2.5.6 Jurisdictional Resources

The Project Study Area was assessed for water resources and local conditions that affect hydrology and water availability for the region including watershed context and drainage. For the purposes of the jurisdictional resource evaluation for potential impacts, field surveys occurred within the Ground Disturbance Area portion of the Alternative 3 RSA where direct impacts would occur, and an associated 500-foot buffer on ground disturbance was assessed through desktop analysis of vegetation communities for indirect impacts to potential aquatic resources. The underground tunnel was not included as no impacts are anticipated to water resources.

An online review of the National Hydrography Dataset (NHD) (USGS, 2023) and National Wetlands Inventory (NWI) (USFWS, 2023a) indicates the presence of mapped aquatic features within the Project Study Area. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels in the vicinity of the Alternative 3 RSA (Figure 7-26). Named aquatic resources nearby the Alternative 3 RSA include the Los Angeles River, Pacoima Wash, Encino Creek, and the Sepulveda Channel. However, only the Los Angeles River is within the Alternative 3 RSA and will be traversed by Alternative 3. The remainder of the aquatic resources within the Alternative 3 RSA are either underground, or ephemeral and unnamed.

Figure 7-26. Alternative 3: National Hydrography Dataset and National Wetlands Inventory Aquatic Features



Source: USFWS, 2023a, 2023b

While the larger Project Study Area includes the Upper Los Angeles River, Ballona Creek, and Garapito Creek Frontal Santa Monica Bay Watersheds (Figure 7-26), only the Upper Los Angeles River and Ballona Creek Watersheds receive waters within the Alternative 3 RSA. Therefore, discussion is limited to the two watersheds relative to the Alternative 3 RSA. The receiving waters from the Alternative 3 RSA include the Los Angeles River and Ballona Creek with their respective tributaries. The Los Angeles River

crosses the Alternative 3 RSA from west to east, roughly parallel, and adjacent to the US-101, while Ballona Creek is 3 miles south of the Alternative 3 RSA.

Upper Los Angeles River Watershed

The Upper Los Angeles River Watershed is located is the northwest portion of Los Angeles County and covers over 613 square miles. This watershed includes the San Fernando Valley and portions of the San Gabriel and Santa Susana Mountains. The six major tributaries along the river include Tujunga Wash, Burbank Western Storm Drain, Verdugo Wash, Arroyo Secco, Rio Hondo, and Compton Creek. The primary source of input into the Los Angeles River watershed is wet weather runoff originating from direct precipitation, and dry weather inputs from urban runoff, and groundwater upwelling (LADPW, 2022).

The northern portion of the Alternative 3 RSA crosses the Los Angeles River in Reach 5, where the river flows west to east, at the base of the Santa Monica Mountains in the San Fernando Valley. Reach 5 of the Los Angeles River runs through low density residential neighborhoods, the Sepulveda Basin, other commercial developed areas, and under I-405, Sepulveda Boulevard, and Van Nuys Boulevard.

Topography throughout the coastal plain area of Upper Los Angeles River Watershed is generally defined by gradually sloping land from the foothills of the San Gabriel Mountains to the Pacific Ocean. Ground elevations range from 10,000 feet in the San Gabriel Mountains approximately 15 miles east of the Alternative 3 RSA, to mean sea level at the mouth of the Los Angeles River approximately 22 miles south of the Alternative 3 RSA. Most of the coastal plain is less than 1,000 feet in elevation (GLAC, 2014), while the upper portion of the watershed is covered by forest and open space. The majority of land in the Upper Los Angeles River Watershed is developed with urban uses, including the portion of the river that traverses the Alternative 3 RSA (LA County, 2023b).

Ballona Creek Watershed

Ballona Creek consists of a 9-mile-long flood protection channel that drains the Los Angeles Basin south of the Alternative 3 RSA. The Ballona Creek Watershed covers approximately 130 square miles in the western portion of the Los Angeles Basin and is made up by the Culver City, Wilshire, and Hollywood sub-watersheds. The headwaters of the watershed are in the Santa Monica Mountains, including a portion in the Alternative 3 RSA, and Baldwin Hills to the southeast of the Alternative 3 RSA. Most of the Ballona Creek drainage network consists of storm drains, underground culverts, and open concrete channels. However, Ballona Creek does not traverse the Alternative 3 RSA. Ballona Creek is an open channel between Venice Boulevard and Pickford Street and its confluence with Santa Monica Bay (a length of approximately 9 miles); it is located approximately 4 miles south of the Alternative 3 RSA. A few natural channels remain in the Santa Monica Mountains and Baldwin Hills. The Sepulveda Channel, which is mostly channelized and underground, runs along I-405 approximately 2.5 miles south of the Alternative 3 RSA and is a major tributary to the Ballona Creek Watershed.

Riparian Habitats

Although not mapped in the NWI, riparian habitats may be present along many of the jurisdictional features identified in the NWI database. Riparian habitats fall under CDFW jurisdiction, which generally extends to the outer limits of riparian habitats occurring around aquatic features. Such habitats provide valuable buffers around aquatic features and provide specific habitat requirements for many plant and wildlife species, including many of the regional special-status species identified above. Based on Project vegetation mapping, 1.1 acres of undifferentiated riparian habitat is located within the 500-foot buffer for Alternative 3, approximately 300 feet west of the Ground Disturbance Area along the northern end of Haskell Creek in the Sepulveda Basin Recreation Area (Figure 6-16). Within the SMMNRA mapping,

undifferentiated designations appear for locations where further classification was not conducted and no finer detail was provided (Section 7.2.5.2). The undifferentiated riparian habitat will be further refined upon future analysis and field surveys. If the refined community is considered a CDFW sensitive community, it would increase the acreage of sensitive communities within the RSA but would not increase acreage impacted (since it is outside the Ground Disturbance Area).

The RSA for Alternative 3 will traverse the Los Angeles River north of the US-101. The Project includes an aerial alignment that would cross over the river adjacent to and east of I-405. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 3 would traverse the river. The Los Angeles River is a Traditional Navigable Water throughout its entire reach. However, it is only considered a Navigable Water[5] from the river's outlet into San Pedro Bay to San Pedro Highway Bridge and/or up to 2.5 feet amsl, which is not within the Alternative 3 RSA (USACE, 2023). Because Alternative 3 proposes traversing above the river (via aerial tramway) supported by structures constructed and installed outside of the jurisdictional area, impacts to the Los Angeles River are not expected.

Ephemeral drainages under the jurisdiction of the U.S. Army Corps of Engineers (USACE), CDFW, and Regional Water Quality Control Boards (RWQCB) were observed adjacent to I-405 within Alternative 3 RSA. However, drainages mapped within the Ground Disturbance Area was limited to a small portion of one ephemeral drainage that entered and exited the Ground Disturbance Area via underground storm drain. This drainage was mapped and photographed; it is included herein.

No potential wetlands or riparian areas were observed throughout the Ground Disturbance Area. Therefore, no wetland delineation forms were required.

Non-wetland jurisdictional features mapped within the Ground Disturbance Area for Alternative 3 are summarized below:

- 0.11 acre (4,943 square feet) of non-wetland Waters of the United States (WOTUS), CDFW streambed, and RWQCB waters of the state within Los Angeles River
- 0.02 acre (837 square feet) of non-wetland RWQCB waters of the state adjacent to I-405 within the Ground Disturbance Area for Alternative 3
- 0.03 acre (1,183 square feet) of non-wetland CDFW streambed adjacent to I-405 within the Ground Disturbance Area for Alternative 3

Further details of existing jurisdictional aquatic resources can be found in Appendix AAppendix A, Aquatic Resources Delineation.

7.2.5.7 Other Protected or Managed Biological Resources

This section provides an overview of other protected or managed biological resources that may occur within the Alternative 3 RSA and were considered in this analysis.

USFWS Critical Habitat

Critical habitat is designated by USFWS for threatened or endangered species listed under the Endangered Species Act (ESA); these areas are considered essential for species conservation (USFWS, 2024b). Critical habitat provides protection to locations necessary for life processes and reproduction

[5] The term "Traditional Navigable Water" is used in reference to Section 404 of the Clean Water Act, while the term "Navigable Water" is used in reference to Section 10 of the Rivers and Harbors Act. The entire stretch of the Los Angeles River is considered a Traditional Navigable Water, but only the portion in proximity to its outlet into San Pedro Bay is considered a Navigable Water.

where individuals and populations can thrive in habitat that is protected from disturbances. Specifically, it provides cover, shelter, food, water, light, minerals, and other nutritional or physiological requirements for survival of the species, along with sites for breeding and rearing offspring (USFWS, 2024b. Areas currently unoccupied may be included in critical habitat boundaries if it would be needed for species recovery (USFWS, 2024b).

No USFWS-designated critical habitat coincides with the Alternative 3 RSA. The nearest critical habitat for plant species listed under the federal ESA includes Braunton's milk-vetch; this unit is located approximately 4 miles west of the Alternative 3 RSA in Topanga State Park. The nearest critical habitat for wildlife includes western snowy plover (*Charadrius nivosus nivosus*), approximately 4 miles west of the Alternative 3 RSA along the coastline in the City of Santa Monica; and tidewater goby (*Eucyclogobius newberryi*), approximately 7 miles west of the Alternative 3 RSA along Topanga Creek in the Santa Monica Mountains. Also, no USFWS-proposed critical habitat coincides with Alternative 3 RSA.

Since no federally designated critical habitat occurs for any species within the Alternative 3 RSA, no impacts are anticipated; hence, critical habitat is not discussed in the impact evaluation section below.

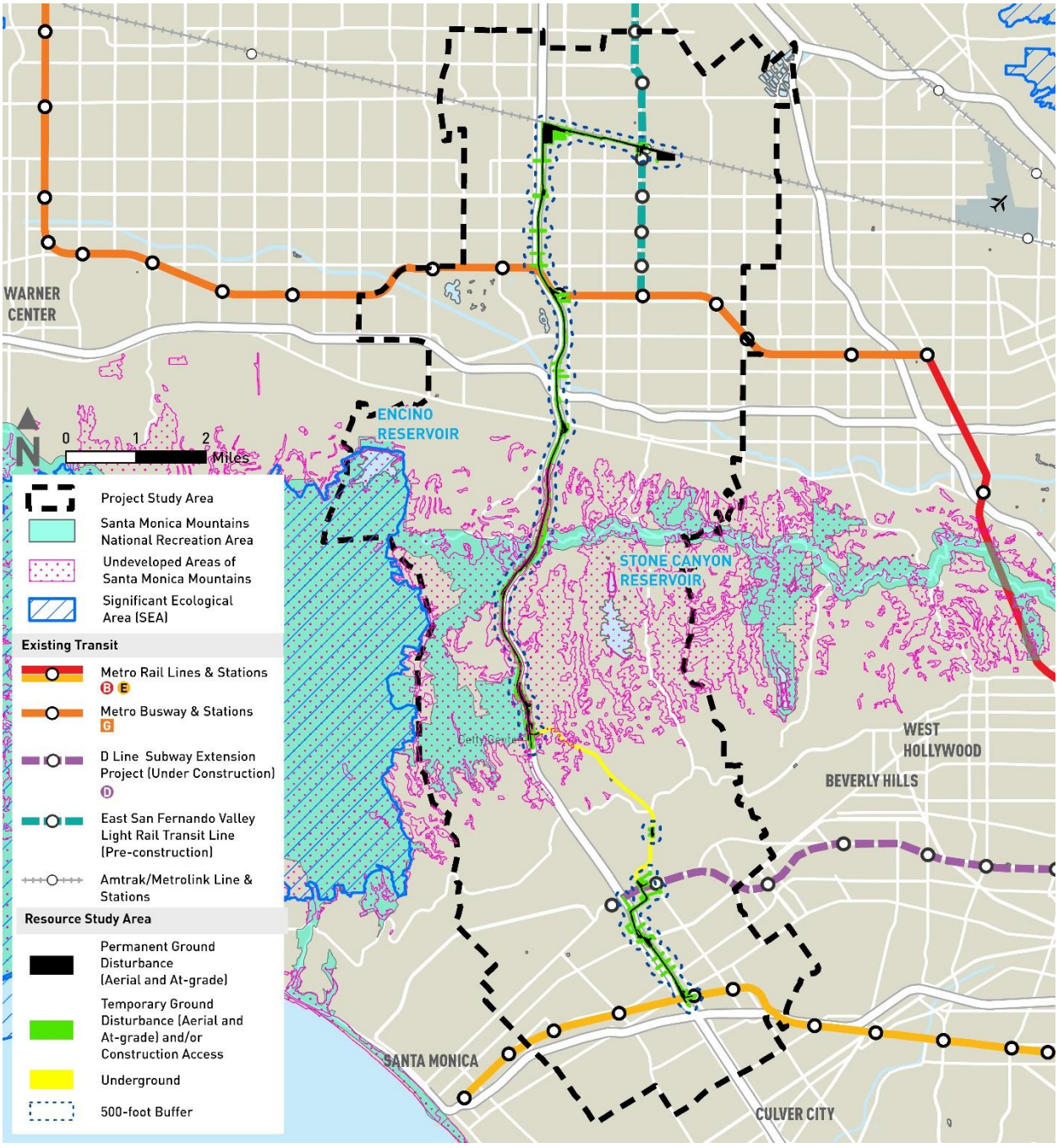
Santa Monica Mountains National Recreation Area

The SMMNRA extends from the Pacific coastline east across the middle of the Alternative 3 RSA, although only 32.0 acres of the SMMNRA coincides with the Alternative 3 RSA (Figure 7-27). On the west side of I-405 within the Alternative 3 RSA, two local parks, San Vicente Mountain Park and Westridge-Canyonback Wilderness Park and adjacent conserved lands, occur along and extend into the western perimeter of the Alternative 3 RSA. Conserved lands under the SMMNRA also occur along Mulholland Drive and Fossil Ridge Park on the east side of I-405. The various parks and other conserved areas under the SMMNRA umbrella provide scenic vistas, nature viewing, and hiking, biking, and horseback riding opportunities, often through undisturbed native chaparral habitats.

Significant Ecological Areas

As introduced in Section 2 of this report, Los Angeles County-designated Significant Ecological Areas (SEA) are ecologically important land and water systems that are valuable as plant or animal communities and are often important to the preservation of threatened or endangered species and conservation of biological diversity in the county. The Santa Monica Mountains SEA is outside the 500-foot buffer and does not intersect with the Alternative 3 RSA (Figure 7-27).

Figure 7-27. Alternative 3: Santa Monica Mountains National Recreation Area, Undeveloped Areas within the Santa Monica Mountains, and Los Angeles County Significant Ecological Areas



Source: LA County Planning, 2009; NPF, 2021

Natural Community Conservation Plan/Habitat Conservation Plan Areas

The RSA is not located within the boundary of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan (CDFW, 2023c; USFWS, 2023b).

7.3 Impact Evaluation

7.3.1 Impact BIO-1: Would the project 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 US Fish and Wildlife Service?

7.3.1.1 Operational Impacts

The potential for operational impacts such as injury or mortality due to collisions with vehicles, behavioral and habitat usage modifications due to exposure to noise and vibration from passing trains, habitat degradation due to edge effects, and impacts on movement due to infrastructure are limited for most wildlife species for Alternative 3 since the aerial portion of the alignment occurs in developed areas. Anticipated impacts are described below.

Special-Status Invertebrates and Reptiles

Special-status invertebrates, such as Crotch's bumble bee, and special-status reptiles that may occur in habitats along the alignment are not anticipated to be subject to operation-associated direct impacts, including injury or mortality due to collision with vehicles, since the alignment is primarily aerial and occurs in mostly developed areas that are not suitable for these species. Therefore, the areal extent of suitable habitat for special-status invertebrates and reptiles that overlaps with Alternative 3 is very limited.

Habitat degradation due to edge effects where native habitats are removed to facilitate construction (see Section 7.3.1.2) will be similarly limited due to the low amount of suitable habitat present along the alignment. Edge effects may include changes to the microclimate due to increase exposure to sun and wind, incursion by nonnative, weedy plant species that alter the vegetation structure, and changes in the distribution and diversity of foraging plant species (for bumble bees) and prey species (for reptiles). These habitat alteration impacts would persist through operation of the facility; however, due to the limited areal extent, is anticipated to constitute a less than significant impact. Further, indirect habitat degradation would be mitigated through the habitat restoration measures related to construction of Alternative 3.

For these reason, operations-related impacts to special-status invertebrates and reptiles are anticipated to be less than significant.

Special-Status Birds and Bats

Special-status birds (including those protected by the MBTA and special-status bats listed in Table 7-5 could have the potential to be significantly impacted during operations of Alternative 3 if nesting birds or roosting bats are present in trees and/or shrubs located within the Alternative 3 RSA that require routine maintenance trimming. Adult birds and bats are highly mobile and are anticipated to be able to relocate away from maintenance trimming activities of their own volition; however, nests, eggs, and nestlings, and bat pups, could be injured, killed, or destroyed by maintenance activities if they are located in the vegetation slated for removal. Additionally, if breeding birds or bats are present in the adjacent areas, individuals may be subject to indirect impacts including exposure to noise, human presence, and dust, which could disrupt natural breeding behaviors such as incubation of eggs and feeding and care of young. In some cases, habitat changes due to vegetation removal could be sufficient to reduce protective cover, resulting in abandonment of nests and eggs.

Since Alternative 3 would be an underground alignment between Wilshire Boulevard and the Getty Center, vegetation maintenance is not anticipated in this section. Impacts from dust and noise to special-status birds or bats are not anticipated during operation since maintenance activities would primarily occur within developed or paved areas at ground level and underground in the tunnel segments.

Special-Status Mammals

Impacts to special-status bats were previously addressed with special-status birds.

Direct significant impacts are not expected for mountain lions since collisions with aerial monorail vehicles are unlikely due to the height at which they will be traveling (Figure 7-2 and Figure 7-3, 16.5 feet to 32 feet above ground to the base of the column caps). While operation of Alternative 3 is anticipated to reduce vehicle traffic on I-405, changes in vehicle traffic associated with operation of Alternative 3 are not likely to significantly reduce risk for a mountain lion attempting to cross the freeway due to the existing exponentially high risk of collision (i.e., I-405 is considered by NPS to be impermeable to mountain lions; NPS, 2023). Alternative 3 is intended to reduce congestion during rush hour, while collision risk is greatest when vehicles are traveling the fastest during off-peak hours, including dawn and dusk when mountain lions are most active. Within Alternative 3, 13 percent (47.0 acres) of the total impacts are within non-developed natural areas in the Santa Monica Mountains (i.e., suitable habitat for mountain lion) the remaining acreage is either in urban areas within the mountain range or are outside of the mountains. Within suitable mountain lion habitat in the Santa Monica Mountains, the majority of the impacts will be temporary (82 percent of suitable mountain lion habitat impacts, 38.4 acres) while permanent impacts represent the rest (18 percent of suitable mountain lion habitat impacts; 8.7 acres). Permanent habitat reductions of this size adjacent to an impermeable highway are anticipated to be less than significant for mountain lions to survive or recover in the wild. Habitat reductions of this size are anticipated to be less than significant for mountain lions to survive or recover in the wild. Impacts to their habitat that could affect movement within the Santa Monica Mountains is discussed in Section 6.3.4.

Special-Status Plants

Impacts to special-status plants that could occur during operation include crushing or trampling of individual plants during normal maintenance, or tree trimming for maintenance. Since maintenance activities would primarily occur within developed or paved areas, it is unlikely that the operation of Alternative 3 would result in significant impacts to special-status plants, including from exposure to fugitive dust. One special-status plant, Nuttall's scrub oak (*Quercus dumosa*), has high potential to be present along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. Since Alternative 3 would be an underground alignment between Wilshire Boulevard and the Getty Center, impacts to special-status plants would not be anticipated in this section. Where present, Nuttall's scrub oak could potentially be impacted by required routine maintenance trimming; no significant impacts are anticipated since Nuttall's scrub oak was not being identified within the Ground Disturbance Area during the initial tree inventory.

Mitigation Measures

MM BIO-1 and MM BIO-2, presented in Section 7.4, are included to reduce potentially significant operations-related impacts to nesting birds and special-status bats from maintenance vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro. MM BIO-3 would reduce operational-related impacts to special-status trees from vegetation maintenance to less than significant

through application of mitigation, as determined in the applicable local ordinance or policy where the impact would occur. Therefore, with implementation of MM BIO-1, MM BIO-2, and MM BIO-3, operational impacts of Alternative 3 on special-status species would be reduced to a less than significant level.

7.3.1.2 Construction Impacts

Impacts to vegetation within the Ground Disturbance Area have the potential to affect sensitive vegetation communities, as well as special-status wildlife or plant species, both directly and through modifications to their habitat. Construction activities for Alternative 3 could result in significant impacts to special-status wildlife, including nesting birds and special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potentially significant impacts include injury to or mortality of individuals, habitat loss due to permanent vegetation removal, noise pollution or exposure to fugitive dust from prolonged heavy equipment operation, and behavioral modifications due to due to increased human presence within species habitats during construction.

Clearing and grading of vegetation would be required for construction of components of Alternative 3, including the structural support beams for the guideway track, staging yards, “cut-and-cover” construction of TPSSs, and aerial MRT stations. While most of the vegetation that could be impacted consists of non-native and ornamental landscaping, some native vegetation is also present within the Ground Disturbance Area.

Other anticipated construction impacts related to the construction along Sepulveda Pass for Alternative 3 include the possibility of increased noise, dust, and vibration during drilling of the aerial track footings. Excessive noise generated from drilling and heavy equipment operation could significantly disturb avian species. Vibration-related disturbance could also disrupt their normal behavioral patterns. Construction-related dust could significantly impact habitat quality by depositing on vegetation, which may reduce photosynthesis and increase leaf temperature, making vegetation more susceptible to drought (Farmer, 1993). Evaluation of the Project’s impact on wildfire risk and occurrence is discussed in the wildfire chapter of the *Sepulveda Transit Corridor Project Safety and Security Technical Report* (Metro, 2025b).

Vegetation Communities/Land Cover Types and Sensitive Vegetation Communities

Direct impacts to vegetation communities would occur within the Ground Disturbance Area; acreages of temporary and permanent impacts to vegetation communities within Alternative 3 are detailed in Table 7-8. Due to the sparse vegetation, lack of species diversity, and continued anthropogenic disturbance, special-status wildlife and plant species are less likely to be found in land cover types developed, cleared land, and ruderal vegetation. Approximately 95 percent (358.6 acres) of the acreage in Alternative 3 planned for ground disturbing activities consist of developed, undifferentiated artificial cuts/embankments, cleared land, or ruderal. Excluding these areas, construction of Alternative 3 is anticipated to result in 40.4 acres of temporary impacts and 9.1 acres of permanent impacts. Within the vegetated areas subject to impacts, less than 1 percent (2.5 acres) is undifferentiated exotic vegetation. The remaining vegetation communities are native vegetation across 11 communities. These represent approximately 4 percent (15.1 acres) of the impacts, of which 4.2 acres are anticipated to be permanently impacted and 10.9 acres are anticipated to be temporarily impacted from construction of Alternative 3. Indirect impacts to vegetation communities may also occur during construction activities. For example, fugitive dust deposition on foliage may reduce photosynthesis and increase plant vulnerability to drought. Additionally, vegetation removals may increase edge effects, including incursion of nonnative, weedy plants that compete with natives for space and resources.

Approximately 0.7 acre of identified sensitive vegetation communities California walnut woodland and sugar bush shrubland would be permanently and temporarily impacted by clearing and grading for I-405 highway improvements along North Sepulveda Boulevard near Mountain Gate Country Club (Figure 7-17) and along Briarwood Drive (Figure 7-19), as well as construction of the Getty Center MRT Station and drainage improvements (Figure 7-16). An additional seven vegetation communities have potential to be considered sensitive (** in Table 7-8) depending upon the associated codominant species present (Sections 3.2.2 and 7.2.5.4). Up to an additional 5.4 acres of this potentially sensitive vegetation community are within the Alternative 3 RSA along I-405. For this analysis, Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping.

The removal and degradation of native and sensitive vegetation communities would constitute potentially significant impacts.

Table 7-8. Alternative 3: Impacts on Land Cover Types and Vegetation Communities within Resource Study Area

Vegetation Community/Land Cover Type[a]	Permanent Impacts (acres)	Temporary Impacts (acres)	Total Project Impacts (acres)[b]	Percent of Total Project Impacts
Developed	117.7	206.5	324.3	86.2
Ruderal	1.2	1.0	2.3	0.6
Cleared Land	0	0.1	0.1	<0.1
Developed, Ruderal, and Cleared Land Total	**119.0**	**207.7**	**326.7**	**86.8**
Post Fire Shrub Regeneration and Undifferentiated Categories including Exotic Vegetation, Artificial Cuts/Embankments, and Firebreaks	4.9	29.5	34.4	9.1
Ceanothus Chaparral	2.4	5.7	8.1	2.2
Laurel Sumac Shrubland**	0.6	2.8	3.4	0.9
Mexican Elderberry Shrubland	0.6	0.3	0.9	0.2
California Buckwheat Shrubland**	0.2	0.5	0.7	0.2
California Sycamore Woodland**	0.1	0.6	0.7	0.2
Sugar Bush Shrubland*	0.2	0.2	0.4	0.1
California Walnut Woodland*	0	0.3	0.3	0.1
Toyon Shrubland**	0	0.3	0.3	0.1
Black Sage Shrubland**	0.1	0.1	0.2	<0.1
California Sagebrush Shrubland**	0	0.1	0.1	<0.1
Scrub Oak Woodland**	0	<0.1	<0.1	<0.1
Vegetation Total	**9.1**	**40.5**	**49.6**	**13.2**
GRAND TOTAL	**128.1**	**248.1**	**376.2**	**100**

Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in calculations due to rounding errors.

* Sensitive vegetation community

** Potential sensitive vegetation community based on codominant species on-site.

Special-Status Invertebrates

One special-status invertebrate, Crotch's bumble bee, has potential to be present within the Alternative 3 RSA during construction activities. Despite having a relatively narrow range, this species is known to occupy a wide variety of natural and disturbed habitat for nesting and foraging and could be present throughout the RSA in undeveloped areas where pavement is not present and the earth is not regularly maintained through grading, tilling or planting. Based on their broad range of suitable habitat and generalist foraging behavior, Crotch's bumble bee are likely to forage throughout the RSA where preferred flowering plants are present (e.g., native sage species [*Salvia* spp.], milkweeds [*Asclepias* spp.], and plants within the pea family [*Fabaceae*]), and may nest where abandoned rodent burrows are present.

Individuals in occupied burrow nests or overwintering queens in surface soils could be crushed or trapped during construction if present within the Ground Disturbance Area. Additionally, foraging Individuals also could be injured or killed if they are foraging during vegetation clearing activities. This species could also be impacted through removal of nectar sources and nests in the Ground Disturbance Area resulting from construction of Alternative 3 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Ground-disturbing impacts from grading and vegetation clearing throughout the RSA could impact individuals and would likely result in loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for Crotch's bumble bee.

The loss of individual Crotch's bumble bees and suitable habitat for this species would be considered a significant impact.

Special-Status Reptiles

Three special-status reptiles are known to occur and two have a moderate potential to occur within the Alternative 3 RSA; individuals of these species may be present during construction activities. Reptiles present during construction activities could be directly injured or killed due to collisions with vehicles and equipment or during vegetation clearing activities. Species that shelter in burrows or under debris could be entrapped and suffocate or be crushed during grading activities; buried nests could be similar crushed or destroyed. Additionally, if individuals become entrapped in open trenches or excavations during construction activities, they could be subject to injury or mortality due to dehydration, opportunistic predation, inability to properly thermoregulate, starvation, or other causes associated with constrained movement. Indirect impacts could include disruption of normal feeding, basking, sheltering, and breeding behaviors due to avoidance of excessive noise and vibration, fugitive dust, and increased human presence. Normal movement patterns throughout a home range also may be disrupted temporarily by avoidance of areas adjacent to construction activities, or permanently by habitat structure modifications. During construction, special-status reptiles also may be subject to higher predation rates by opportunistic predators such as common ravens (*Corvus corax*), coyote, or skunk, that could be attracted to work areas if food debris is present.

Two of the species, southwestern pond turtle and two-striped garter snake, are most likely to occur near aquatic resources such as the ponds in the Sepulveda Basin and UCLA Mathias Botanical Garden. Based on habitat requirements, the remaining three are most likely to be found in the Sepulveda Pass and Santa Monica Mountains. Individuals could be found in or proximate to work areas along I-405 in the Santa Monica Mountains. Roadway realignment along I-405 between Sunset Boulevard and Mulholland Drive would involve clearing and grading of native vegetation adjacent to the freeway. The clearing of vegetation in the Sepulveda Pass would likely result in injury or mortality of individuals, disruptions of

natural behaviors, and loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for the following five special-status reptiles:

- Southwestern pond turtle (*Actinemys pallida,* SSC) is known to occur in the Alternative 3 RSA on UCLA's campus or adjacent to I-405 south of Ventura Boulevard in and adjacent to water sources with aquatic vegetation including streams or lakes. This species could be impacted through removal of upland breeding habitat, destruction of buried nest sites, or degraded water quality resulting from ground disturbance activities within the Alterative 3 RSA, including construction of structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Southern California legless lizard (*Anniella stebbinsi*, SSC) has moderate potential to occur in loose soil, sand, and leaf litter in the Santa Monica Mountains and remnant patches of native vegetation. This species could be impacted by ground-disturbance activities within the Alternative 3 RSA for construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Coastal whiptail (*Aspidoscelis tigris stejnegeri,* SSC) is known to occur in chaparral and coastal sage scrub in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities within the Alternative 3 RSA for construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Coast horned lizard (*Phrynosoma blainvillii*, SSC) is known to occur in chaparral and coastal sage scrub in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities within the Alternative 3 RSA for construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Coast horned lizards are particularly vulnerable to injury or mortality due to vehicle collisions since their defensive strategy is to rely on natural camouflage and remain still when approached by potential predators.
- Two-striped garter snake (*Thamnophis hammondii*, SSC) has moderate potential to occur along the Santa Monica Mountains and could be impacted by the removal of vegetation and ground-disturbance activities within the Alternative 3 RSA for construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.

The loss of individuals and suitable habitat for these special-status species would constitute a significant impact.

Special-Status Birds

Four special-status bird species were identified as known to occur and five have high potential to occur within the Alternative 3 RSA. Based on habitat requirements for these nine species, they are likely to be found throughout the RSA in transit, resting and/or foraging from the Los Angeles National Cemetery in the south to the Sepulveda Basin in the north. Birds in transit are unlikely to be affected by construction activities; adults are highly mobile and can be expected to relocate away from construction activities of their own volition. However, migratory individuals may experience temporary or permanent loss of transitory habitat. If overwintering burrowing owls are present, individuals could be entrapped and suffocate or be crushed if burrows are present in the work areas during grading and vegetation removal. Additionally, grading could result in loss of suitable wintering burrows for migratory burrowing owls. If

native birds breeding within or adjacent to work areas, nests, eggs, and nestlings would be vulnerable to destruction, injury, or mortality if they are present during vegetation clearing and other construction activities. Ground nests may be vulnerable to crushing, trampling, or destruction by pedestrians and vehicles. Nests in adjacent areas also may be exposed to noise, fugitive dust, human presence, and vibration that could disrupt natural breeding behaviors including incubation of eggs and care and feeding of young; these disruptions could result in failure of a nest to successfully produce young. Excessive disruption, or substantial changes in habitat during the nesting period, could also result in abandonment of nest sites, eggs, or young. Further, impacts associated with clearing and grading of vegetation adjacent to I-405 would likely result in loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for the following nine special-status species and nesting birds protected under the MBTA:

- Tricolored blackbird (*Agelaius tricolor*, state threatened and SSC) has high potential to occur in freshwater marshes, freshwater lakes, and agricultural fields in the Sepulveda Basin Wildlife Preserve where it overlaps with the Alternative 3 RSA. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Breeding habitat is not expected to be impacted due to its absence.
- Burrowing owl (*Athene cunicularia*, state candidate and SSC) has high potential to occur in grassland and open scrub throughout the Alternative 3 RSA. This species could be impacted from construction noise and activity, removal of burrows, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Impacts to nests and nestlings are not anticipated as the RSA is outside the breeding range for this species; only overwintering adult burrowing owls are anticipated to occur. If burrowing owls are present in burrows during construction, individuals could be trapped and suffocate or be crushed during vegetation clearing, grading, and other initial ground disturbance.
- Swainson's hawk (*Buteo swainsoni*, state threatened) is present throughout the Alternative 3 RSA during migration, particularly in grasslands. This species could be impacted construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Northern harrier (*Circus hudsonius*, SSC) has high potential to occur throughout the Alternative 3 RSA during migration, particularly in grasslands. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Olive-sided flycatcher (*Contopus cooperi*, SSC) is present throughout the Alternative 3 RSA during migration. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Breeding habitat is not expected to be impacted due to its absence.

- Bald eagle (*Haliaeetus leucocephalus*, state endangered and Fully Protected) has high potential to occur near bodies of water, particularly in the Sepulveda Basin Wildlife Preserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Species habitat is not expected to be impacted.
- Loggerhead shrike (*Lanius ludovicianus*, SSC) has high potential to occur in and breed in grasslands or chaparral, particularly the Santa Monica Mountains or in the Sepulveda Basin Wildlife Preserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Vermilion flycatcher (*Pyrocephalus obscurus*, SSC) is present in the Los Angeles National Cemetery in the southern portion of the alignment and has potential to occur in and breed in a variety of habitats in the Alternative 3 RSA, particularly park and cemeteries. This species could be impacted from vegetation removal during construction for Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Least Bell's vireo (*Vireo bellii pusillus*, FE and SE) is present and breeds along the Santa Monica Mountains and in the Sepulveda Basin Wildlife Reserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities for Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.

The loss of nests, eggs, or nestlings, impacts to natural breeding behaviors, eviction from wintering burrows, and loss of suitable habitat for these special-status species would constitute a significant impact.

Special-Status Mammals

Three special-status mammals were identified as likely to be present and one has high potential to occur within the Alternative 3 RSA, including mountain lion, silver-haired bat, and hoary bat. Mountain lions are known to occur within the Santa Monica Mountains, while the silver-haired and hoary bat have broader habitat requirements and have potential to forage in both natural and developed habitats. Within the Sepulveda Pass and Santa Monica Mountains, special-status mammals could occur in or proximate to work areas along I-405. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway.

Within the developed northern and southern ends of the projects, special-status bats could be present in ornamental street trees or on existing infrastructure, such as bridges and buildings. Individuals may be subject to injury or mortality if they are present as roosting adults during vegetation clearing activities. Roosting adults also may be disturbed by construction-related noise and vibration, causing them to flee roosts during daylight hours. Maternal roosts would also be vulnerable to injury or mortality if present, as pups are unable to take flight and would be likely to be killed if present. Suitable foraging, sheltering, and roosting habitats have potential to be removed during vegetation clearing and grading, or temporarily impacts by construction noise, fugitive dust, and increased human presence.

Nighttime construction lighting also may impact foraging habitat by attracting prey species, which may attract some bat species and repel others.

Individual larger mammals, including mountain lions, are unlikely to be directly impacted by construction activities as they are highly mobile and can be anticipated to relocate away from work areas of their own volition. Individuals are not likely to be vulnerable to collisions with slower moving construction equipment and vehicles. However, natural foraging, sheltering, and breeding behaviors may be disrupted by construction activities, both temporarily through avoidance of areas with construction-related noise, human presence, vibration, and fugitive dust, and permanently through changes in habitat due to vegetation clearing and grading.

The clearing of vegetation in the Sepulveda Pass and along city streets and demolition of structures with suitable roosts would also likely result in loss of suitable habitat that could be used for roosting, breeding, shelter, and/or foraging for the following three special-status mammals:

- Mountain lion (*Puma concolor*, state candidate for listing) is known to occur in the Alternative 3 RSA in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites. Alternative 3 is unlikely to result in significant impacts to suitable habitat due to the small size and linear nature of the clearing and grading activities in comparison to the species' large home range size. However, the construction and operation of Alternative 3, specifically temporary and permanent impacts associated with widening I-405 between the Getty and Mulholland Drive, has the potential to result in a significant impact to mountain lion movement and usage of wildlife corridors (evaluated in Section 7.3.4).
- Silver-haired bat (*Lasionycteris noctivagans*, WBWG medium priority) is known to occur in the northern and southern portions of the Alternative 3 RSA. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Hoary bat (*Lasiurus cinereus*, WBWG medium priority) has high potential to occur along the Santa Monica Mountains, portions of the Alternative 3 RSA with large mature trees, and the Sepulveda Basin Wildlife Reserve in or near riparian habitats. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 3 features such as structural support beams for the guideway track, stations, staging areas, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.

The loss of suitable habitat for silver-haired bats and hoary bats would constitute a significant impact.

Special-Status Plants

Five special-status plant species were identified with medium or high potential to occur within the Alternative 3 RSA; none were present. Based on habitat requirements for these five species, these species are most likely to occur in chaparral and/or coastal sage scrub, which occurs on the Project in the Sepulveda Pass and could be in or proximate to work areas along I-405 in the Santa Monica Mountains. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway. Clearing and grading of vegetation would also be required for construction of the structural support beams for the guideway track, staging yards, TPSS, and aerial MRT stations; although vegetation

to be impacted is largely non-native and/or ornamental landscaping, native vegetation is also present. If individuals are present during clearing and grading activities, they could be subject to trampling, crushing, and removal. Individuals present in adjacent areas may be exposed to fugitive dust, which can settle on vegetation and interrupt natural photosynthesis. Following vegetation clearing, adjacent areas also may be subject to edge effects including higher exposure to sun, dust, and wind, and incursion by nonnative, weedy species, which can increase competition for space and resources and decrease habitat value for special-status plants.

The clearing of vegetation in the Sepulveda Pass could result in loss of suitable habitat for the following special-status plant species:

- Braunton's milk-vetch (*Astragalus brauntonii*, federally endangered, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 3 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*, CRPR 1B.2) has moderate potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 3 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Davidson's bushmallow (*Malacothamnus davidsonii*, CRPR 1B.2) has high potential to occur in the Santa Monica Mountains, the Sepulveda Basin, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for Alternative 3 features such as structural support beams for the guideway track, stations, MSFs, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Chaparral nolina (*Nolina cismontana*, CRPR 1B.2) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 3 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.
- Nuttall's scrub oak (*Quercus dumosa*, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 3 features including structural support beams for the guideway track, stations, I-405 widening, retaining wall reconstructions, and at-grade TPSS sites.

The loss of individuals or suitable habitat for these special-status plants would constitute a significant impact.

Mitigation Measures

As described in Section 7.4, mitigation measures would be implemented to reduce construction-related impacts to special-status plant and wildlife species and their habitats to a less than significant level through establishment of survey and monitoring requirements (MM BIO-4, MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-17, and MM BIO-29); monitoring of bird nests and determination if no-disturbance buffers require adjustments (such as due to noise from construction activities) (MM

BIO-4); education and training of personnel about Project 's biological concerns and requirements (MM BIO-18); establishment and demarcation of Environmentally Sensitive Areas (MM BIO-16); and creation of a habitat restoration plan (MM BIO-9). General construction measures to protect special-status species include protection from wildfire (MM BIO-19), domestic pets (MM BIO-20), night lighting (MM BIO-22), invasive plants (MM BIO-23), entrapment (MM BIO-26), vehicular collisions (MM BIO-25), dust (MM BIO-24), and construction-related trash (MM BIO-27).

7.3.1.3 Maintenance and Storage Facilities

MSF Base Design

Maintenance of the monorail vehicles and equipment would occur at the MSF Base Design and may occasionally require routine maintenance trimming of ornamental trees and shrubs located within the MSF Base Design. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected nesting birds from operations-related activities through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, presented in Section 7.4, are included to reduce operations-related impacts from vegetation trimming to nesting birds and special-status bats to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The MSF Base Design for Alternative 3 would be on developed property at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor; no habitat modifications or removal would be required for the construction of the MSF. No impacts to special-status plant species would result from the construction of the MSF since suitable habitat is not present. Roosting bats and MBTA-protected nesting birds do have potential to be impacted during construction of the MSF Base Design if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF Base Design are trimmed or removed; this would potentially be a significant impact. Impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, included in Section 7.4, are specified to reduce construction-related impacts related to vegetation removal to nesting birds and special-status bats to a less than significant level by requiring pre-activity surveys for nesting birds and roosting bats during the relevant seasons, and implementing no-disturbance buffers as relevant.

MSF Design Option 1

Maintenance of the monorail vehicles and equipment would occur at the MSF Design Option 1 and may occasionally require maintenance trimming of ornamental trees and shrubs located within the MSF Design Option 1 Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected nesting birds through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, presented in Section 7.4, are included to reduce operations-related

impacts to nesting birds and special-status bats from vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The MSF Design Option 1 for Alternative 3 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor; no habitat modification or removal would be required for the construction of the MSF Design Option 1. No impacts to special-status plant species would result from the construction of the MSF Design Option 1 since suitable habitat is not present. Roosting bats and MBTA-protected nesting birds have potential to be impacted during construction of the MSF if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed; this would potentially be a significant impact. Impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, included in Section 7.4, are specified to reduce construction-related impacts to nesting birds and special-status bats from vegetation trimming or removal to a less than significant level.

7.3.2 Impact BIO-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, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

There is no riparian habitat within the Alternative 3 Ground Disturbance Area, although there is 1.1 acres of undifferentiated riparian habitat in the RSA located in the 500-foot buffer. Sensitive natural vegetation communities present within the Ground Disturbance Area for Alternative 3 include sugar bush shrubland and California walnut woodland. Seven additional vegetation communities have potential to be sensitive with further refinement, including the following: laurel sumac shrubland, California buckwheat shrubland, California sycamore woodland, toyon shrubland, black sage shrubland, California sagebrush woodland, and scrub oak woodland. Potentially sensitive communities are assumed to be as such for discussion of impact analysis.

7.3.2.1 Operational Impacts

No riparian habitat occurs within the Ground Disturbance Area, resulting in no operational impacts from maintenance vegetation trimming.

Minor vegetation trimming of sensitive communities may occur during operations. Vegetation trimming would likely remove overhanging branches (if any) and is not likely to result in the removal of entire trees, shrubs, or root bases. No impacts to sensitive natural vegetation communities from operation of Alternative 3 are anticipated since vegetation that may require operational maintenance trimming will have been mitigated under impacts for construction of the Project. An additional potential impact to sensitive communities is introduction of invasive plant seeds into native habitat through vehicle tires used to bring equipment used for operational maintenance activities onto Alternative 3, such as work trucks carrying pressure washing or painting equipment. Maintenance activities with potential to introduce or spread invasive plant species would primarily occur within developed or paved areas where tires would not be touching bare ground.

7.3.2.2 Construction Impacts

No riparian habitat occurs within the Ground Disturbance Area; however, 1.1 acres of undifferentiated riparian habitat are located in the RSA along Haskell Creek in the northeastern corner of Sepulveda Basin in the 500-foot buffer. No impacts from construction are anticipated since construction activities including installation of structural support columns for the aerial guideway and construction staging would be on the east side of I-405.

Sensitive natural vegetation communities (California walnut woodland and laurel sumac scrub) are known to occur within the Ground Disturbance Area along the Sepulveda Pass in the Santa Monica Mountains; 0.7 acre of sensitive communities are present within the Alternative 3 Ground Disturbance Area (Table 7-8). Construction activities adjacent to these locations are associated with aerial guideway construction in the Santa Monica Mountains, specifically the I-405 widening (Figure 7-19), and construction of the Getty Center MRT Station and drainage improvements next to the station. Installation of the structural support columns would occur along the aerial alignment next to the sensitive vegetation communities. Within freeway-widening work zones, retaining walls, drainage, and outer pavement widenings would be constructed, which would require clearing and grading of native habitat. Potentially sensitive vegetation communities (Table 7-6) occur along I-405 through the Santa Monica Mountains, with 5.4 acres present within the Alternative 3 Ground Disturbance Area. Clearing of vegetation in this area for project features such as the I-405 widening, aerial guideway structural support columns, construction of stations, construction of TPSS stations, and access roads could result in loss of sensitive natural communities within the Ground Disturbance Area of the Alternative 3 RSA. Vehicle tires on equipment used for construction of Alternative 3 have potential to transport invasive plant seeds into native habitat during clearing and grading. An additional risk to sensitive natural community would exist from elevated levels of particulate matter from tires and dust deposition on vegetation from active construction that can disrupt photosynthesis and other processes critical for plant survival.

The Project could result in significant impacts to sensitive natural communities as a result of construction activities, including permanent vegetation removal activities, associated with the construction for Alternative 3. MM BIO-10, MM-BIO 16 through MM BIO-18, and MM BIO-23 through MM BIO-25, described in Section 7.4, are included to reduce construction-related impacts to sensitive natural communities to a less than significant level through establishment of Environmentally Sensitive Areas, biological monitoring of work within these communities, environmental training to Project workers, protection from invasive weeds, and protection from dust from speeding or other sources.

7.3.2.3 Maintenance and Storage Facilities

MSF Base Design

The MSF Base Design for Alternative 3 would be on developed property at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. There are no riparian habitats or sensitive natural communities present within the Ground Disturbance Area or the 500-foot buffer of the MSF Base Design. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF Base Design.

MSF Design Option 1

The MSF Design Option 1 for Alternative 3 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor. No riparian habitats or sensitive natural communities are present within the Ground Disturbance Area or the 500-foot buffer of the MSF Design Option 1. No

impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF Design Option 1.

7.3.3 Impact BIO-3: Would the project 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?

7.3.3.1 Operational Impacts

There are no state or federally protected wetlands within the Ground Disturbance Area for Alternative 3; therefore, there would be no impacts to protected wetlands related to the operation of Alternative 3.

However, non-wetland waters do occur in the Alternative 3 Ground Disturbance Area. The Los Angeles River occurs along the Alternative 3 alignment and is a WOTUS under the jurisdiction of the USACE, RWQCB, and CDFW. One unnamed ephemeral drainage also occurs, portions of which are under the jurisdiction of the RWQCB and CDFW. While temporary impacts to these features are anticipated during construction, as described below, no operations-related impacts are anticipated as all operations will occur only on existing roadways and developed surfaces.

7.3.3.2 Construction Impacts

The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 3 traverses the river; no wetlands are associated with the river at this location. There are no state or federally protected wetlands that occur within the Ground Disturbance Area for Alternative 3; consequently, no impacts to protected wetlands are anticipated from construction of Alternative 3.

The Los Angeles River is considered WOTUS under the jurisdiction of the USACE, RWQCB, and CDFW within the Alternative 3 Ground Disturbance Area. A total of 0.11 acres of non-wetland waters is associated with the Los Angeles River within the Alternative 3 Ground Disturbance Area. Construction activities would occur outside of jurisdictional areas associated with the Los Angeles River; therefore, no direct significant impacts to the Los Angeles River are anticipated during construction.

Additionally, there are 164 linear feet of non-wetland ephemeral channels under the jurisdiction of the RWQCB and CDFW present within the Alternative 3 Ground Disturbance Area. This extent includes temporary impacts to 0.02 acre of waters of the State under the jurisdiction of RWQCB and 0.03 acre of CDFW-jurisdictional streambed. Construction-related impacts to these features could include temporary filling of, or sedimentation or erosion into the waterways, or disturbance of the bank or bed during construction activities. This would be a potentially significant impact to aquatic resources.

Impacts to aquatic resources will be avoided, minimized, and mitigated for through implementation of MM BIO-15, MM BIO-18, and MM BIO-21, which require aquatics monitoring during work near jurisdictional waters, work area delineation, best management practice (BMP) implementation to protect against sedimentation, worker education on sensitive aquatic resources, and avoidance of work near jurisdictional waters during and following rain events.

7.3.3.3 Maintenance and Storage Facilities

MSF Base Design

The MSF Base Design for Alternative 3 would be on developed property located at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. Since there are no wetlands or non-wetland waters present within the Ground Disturbance Area of the MSF

Base Design, no impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of the MSF Base Design.

MSF Design Option 1

The MSF Design Option 1 for Alternative 3 would be located on developed property abutting Orion Avenue located south of the LOSSAN rail corridor. Since there no wetlands or non-wetland waters are present within the Ground Disturbance Area of MSF Design Option 1, no impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of MSF Design Option 1.

7.3.4 Impact BIO-4: Would the project 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?

The SMMNRA that transects the Alternative 3 RSA, along with habitat in the Santa Monica Mountains that is outside the SMMNRA, represents a regional connectivity corridor with respect to habitat patches. The SMMC's habitat linkage planning map (SMMC, 2021) identifies four potential wildlife corridors along the I-405 corridor: Mulholland Drive Bridge, Skirball Center Drive bridge, Bel Air Crest Road underpass, and the Sepulveda Boulevard underpass. Habitat for nesting birds and roosting bats is also present in the form of vegetation such as natural and ornamental trees and infrastructure such as buildings and bridges.

7.3.4.1 Operational Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 3 RSA. Thus, no operations-related impacts to the movement of resident or migratory fish is anticipated for Alternative 3.

Native Resident or Migratory Wildlife

The Alternative 3 RSA runs north to south and bisects the Santa Monica Mountains. Currently, I-405 acts as a restrictive barrier to mountain lion and other vertebrates for east – west movement where it intersects the Santa Monica Mountains. Barriers to movement result in gene flow limitations and isolation of populations, both of which negatively affect the overall health and success of a species (NPS, 2019b). Instances of I-405 crossings by mountain lions and other vertebrates are rare but have been recorded on occasion, both successfully and unsuccessfully (i.e., death resulting from vehicle collision), during NPS studies of the Santa Monica Mountains population (NPS, 2019b).

Operation of Alternative 3 and permanent impacts from the Project could further impact movement of mountain lions and other vertebrates across I-405 because of the expanded roadway (i.e., increased width at three locations, including by approximately 50 feet at the Mulholland Drive Bridge wildlife crossing, by approximately 50 feet by Promontory Road near Mountaingate Country Club, and by up to approximately 30 feet south of the Getty Center MRT Station). The aerial guideway also represents a novel obstacle and possible deterrent to wildlife movement in the area. Noise, lighting, and the overall presence of trains passing overhead on the aerial guideway are anticipated to deter wildlife movement. Anthropogenic disturbance for ongoing maintenance is expected to be intermittent and so is unlikely to significantly impact wildlife movement. Alternative 3 operation is likely to decrease the potential of a successful crossing and increase barriers to movement due to an increase in crossing distance from a wider disturbance footprint and the presence of an overhead guideway and moving trains. This would be a significant impact for wildlife movement and habitat connectivity. MM BIO-28, described in Section

7.4, is included to mitigate for operational-related impacts to the movement of native wildlife species, specifically mountain lions and other vertebrates, to less than significant through monitoring of wildlife crossings and enacting additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, within 6 months if impacts are observed.

Permanent changes to this area would impact local wildlife movement (Suvarna, 2020). Aerial trains could influence the behavior and movement of wildlife during operation. Specifically, the noise and vibrations associated with operation of trains could alter foraging, mating, or dispersal patterns. Lights used for operational and safety purposes have potential to confuse and disrupt nocturnal species. In addition, birds and bats are at risk of collision with the moving components of aerial trains. However, operation of aerial trains, when compared to a ground level roadway, also have potential to provide some benefits to wildlife, including less consistent and sustained source traffic noise, a decreased chance of direct strikes due to reduced vehicle traffic, and a comparatively lower level of fragmentation to habitat (Lucas et. al., 2017). Synanthropic species, such as raccoon and coyote, are those that have adapted to living in close proximity to humans and are more assimilated to anthropogenic disturbances; they are frequently found in urban environments, making them more likely to adapt and utilize movement corridors during Alternative 3 operation. Wary species, such as mountain lion and bobcat, have potential to be more easily deterred by the aerial tram when it is present and passing overheard during operation. Research based on the I-405 Sepulveda Pass Widening and HOV project found that wildlife crossing activity did not return to preconstruction levels following project conclusion at three of the four crossings identified by SMMC (NPS, 2024a), presumably due to changes to the crossings and adjacent vegetation following construction. Bel Air Crest underpass was the exception where wildlife activity did not decrease postconstruction, presumably due to less habitat impacts (i.e., vegetation leading to crossing remained intact) and construction activity (i.e., no construction staging).

The Sepulveda Basin Recreation Area is a potential local movement corridor, with habitat for avian species, coyotes, and herpetological species. Approximately 35 acres along the eastern edge of the Sepulveda Basin is within the Alternative 3 RSA, in the 500-foot ground-disturbance buffer. If permanent disruption to habitat within the Sepulveda Basin were to occur, it would be likely to alter local corridors by blocking or altering travel routes. However, no ground disturbing activities are planned for within the area. The aerial guideway would be on the eastern side of I-405 when adjacent to the area, 300 feet or more from habitat. Once operational, the presence of the guideway would increase the distance if wildlife are entering or exiting the area from the east; up to 75 feet would be added to the distance to cross I-405 into the refuge. Even urban-adapted species such as coyotes may need to adjust local movement corridors to access the refuge if access would be too close to the guideway or traffic. This increased distance and potential disruption to local corridors would represent a significant impact to local wildlife movement if unmitigated.

The aerial monorail associated with Alternative 3 could pose hindrances to avian movement. For regional movement corridors, this alignment would run predominantly north to south within the Alternative 3 RSA and, therefore, would be perpendicular to the primary direction of avian movement for migrating birds. Most migrating birds would transit above the height of the aerial monorail (i.e., 45 to 55 feet above the existing ground level), so disruptions are expected to be minimal. However, lights on the vehicles or guideway could disorient birds during migration periods (early April through late May and mid-August through early November) and lead to exhaustion and death (USFWS, 2020). Dispersing local resident or younger, recently fledged birds have potential to collide with the guideway track or vehicles while flying along local movement corridors.

If special-status bat species have roosting or maternity habitat or if commuting or foraging flyways (e.g., roads through or alongside tree stands, riparian corridors) are adjacent to the guideway, impacts to bats could occur from vehicle collisions (Caltrans, 2019). One special-status migratory bat species, the hoary bat, and special-status birds have the potential to occur in the Alternative 3 RSA during operation of Alternative 3. Operations-related activities associated with Alternative 3, such as vegetation removal or trimming, could also result in a potentially significant impact to migratory bat and avian species by removing potential nesting, roosting, and foraging habitat. Artificial lighting that may be present on guideway structures and within vehicle during operation could negatively affect adjacent bat roosting locations.

MM BIO-1 and MM BIO-2, as described in Section 7.4, are included to reduce operational-related impacts to migratory wildlife species from aerial train presence to a less than significant level through limiting of vegetation trimming to outside of nesting bird and roosting season where feasible and installation of appropriate anti-collision devices to aerial vehicles and support structures where an aerial alignment is present. MM BIO-28 is included to mitigate for operational-related impacts to the movement of native wildlife species, specifically mountain lions and other vertebrates, to less than significant through monitoring of wildlife crossings and enactment of additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, within six months if impacts are observed.

7.3.4.2 Construction Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 3 RSA. Thus, no construction-related impacts to the movement of resident or migratory fish is anticipated for Alternative 3.

Native Resident or Migratory Wildlife

Mountain lion movement is already dramatically impacted within the Alternative 3 RSA due to I-405. Construction activities associated with construction of Alternative 3 could temporarily further hinder movement within the Santa Monica Mountains.

The Ground Disturbance Area of Alternative 3 along the Sepulveda Pass would include aerial guideway construction in the Santa Monica Mountains and the widening of I-405 at discrete locations through the Santa Monica Mountains. Within these freeway work zones, retaining walls construction, drainage improvements, and pavement expansion would be conducted for the I-405 widening. Construction of Alternative 3 would impact movement of mountain lions and other vertebrates across I-405 as a result of construction activities, including equipment and lighting and prolonged human presence, thereby decreasing the probability of successful crossings and increasing barriers to movement. This would be a significant impact to wildlife movement and habitat connectivity. MM BIO-14, described in Section 7.4, is included to reduce construction-related impacts to the movement of native wildlife species, specifically mountain lions and other vertebrates to less than significant through preconstruction surveys, protection of natal dens if located, limiting vegetation removal, vegetation restoration, and creation of a 5-year monitoring plan.

Local movement through wildlife corridors may be temporarily impacted due to the increase in noise, lights, anthropogenic presence, and air pollution associated with Alternative 3 construction. Although resident species are assumed to be exposed to, and therefore acclimated to, at least some level of existing disturbance associated with I-405 and other nearby development, an increase in disturbance

related to Project construction would further disrupt behavior patterns in an already urbanized environment. Urban-adapted wildlife may alter their pathways through the region based on construction. Impacts to birds and bats from construction of Alternative 3 may occur due to equipment and lighting associated with nightwork. Bat species have differing reactions to light, with some being attracted and some repelled, but the insects they prey on are influenced by artificial lighting. If artificial lighting for nightwork is adjacent to roosting habitat, it can negatively affect the quality of the habitat. One special-status migratory bat species, the hoary bat, has moderate potential to occur within the Alternative 3 RSA during migratory flyover events. The Santa Monica Mountains provide habitat for the hoary bat for roosting, and foraging resources during their migration from south to north, and vice-versa. Migratory special-status birds also have the potential to occur in the Alternative 3 RSA during construction of Alternative 3. Ground disturbance activities (such as removal of vegetation/habitat, drilling, excavating, pile-driving, topsoil removal, grading) associated with the construction of Alternative 3 could result in a potentially significant impact to migratory bat and migratory avian species.

MM BIO-4, MM BIO-5, MM BIO-7, and MM BIO-14, described in Section 7.4, are included to reduce construction-related impacts to migratory species to a less than significant level through protections for nesting birds and special-status bats, protections for least Bell's vireo, protection of natal dens if located, vegetation restoration, development of a monitoring plan to document changes in wildlife movement over time.

7.3.4.3 Maintenance and Storage Facilities

MSF Base Design

The MSF Base Design for Alternative 3 would be on developed property at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. Since there is no open habitat, waterways, or native vegetation present, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of the MSF Base Design.

MSF Design Option 1

The MSF Design Option 1 for Alternative 3 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor. Since there is no open habitat, waterways, or native vegetation present in MSF Design Option 1, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of MSF Design Option 1.

7.3.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

To assess for conflicts with local policies or ordinances that protect biological resources, policies and ordinances were evaluated by landowner for applicability to the Project. The County of Los Angeles General Plan is applicable to the unincorporated County land located in the southern portion of the Alternative 3 RSA, where the VA Hospital site and Los Angeles National Cemetery are located, among other entities. The County land is already highly developed and landscaped; no woodlands are present and there is low to no likelihood of native vegetation being present that would represent a diverse ecosystem to be preserved. Of the 18 trees within the Tree Survey Area, 14 are nonnative landscaped species and four are oak trees within landscaped areas (discussed below under applicable tree ordinances or policies).

The goal of the "OurCounty" Sustainability Plan is to reduce car dependency by providing a safe, affordable public transit system, which is also the purpose of the Project. In addition, the Project would mitigate for tree impacts on unincorporated County land through an applicable ordinance or policy based on species and therefore contribute to the "living streets" approach of the Sustainability Plan.

For Alternative 3, the *City of Los Angeles General Plan's* (DCP, 2001) policies to create and maintain an integrated open space system that apply to and are addressed by the Project include preserving habitat linkages and providing wildlife corridors (MM BIO-14); conserve and manage watersheds (MM BIO-15 through jurisdictional aquatic resource mitigation); onsite evaluation of sensitive habitats (MM BIO-10) and species (MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-14); and analysis of wildlife movement (MM BIO-14).

Since no SEAs intersect with the RSA and no ground disturbance is planned for the Sepulveda Basin, these policies do not apply to Alternative 3.

The City of Santa Monica General Plan is not applicable to Alternative 3 since no land owned by the City is within the RSA.

The Project complies with the SMMNRA General Management Plan in that the Alternative 3 alignment intersects with SMMNRA in locations that are already developed and therefore is preserving natural resources. Roadside vegetation impacts within SMMNRA are temporary impacts for I-405 highway improvements. MM BIO-9 requires Metro to prepare a Habitat Restoration Plan which will restore temporary impacted locations. MM BIO-14 details coordination with appropriate entities to mitigation for vertebrate crossing impacts, which could include implementing vegetation restoration. Trail locations within SMMNRA would not be affected by the Project. The Project would reduce dependency on cars to comply with the Action Plan. MM BIO-23 complies with the Invasive Plant Management Plan by requiring equipment and personnel to be free of mud, debris, or vegetation when entering the Project.

Four local ordinances or policies protecting trees and shrubs were found to be applicable within the Alternative 3 RSA: City of Los Angeles Protected Tree and Shrub Ordinance, Los Angeles County Oak Tree Ordinance, City of Los Angeles Street Tree Policy (City of LA Policy), and the Metro Tree Policy. For the purpose of this analysis, trees within SMMNRA were assumed to be under the protection of one of these ordinances or policies. No other ordinances or policies related to biological resources were identified that would be pertinent to the operation or construction of Alternative 3.

As discussed below, there is potential for significant impacts related to protected tree and shrub removal within the City of Los Angeles, unincorporated County of Los Angeles, and the SMMNRA related to the construction and operation of Alternative 3. Each tree or cluster within the Tree Survey Area was assigned to one ordinance or policy; the applicable ordinance or policy per tree is included in the detailed tree inventory (Appendix B, Attachment 1, Tree Inventory Tables). When protection requirements for City of LA Ordinance or County Oak Tree Ordinance were not met, trees were considered protected through either the City of LA Policy or Metro Tree Policy. Mitigation amounts and maintenance periods vary between ordinances and policies (Table 7-9).

While there are also trees with potential to be impacted within the SMMNRA on Alternative 3, the SMMNRA does not have a tree ordinance or policy; mitigation for vegetation impacts would be decided through coordination with the applicable entities, such as the National Park Service.

Table 7-9. Details of Jurisdiction, Mitigation Ratios, and Maintenance Period for Landowners with Potential for Impacts to Trees

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
City of LA Protected Tree and Shrub Ordinance	City of LA, including private property	4:1	3 years	Survival of continuously living replacements for maintenance period required.
LA County Oak Tree Ordinance	Unincorporated LA County	2:1	NA	Applicant's proposal should include future maintenance measures where required.
Santa Monica Mountains National Recreation Area (SMMNRA)	Many, National Park Service acts as administrator	2:1 to 4:1[c]	3 to 5 years[c]	Mitigation for impacts within SMMNRA are determined through coordination with appropriate entities. Replacement ratio and maintenance period presented represent a preliminary estimate.
City of Santa Monica Tree Code	City of Santa Monica Public right-of-way (ROW)	2:1 to 4:1[c]	3 to 5 years[c]	Mitigation ratio and maintenance period at discretion of City of Santa Monica. Replacement ratio and maintenance period presented represent a preliminary estimate.
Metro Tree Policy	Metro right-of-way (ROW), Properties & Capital Project Sites	2:1	3 years	Heritage trees, as defined by local ordinance, are protected at 4:1[a].
City of Los Angeles Street Tree Policy	City of LA Public ROW	2:1	5 years	Applicable to any tree or upon any street or parkway in the City, but does not apply to trees within private properties, in Caltrans ROW, or on UCLA campus[b] unless the tree was planted and maintained by the City.

Source: HTA, 2024

[a]Mitigation ratios are for number of replacement trees required per individual tree impacted.

[b]Teresa Estrada, phone call by C. Hargreaves to LA Dept of Urban Forestry Division, July 19, 2024

[c]Mitigation ratio and maintenance period for trees within SMMNRA and the City of Santa Monica estimated from the range of replacement trees for the Metro Tree Policy to the City of LA Ordinance.

NA = not applicable
SMMRNA = Santa Monica Mountains National Recreation Area

There is potential for significant impacts related to tree and vegetation removal within the City of Los Angeles, unincorporated County of Los Angeles, and the SMMNRA related to the construction and operation of Alternative 3.

7.3.5.1 Operational Impacts

During operations of Alternative 3, activities such as trimming, encroaching into the protection zone (i.e., dripline or canopy), or other actions that could damage root systems or alter the grade around a

trunk may impact protected tree and shrub species. These activities would result in a potentially significant impact to protected trees.

Protected tree species on Alternative 3 that may require maintenance include coast live oaks, southern California black walnuts, and Mexican elderberry located at the proposed Getty Center Station and adjacent TPSS facility; coast live oaks and western sycamores located at the proposed Metro G Line Station; and coast live oaks and southern California black walnut located at the proposed Sherman Way Station and adjacent TPSS facility. Maintenance to these protected trees would constitute a significant impact. At the Wilshire Boulevard station within the VA Hospital site, coast live oak and a holly oak are present; however, although these trees are located within the expanded 200-foot Tree Survey Area required for oak trees on unincorporated County land, they are unlikely to require maintenance trimming as a result of Alternative 3.

To address this impact, Alternative 3 would implement MM BIO-3, described in Section 7.4, which would require the installation and maintenance of replacement trees or shrubs when impacts to are unavoidable. With implementation of MM BIO-3, impacts to protected trees during operations of Alternative 3 would be reduced to a less than significant level through installation and maintenance of replacement trees or shrubs following the requirements of the pertinent tree preservation ordinance.

7.3.5.2 Construction Impacts

For the purpose of this assessment, protected trees and shrubs included in the inventory (i.e., of the appropriate size and species whose Tree Protection Zone (TPZ) (dripline or canopy of the tree/shrub) falls at least partially within the Tree Survey Area) are presumed to require removal during construction.

For Alternative 3, a total of 2,926 protected trees and shrubs are mapped within the Tree Survey Area (Table 7-10, map series in Appendix B, Attachment 2). Of those, 154 are protected under the purview of the City of LA Ordinance, irrespective of land ownership at their location, and require permits for any alterations made to protected trees and shrubs during construction, including trimming and encroaching into the tree/shrub protection zone in any manner that will cause a protected tree or shrub to die, such as damaging the root system with compaction or injury and changing the grade around the trunk. Four individual oak trees are protected under the County Oak Tree Ordinance since they occur on unincorporated County land within 200 feet of the Ground Disturbance Area; any modification to them requires a permit beforehand from the Director of Public Works. No impacts are anticipated to these four oak trees due to their distance from the Ground Disturbance Area (i.e., outside the 10-foot buffer but within the 200-foot buffer required by the County Oak Tree Ordinance). The remaining 2,670 trees are protected under the Metro Tree Policy and City of LA Policy. Within the SMMNRA, 98 trees of 11 tree species and 1 unknown species are located within the Tree Survey Area. Heritage or protected trees, as determined by local ordinances or policy, may be present within the Alternative 3 Tree Survey Area; impacts to these trees are anticipated to be less than significant for Alternative 3.

Unless mitigated, the anticipated removal and alteration of protected trees and shrubs during construction of Alternative 3 would conflict with the City and County tree ordinances and with Metro Tree Policy and City of LA Policy. This would be considered a significant impact.

To address this impact, Alternative 3 would implement MM BIO-11, described in Section 3.3.6, which would require installation and maintenance of replacement trees or shrubs when impacts are unavoidable. With implementation of MM BIO-11, impacts associated with the removal of protected trees and shrubs during construction of Alternative 3 would be reduced to a less than significant level.

Table 7-10. Alternative 3: Protected Trees and Shrubs by Jurisdiction within Tree Survey Area

Jurisdiction	Scientific Name	Common Name	Quantity	Mitigation Amount (# replacement trees)
City of LA Protected Tree and Shrub Ordinance	*Heteromeles arbutifolia*	Toyon	29	116
	Juglans californica	Southern California black walnut	20	80
	Platanus racemosa	Western sycamore	24	96
	Quercus agrifolia	Coast live oak	53	212
	Quercus chrysolepis	Canyon live oak	3	12
	Quercus lobata	Valley oak	2	8
	Sambucus mexicana	Mexican elderberry	23	92
LA County Oak Tree Ordinance[a]	*Quercus agrifolia*	Coast live oak	3	6
	Quercus ilexa	Holly oak	1	2
TOTAL			**158**	**624**
Santa Monica Mountains National Recreation Area	Numerous native and non-native tree species[c]		98	196 to 392[d]
City of Santa Monica Tree Code	Numerous native and non-native tree species[b]		NA	NA
Metro/City of Los Angeles Street Tree Policy	Numerous native and non-native tree species[b]		2,670	5,340 plus additional for heritage trees
GRAND TOTAL			**2,926**	**5,964 plus TBD and heritage trees**

Source: HTA, 2024

[a]Los Angeles County Oak Tree Ordinance states “any tree of the oak genus”; non-native oak species are included in this inventory and mitigation calculations.

[b]Mitigation amounts would be at discretion of City of Santa Monica. City of Santa Monica Tree Code mitigation amounts presumed to be within range of ordinances and policies within the area, between 2:1 and 4:1 for the purposes of this analysis.

[c]Full list of SMMNRA and Policy-protected trees listed in Appendix B, Attachment 1, Tree Inventory Tables.

[d]SMMNRA and City of Santa Monica Tree Code mitigation amounts would be decided through coordination with appropriate entities after a preferred alternative is selected.

NA = not applicable
SMMNRA = Santa Monica Mountains National Recreation Area
TBD = to be determined

7.3.5.3 Maintenance and Storage Facilities

Trees present within the two MSF locations associated with Alternative 3 are summarized below; they are policy-protected by either the City of LA Policy or Metro Tree Policy. Permitting would be required for trees on the public ROW and covered by the City of LA Policy. Tree impacts under the Metro Tree Policy would not require permits; instead, coordination and negotiation with landowners would be required to reconcile for street tree impacts removals.

MSF Base Design

The MSF Base Design is not within unincorporated County land, so the Los Angeles County General Plan and Sustainability Plan "OurCounty" are not applicable.

The MSF Base Design for Alternative 3 would be located on developed property at the LADWP facility located east of the Van Nuys Metrolink Station and directly south of the LOSSAN rail corridor. Within the MSF Base Design, there are 32 ornamental trees, including Chinese elm, jacaranda, Canary Island pine, and shamel ash, among others. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF; these trees are covered by the Metro Tree Policy.

Impacts to trees at the MSF Base Design during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW. Trees within the MSFs are anticipated to be removed during construction. Those that are not removed during construction could be subject to potentially significant impacts during operations if maintenance, such as trimming, injury that would result in death, or removal, is required during operations. With implementation of MM BIO-3, impacts to protected trees and shrubs during operations of the MSF for Alternatives 1 and 3 would be reduced to less than significant.

Tree removal at the MSF Base Design during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact. To address this impact, the MSF Base Design would implement MM BIO-11, described in Section 7.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-11, impacts associated with removal of protected trees and shrubs during construction of the MSF Base Design would be reduced to less than significant.

MSF Design Option 1

The MSF Design Option 1 is not within unincorporated County land, so the Los Angeles County General Plan and Sustainability Plan "OurCounty" are not applicable.

The MSF Design Option 1 for Alternative 3 would be located on developed property abutting Orion Avenue, south of the LOSSAN rail corridor. Within the MSF Design Option 1, there are 206 ornamental trees including carob, eucalyptus, sweetgum, cajeput, jacaranda, and assorted palm tree species among others. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF.Impacts to trees at the MSF Design Option 1 during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW; however, no impacts to trees within the MSF Design Option 1 are anticipated during operation since trees within the MSF would have been removed during construction.

Tree removal at the MSF Design Option 1 during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact. To address the impact, the MSF Design Option 1 would implement MM BIO-11, described in Section 7.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-11, impacts associated with removal of protected trees and shrubs during construction of the MSF Design Option 1 would be reduced to less than significant.

7.3.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 3 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

7.3.6.1 Maintenance and Storage Facilities

MSF Base Design

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 3 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

MSF Design Option 1

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 3 RSA. Therefore, no impacts would occur.

7.4 Mitigation Measures

7.4.1 Operational Mitigation Measures

Operational Mitigation Measures can be re-evaluated through discussion with Metro with consideration of any programmatic permits or operation and maintenance plans that pertain to potential impacts to biological resources during operation of the Project.

MM BIO-1: ***Avoid and Minimize Operations-Related Impacts to Nesting Birds.*** *Vegetation trimming for operation of the Project related to operational maintenance shall be under the purview and conducted in compliance with the existing Metro Tree Policy on facilities owned by Metro. The Metro Tree Policy's measures to protect native nesting birds (generally February 15 through September 15), including implementation of bird surveys if tree maintenance must occur within the breeding season, shall be implemented. Metro shall be responsible for ensuring compliance with the Metro Tree Policy throughout operations where such activities occur on its own properties.*

- *Project features and/or mitigation recommendations to avoid direct impacts to bird movement shall be implemented where possible, such as Implementation of appropriate deterrents (e.g., visual and/or auditory) on aerial vehicles and/or support structures of the aerial alignment (where present) to prevent bird collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*

MM BIO-2: ***Avoid and Minimize Operations-Related Impacts to Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from operations-related activities, the following shall be implemented:*

- *Specific mitigation measures related to operational work for the Project shall be detailed in a Bat Habitat Mitigation and Monitoring Plan (BHMMP) created by a Qualified Biologist and approved by the California Department of Fish and Wildlife prior to construction. The BHMMP shall include site-specific measures to*

avoid and minimize Project-related impacts to roosting, overwintering, and breeding special-status bat species. The BHMMP also shall include reporting requirements to document activities and the results of these measures. Bat protection measures may include, but not be limited to, the following:

- *Limiting vegetation removal wherever possible.*
- *Implementation of appropriate deterrents (e.g., visual, sonar, and/or auditory) on aerial vehicles and/or support structures of the aerial alignment where present to prevent bat collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*
- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes shall not be allowed including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during operations, they shall be removed only during the fall (September 1 to October 31) or a time recommended by a Qualified Biologist to ensure removal occurs outside of bat maternity and hibernation seasons. Removal shall occur at night whenever feasible to minimize disturbances. Before removal, a Qualified Bat Bioogist shall inspect each swallow nest for occupancy. If the nest is unoccupied, it may be removed immediately. If bats are present, a small portion of the nest shall be carefully removed to make it less suitable for roosting. This process shall be repeated nightly until the nest is vacated. If the next is not vacated after successive attempts, consultation with the California Department of Fish and Wildlife shall occur to determine appropriate actions.*

- *Trees, bridges, or other structures that may need to have maintenance work conducted during operations shall be evaluated for potential to support bat roosts. Before work is conducted, a Qualified Biologist shall conduct a one-night emergence survey during acceptable weather conditions. The following measures shall apply to trees, bridges, or other structures should bat roosts be detected.*
  - *If roosting bats are determined to be present during the maternity season (April 15 through August 31), work on the tree/structure shall be avoided to the extent feasible until after the maternity season when young are self-sufficient. If work on a tree/structure must occur during the maternity season (for repairs or other activities that cannot wait until the end of the maternity season), bat surveys shall be conducted by a Qualified Biologist to determine the use of the roost by bats, if a maternity roost is present, etc. This shall help inform additional avoidance and minimization measures that may need to be implemented in conjunction with the California Department of Fish and Wildlife to permit work during the maternity season.*

  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state, which occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of operations activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, impacts to the roost shall be avoided, to the extent feasible, until after the winter season when bats are once again active. If avoidance of roosting bats is not possible due to the need for repairs, discussion with the California Department of Fish and Wildlife may be necessary to reduce potential impacts while permitting repair activities.*

- *Trees, bridges, or structures with potential colonial bat habitat that require trimming or repairs during operations outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) can be conducted using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities that could potentially be used by bats shall be removed by hand (e.g., using handsaws) or smaller components of the structure shall begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree will likely cause bats roosting in the tree to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree, bridge, or structure can occur the following day under the supervision of a Qualified Biologist.*
  - *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-3: ***Avoid and Minimize Operations-Related Impacts to Protected Trees and Shrubs.*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *Compliance with the applicable tree policies requirements for permitting and mitigation.*
- *Impacts to protected trees and shrubs during operation of the Project shall be minimized to the maximum extent feasible. When impacts to protected trees and shrubs are unavoidable — including alterations made such as trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy of the tree/shrub) — the following measures shall be required.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture in a manner that does not cause permanent damage or adversely affect the health of*

the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities with jurisdiction as follows:

- *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
- *Trees protected under the City of LA Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
- *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*
- *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
- *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority).*

- *If operations and maintenance requires removal of protected trees or shrubs, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***Special-status trees afforded protection under the California Endangered Species Act or ESA:** Impacts to all trees protected by the California Endangered Species Act or federal Endangered Species Act (e.g., Quercus dumosa) shall require coordination with the California Department of Fish and Wildlife or U.S. Fish & Wildlife Service, as applicable, in addition to the appropriate tree protection ordinance or policy.*
  - ***Los Angeles County Oak Tree Ordinance:** All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:** Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***Policy-Protected Trees**: All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1, or an in-lieu fee shall be made. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*

  - ***Santa Monica Mountains National Recreation Area****: Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*

- *All trees occurring on private property, including within Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*

MM BIO-28: ***Avoid and Minimize Operations-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors during operations shall be avoided, minimized, and/or mitigated as follows:*

- *Metro shall develop, in coordination with California Department of Fish and Wildlife and relevant species experts, and implement a five-year monitoring plan to track wildlife movement across corridors during operations of the Project. This shall include a survey of the Project area prior to construction to establish baseline conditions, as well as monitoring the Project area during operations. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is adversely impacted by the presence of the Project (e.g., injury or mortality due to collisions and other effects, reduced habitat patch connectivity, disruptions in corridor usage or avoidance of pre-existing travel corridors), additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

7.4.2 Construction Mitigation Measures

7.4.2.1 Resource-Specific Mitigation Measures

MM BIO-4: ***Avoid and Minimize Construction-Related Impacts to Nesting Birds.*** *Vegetation clearance for construction of the Project shall occur outside of the nesting bird season (generally February 15 through September 15) to the extent feasible. If vegetation removal outside this time period is not feasible, the following additional measures shall be employed to avoid and minimize impacts to special-status bird species and nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code:*

- *A preconstruction nesting bird survey of the work area (as defined by the Ground Disturbance Area, including staging and laydown yards) plus a 300-foot buffer shall be conducted by a Qualified Biologist within three days prior to the start of ground disturbing activities (including vegetation removal activities) to determine whether active nests (defined as nests with eggs or young) are present within or adjacent to (i.e., within 100 feet for non-special status songbirds, 300 feet for raptors and special-status species) the work zone. Any active nests found shall be recorded and a nest avoidance zone shall be established where no work shall occur. If project activities are delayed beyond 72 hours, a new nesting bird survey shall be completed within 72 hours prior to the resumption of ground disturbing activities.*
- *Active bird nests for species protected by the Migratory Bird Treaty Act shall have a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer established as follows: 300-foot radius buffer for raptors and special-status birds (refer to MM BIO-7 for additional least Bell's vireo measures) and 100-foot-radius buffer for non-raptor and non-special status avian nests. The Qualified Biologist can adjust buffer distances to increase or decrease the radius contingent on topography, existing noise levels, planned operational activities, species specific tolerances to disturbances such as noise and vibration from construction activities, and observations specific nesting pair tolerance to disturbances. Nest monitoring by the Qualified Biologist shall be required following buffer modifications to ensure new buffer is appropriate; adjustments can be made only following monitoring of nesting pair to determine if the buffer is adequate to protect the nest from construction impacts including from noise and vibrations. Installation of temporary noise barriers between the work area and nest can also be evaluated, if installation can occur in a manner to not disturb the nesting pair based on the Qualified Biologist's recommendation. If a Qualified Biologist determines work activities may result in nest failure, project work shall cease within the recommended no-disturbance buffer until a Qualified Biologist determines nest status. Additional follow-up surveys shall be conducted as necessary to determine nest status. Once the nest is determined to be fledged or no longer active, the buffer shall be removed.*
- *A Qualified Biologist shall inform maintenance personnel of any active nests, facilitate avoidance measures, and verify operational activities do not cause disturbance. Maintenance personnel shall be updated on nest status and when avoidance buffers are no longer necessary.*
- *A Qualified Biologist shall monitor each nest on a biweekly basis and project activities shall not occur within the buffer until a Qualified Biologist determines the nest is no longer active (either by fledging or failing naturally). If a nest is adjacent to an access road where no project activities are being conducted, vehicles can drive past the nest without stopping or parking. Signage stating no stopping or idling vehicles shall be posted (facing outwards from the buffer) at the start and end of the nest buffer where it crosses the road.*
- *A Qualified Biologist can determine a nest is inactive (defined as eggs and young no longer present or reliant on the nest site, including fledged young that still*

depend upon the nest), following no observations of activity at the nest location for 1 hour for non-raptor avian nests and 4 hours for raptors.

- *A summary of nesting bird surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented by the biologist at the conclusion of each nesting season and submitted to Metro. In the event that an active bird nest is as belonging to a special-status species afforded protection under the California Endangered Species Act or the federal Endangered Species Act, then the appropriate agency shall be immediately informed, and additional coordination shall occur, as needed.*

MM BIO-5: ***Avoid and Minimize Construction-Related Impacts to Roosting Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from construction activities, the following shall be implemented:*

- *A bat habitat assessment shall be conducted during the bat maternity season (generally April 15 through August 31 for southern California, yearly timing dependent on weather conditions) at least one year prior to construction. A Qualified Biologist shall conduct surveys to determine the presence of bat roosting or maternity habitat within suitable areas where vegetation trimming, tree removal, bridge repair activities, structure demolition, or other construction-related activities may occur and bats may be present. A visual inspection and/or one-night emergence survey of potential bat habitat that may be impacted by activities shall be completed utilizing acoustic recognition technology to determine if any maternity roosts are present. Results from this survey shall be used to create a Bat Habitat Mitigation and Monitoring Plan (BHMMP), produced by a Qualified Biologist, and shall include site-specific minimization and avoidance measures for operations and construction of the Project. These measures shall include but not be limited to establishment of no-disturbance buffers, monitoring of roosting bats to ensure tolerance to disturbances such as noise and vibration from Project activities, mitigation for habitat impacts, and humane eviction or exclusion. If monitoring indicates established no-disturbance buffer is not adequate to prevent disturbances to roosting bats, a Qualified Biologist can adjust the buffer as needed.*
- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during construction. Modifications to ingress and egress routes are not allowed including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (e.g., vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during construction, removal shall occur in the fall (September 1 to October 31 or based on local expert bat biologist input as long as it is outside of bat maternity or hibernation season), preferably at night. Nests shall be inspected for occupancy by a Qualified Biologist and if empty, removed. If a bat is present, if feasible a small portion of the nest can be carefully removed to make the nest a less suitable for roosting. The following night, if the nest is empty, it can be removed entirely. If not, another small portion can be removed if feasible. If removal is not feasible or bats are still present,*

consultation with the California Department of Fish and Wildlife may be appropriate.

- *Trees or structures to be removed as part of the Project shall be evaluated for their potential to support bat roosts. An experienced bat biologist shall conduct a one-night emergence survey during acceptable weather conditions, before the start of removal. The following measures shall apply to trees or structures to be removed that provide potential bat roost habitat; these shall be implemented by a Qualified Biologist.*
  - *If roosting bats are determined present in a tree or on a structure during the maternity season (April 15 through August 31), the tree/structure shall be avoided until after the maternity season when young are self-sufficient. If other trees/structures in the immediate vicinity are slated for removal, or other work shall occur in the immediate vicinity that might disturb roosting bat, a no-work buffer may be needed.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state that occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of project activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, the tree or structure shall be avoided until after the winter season when bats are once again active.*
- *Trees or structures with potential to serve as colonial bat habitat can be removed outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities shall be removed by hand (e.g., using handsaws) or smaller components of the structure shall begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree/structure will likely cause bats roosting to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree or structure can occur the following day under the supervision of a Qualified Biologist.*
- *Trees that are only to be trimmed and not removed shall also require a two-step process with these deviations from the removal process explained above: if a branch with a potential roost must be removed, all surrounding branches shall be trimmed on Day 1 under supervision of a Qualified Biologist and then the limb with the potential roost shall be removed on Day 2.*

- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-6: ***Avoid and Minimize Construction-Related Impacts to Crotch's Bumble Bee.***
To reduce impacts on Crotch's bumble bee from construction activities, the following shall be implemented:

- *A pre-construction habitat assessment for Crotch's bumble bee shall be conducted by a Qualified Biologist within the Ground Disturbance Area and a surrounding 100-foot buffer to demarcate potentially suitable nesting and foraging habitat.*
- *Nesting surveys and foraging surveys shall be conducted during the most active flight period and peak blooming period of nectar and pollen sources (generally April 1 through July 31). The survey shall be conducted between at least 1 hour after sunrise and at least 2 hours before sunset, with ambient air temperature between 60- and 90-degrees Fahrenheit. Surveys shall not be conducted during windy periods with speeds of over 10 mph, during fog or low visibility, or precipitation heavier than drizzling rain.*
- *Foraging surveys shall focus on areas of high abundance of nectar and pollen sources with meandering transects within these areas at a rate of no more than 2.5 acres per hour.*
- *Nesting surveys shall focus on areas with existing, abandoned, rodent burrows; the biologist shall focus on detecting potential Crotch's bumble bee nest within suitable habitat.*
- *If a nest is documented, a 50-foot "no-disturbance" buffer shall be established and clearly identified in the field for avoidance. Construction activities shall avoid the nest location and surrounding buffer until the nest has senesced.*
- *Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed and/or a nest is located, California Department of Fish and Wildlife shall be informed, and additional coordination shall occur as needed.*

MM BIO-7: ***Avoid and Minimize Project-Related Impacts to Least Bell's Vireo.***
To reduce impacts on least Bell's vireo from construction activities, the following shall be implemented:

- *Prior to initiation of construction activities, the Project shall perform one full season of protocol surveys for least Bell's vireo in suitable habitat within 500 feet of construction activities following the accepted U.S. Fish & Wildlife Service protocol. Focused surveys shall be completed prior to construction initiation and results shall be used to inform a consultation process with the U.S. Fish & Wildlife Service for project permitting. Eight surveys shall be conducted between April 10 and July 31, with each survey spaced at least 10 days apart. Reduction in the prescribed number of individual surveys may be evaluated in accordance*

with the U.S. Fish & Wildlife Service protocol. Surveys shall be conducted between dawn and 11:00 a.m. and outside of periods of inclement weather (excessive heat or cold, high winds, rain, etc.). Surveys shall not be conducted concurrently with other surveys. Per the U.S. Fish & Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.

- *Following completion of protocol surveys, pre-construction presence/absence clearance surveys shall be required if construction is planned to begin within the nesting season. Clearance surveys shall be required within 500 feet of suitable habitat and must occur 3 or fewer days prior to start of activities. Presence/absence surveys shall be conducted by a Qualified Biologist who is familiar with species visually and aurally, and who is able to differentiate similar species. The Qualified Biologist shall not be required to have an Endangered Species Act Section 10(a) recovery permit covering this species since recorded vocalizations shall not be used to illicit responses and nest monitoring (i.e., locate and monitor the nest, including removal of brown-headed cowbird (Molothrus ater) eggs and chicks from parasitized nests) and handling of individual are not proposed.*
- *If protocol and pre-construction survey results are negative, construction activities can commence, and a Qualified Biologist shall conduct presence/absence surveys weekly during the breeding season while construction is occurring within 500 feet of suitable habitat. If least Bell's vireo are detected during a survey, a Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat until the end of the breeding season. If construction within 500 feet of suitable habitat is paused for more than 3 days, a new survey must be conducted to verify if least Bell's vireo are present.*
- *If an active nest is documented, a no-disturbance 300-foot radius buffer shall be established and clearly identified in the field. Construction activities shall avoid the nest location and buffer until a Qualified Biologist declares the nest inactive. A Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat every day work is occurring while the nest is active. Noise monitoring shall be required weekly on varying days to account for changes in construction-related noise levels from before the nest is active to after. Monitoring shall be to ensure noise levels remain at or below 60 A-weighted decibels (dBA) or to the ambient noise level if it already exceeds 60 dBA before construction at specified monitoring locations within 100 feet of the nest. The Qualified Biologist shall either conduct the noise monitoring or escort the noise monitor if they are not a Qualified Biologist.*
- *The results of the surveys shall be used to design project features and temporary work areas to avoid direct impacts to occupied habitat for listed riparian bird species. Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*

MM BIO-8: ***Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles.*** *To reduce impacts on special-status reptiles from construction activities, the following shall be implemented:*

- *Prior to the start of vegetation removal, the Ground Disturbance Area shall be clearly fenced (usually with silt fencing) to delineate the extent of the construction area.*
- *Once fencing is in place, a Qualified Biologist shall conduct a pre-vegetation clearance sweep to look for and remove any special-status reptile species (e.g., coast horned lizard, two-striped garter snake, southwestern pond turtle, coastal whiptail, and southern California legless lizard) that may occur within the Ground Disturbance Area. If any special-status reptile species are detected within the Ground Disturbance Area, personnel shall allow the species to escape unimpeded if possible. Alternatively, the Qualified Biologist shall move the species outside of the fencing to the closest suitable habitat pending authorization from the U.S. Fish & Wildlife Service or California Department of Fish and Wildlife, if required.*
- *Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*
- *Any observations of special-status reptiles shall be summarized in writing and submitted to Metro. In the event that an observed special-status species is afforded protection under the California Endangered Species Act or federal Endangered Species Act, then the appropriate agency shall be immediately informed and additional coordination shall occur, as needed.*

MM BIO-9: ***Avoid and Minimize Construction-Related Impacts to Special-Status Plants.*** *Impacts to special-status plants shall be avoided, minimized and/or mitigated through incorporation of the following:*

- *Prior to any Project activities that may modify vegetation, focused rare plant surveys shall be conducted following California Department of Fish and Wildlife protocols. Focused surveys shall occur during optimal blooming periods for special-status species likely to occur, which typically results in multiple visits within one growing season (e.g., early, mid- and late-season surveys). In the event a federally listed species is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*
- *If focused rare plant data is more than 1 year old at commencement of construction, pre-construction surveys during the optimal blooming periods shall occur to demarcate special-status plant populations for avoidance (where feasible). The results of the focused surveys shall be used to design Project features and temporary work areas to avoid direct impacts to federally and state-listed plant species.*
- *Any observations of special-status plants prior to and during Project construction activities shall be documented in writing, including detailed descriptions of the location, species, and condition of the plant. If a special-status species protected*

under the California Endangered Species Act or the federal Endangered Species Act is observed, Metro shall immediately notify the appropriate agency (e.g., California Department of Fish and Wildlife or U.S. Fish & Wildlife Service) and coordinate further actions as required by law. This may include consultation to determine the need for additional avoidance, minimization, or mitigation measures. If impacts to special-status plants cannot be avoided, the Project shall prepare and implement a Habitat Restoration Plan. The Habitat Restoration Plan shall include mitigation ratios for impacted special-status plants and native habitats, installation methods, a detailed monitoring plan that includes quantifiable data collection, maintenance strategies, reporting requirements, and quantifiable performance criteria for restoration success.

- *Special-Statis plant mitigation strategies shall include restoration of impacted areas through seeding and/or plantings. Weed abatement shall be implemented if Project activities result in non-native species within the Ground Disturbance Area that were not present before activities began. Specific strategies shall be implemented as described below:*
  - *If special-status plant species observed during surveys can feasibly be transplanted, such as slender mariposa lily (Calochortus clavatus var. gracilis), individuals shall be salvaged prior to ground disturbance for translocation. Salvage may include collection by hand of individual plants, storage in an appropriate manner depending on species, and replanting within suitable habitat close to its original location following completion of construction activities. For the purposes of this measure, "feasible" shall mean the ability to transplant plants without jeopardizing plant viability, project design, or safety requirements.*
  - *If on-site repair or restoration efforts are not feasible or adequate to mitigate for impacted plants, alternative measures, such as off-site compensation, shall be implemented. Off-site compensation shall achieve equivalent or greater ecological value and shall utilize a minimum 3:1Erreplacement ratio (three replacement plants for every one impacted plant). The replacement ratio shall be based on the number of individuals impacted or the acreage of habitat affected, depending on the specific circumstances, and the species affected. The compensation area shall be protected in perpetuity through mechanisms such as conservation easements, deed restrictions, or long-term management agreements.*
  - *To protect special-status plant populations from human disturbance after construction is completed, fencing or signage shall be installed around restored areas where public access is anticipated.*

MM BIO-10: ***Avoid and Minimize Construction-Related Impacts to Sensitive Vegetation Communities.***

Impacts to sensitive vegetation communities shall be avoided, minimized, and/or mitigated as follows:

- *The Project shall prioritize avoiding impacts to sensitive vegetation communities, including but not limited to California walnut woodland and sugar bush shrubland, and any other communities ranked S1 to S3 by the California Department of Fish and Wildlife. When avoidance is not possible, impacts shall be minimized by planning construction activities in previously disturbed areas to the extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid impacts without compromising essential project design, safety, regulatory compliance, or causing environmental impacts that would be greater than those being minimized.*
- *Impacts to any natural vegetation communities designated sensitive, such as California walnut woodland and sugar bush shrubland, shall be reduced by trimming vegetation instead of removing entire trees or shrubs where feasible. For the purposes of this measure, "feasible" is defined as the ability to trim vegetation without compromising plant health, public or worker safety, or essential project design requirements. Where trimming alone is infeasible, removal shall be conducted in a manner that avoids further damage to surrounding vegetation.*
- *When feasible, temporary impact areas shall have vegetation trimmed and rootballs left intact to enable regrowth once construction is complete.*
- *In conjunction with appropriate entities with jurisdiction (i.e., Caltrans for their right-of-way, Santa Monica Mountains Conservancy for Santa Monica Mountains National Recreation Area), Metro shall design, develop and implement a 5-year restoration plan to restore native vegetation communities disturbed by construction activities. A preconstruction assessment of sensitive vegetation communities shall be conducted to collect a comprehensive plant species list, community structure data, native and nonnative plant cover assessments, and preconstruction photos for permanent photo points; this information shall be incorporated into the restoration plan. The plan shall include a monitoring program that includes both qualitative and quantitative data collection, quantified performance criteria that consider pre-construction conditions, irrigation and maintenance actions, and the use of native plantings and/or seedlings to restore native communities. Performance criteria shall be defined with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and shall include the following habitat characteristics: native plant species cover and diversity, container plant survivorship (if applicable), non-native annual species cover, absence of non-native, woody perennial species cover, and self-sufficiency of restoration plants (i.e., ability to persist without supplemental irrigation).*
- *Native species such as succulents, bulb species, and cactus shall be salvaged from the Ground Disturbance Area before work begins, to the maximum extent*

feasible, and stored in an appropriate manner depending on species requirements. These species shall be replanted within the Ground Disturbance Area at project conclusion as part of the restoration efforts.

- *Progress toward these performance criteria shall be evaluated on a regular basis as defined in the restoration plan, but a minimum of once annually for the 5-year maintenance period. If the success standards are not met by the end of Year Five, additional measures such as replanting, remedial seeding, and/or supplemental watering shall be implemented. Monitoring shall continue thereafter until performance criteria are attained.*
- *Restoration monitoring results and future recommendations shall be submitted in annual reports submitted to Caltrans, the Santa Monica Mountains Conservancy, and other relevant agencies until success criteria are achieved.*

MM BIO-11: ***Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Applicable to Alternatives 1 and 3).*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *A Tree Expert, as defined under the City of Los Angeles Protected Tree and Shrub Ordinance, shall complete a detailed tree survey report prior to construction and once access is obtained to properties within the alignment. The report shall build upon the Initial Protected Tree and Shrub Inventory Memorandum (Appendix B) and include detailed field methods and data for each protected tree or shrub, such as species, height, diameter, canopy spread, physical condition, and precise location. The City of Los Angeles Protected Tree and Shrub Ordinance has jurisdiction in the Project; therefore, a Tree Expert shall be required to conduct the detailed survey and procure permit for protected tree/shrub removal from the Los Angeles Board of Public Works. The Tree Expert's follow-up report shall expand upon the initial assessment to provide a comprehensive dataset with verification of tree/shrub species, height, canopy width, and tree/shrub health for the Ground Disturbance Area. This follow-up report shall be used to procure the required permit prior to commencement of tree impacts within the City of Los Angeles.*
- *Impacts to protected trees and shrubs shall be minimized to the maximum extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid or minimize impacts while meeting project design, safety, and operational requirements, as determined by the Tree Expert and project engineers. When trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy) is needed, the following measures shall be implemented.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture and conducted in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities as follows:*

- *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
- *Trees protected under the City of Los Angeles Street Tree Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
- *Trees covered by the Metro Tree Policy and designated for retention shall require the Project to prepare a Tree Protection Plan. The Tree Protection Plan shall identify Tree Protection Zones for all trees designated for retention and shall protect larger trees from immediate damage during construction and delayed damage from construction activities, such as loss of root area or soil compaction. The Project shall prepare a mitigation plan for damaged and removed trees with a minimum replacement ratio of 2:1 per removed street tree.*
- *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
- *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority)*

- *For impacts to protected trees and shrubs beyond trimming, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***Los Angeles County Oak Tree Ordinance:*** *All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:*** *Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***Policy-Protected Trees:*** *All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1 per individual. The Los Angeles Street Tree Policy allows for an in-lieu fee to be made with approval of the Board of Public Works following verification that replacement trees cannot be feasibly planted onsite. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*

  - ***Santa Monica Mountains National Recreation Area:*** *Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*

- *All trees occurring on private property or Caltrans right-of-way shall not require permitting but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1 per individual.*
- *For protected trees and shrubs that are not anticipated to be impacted, a Tree Protection Zone shall be established around each tree/shrub or cluster of trees/shrubs prior to the commencement of work. The Tree Protection Zone shall be erected using temporary fencing in an environmentally sensitive manner and remain in place until all site work has been completed. Specific installation timeframe may vary but the Tree Protection Zone must be inspected and approved by a Qualified Arborist prior to construction work occurring, including staging of equipment. Work can commence directly following arborist inspection and approval. No construction-related materials shall be stored or staged within the Tree Protection Zone (fenced areas).*
- *The LA Street Tree Policy would require coordination with the City of Los Angeles Department of Public Works for removal or maintenance of protected trees; this policy does not apply to trees within private property, UCLA, or within the Caltrans right-of-way. The Metro Tree Policy would not require permitting but would require coordination with the landowners (e.g., private landowners, UCLA, Caltrans) when a tree must be removed. Additionally, Metro Tree Policy states a mitigation plan would be required to be developed in consultation with a Certified Arborist if construction impacts resulted in a damaged to or removed a protected tree; decisions would be made in accordance with local ordinances identifying protected trees.*

MM BIO-14: ***Avoid and Minimize Construction-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors shall be avoided, minimized, and/or mitigated as follows:*

- *Prior to any ground-disturbing activity, a Qualified Biologist shall conduct a detailed analysis of wildlife movement and corridors within the Santa Monica Mountains as they relate to ground disturbance activities for the Project. Analysis shall include desktop review of publicly available documentation, including research publications, project reports, environmental analyses, and high-quality aerial imagery, to anticipate wildlife movement patterns within the project vicinity. Field surveys shall also be conducted to identify and document wildlife crossings.*
- *Prior to construction, Metro shall coordinate with the California Department of Fish and Wildlife, Caltrans, the Santa Monica Mountains Conservancy/Santa Monica Mountains National Recreation Area, and species experts (as appropriate) to identify and implement appropriate minimization and avoidance*

measures to facilitate mountain lion and other vertebrate movement and connectivity across the Santa Monica Mountains. Performance standards for wildlife connectivity shall require that post-construction conditions maintain or improve wildlife movement. Specifically, the Project shall achieve a 0 percent increase in road mortality for mountain lions and other sensitive species in the Project Study Area, as measured through tracking and monitoring for at least five years post-construction.

- *Prior to any ground-disturbing activities, field surveys shall be conducted by a Qualified Biologist to (1) confirm mountain lion presence or absence (2) identify known or potential mountain lion natal dens within suitable habitat with 600 feet of ground-disturbing activities during the breeding season (April through September), and (3) identify and document wildlife crossings in the Project vicinity. Surveys shall be conducted at dawn and dusk to increase probability of detection.*
  - *If a mountain lion natal den is identified during the survey, the Qualified Biologist shall establish a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer where work shall cease until the den is no longer occupied or the cubs have successfully reared. The size of the buffer shall be determined based on characteristics of the den (e.g., distance, direction facing, observed behavior) and through consultation with species experts and the California Department of Fish and Wildlife to ensure the buffer is of appropriate size to not adversely affect rearing of cubs.*
  - *Vegetation removal shall be limited wherever possible, particularly within the Santa Monica Mountains.*
  - *Vegetation restoration within temporarily disturbed areas adjacent to wildlife crossings shall be designed to facilitate wildlife movement. Installed vegetation patches shall be designed to act as "stepping stones" to provide cover for wildlife approaching crossings. All vegetation provided shall be consistent with any Habitat Restoration Plan required pursuant to MM BIO-9.*
- *A summary of survey results from presence/absence and den surveys shall include maps of the survey area and possible denning locations and shall be submitted to Metro and the California Department of Fish and Wildlife. If a natal den or presence is confirmed, the California Department of Fish and Wildlife shall be immediately informed, and additional coordination shall occur, as needed.*

- *Metro shall also develop a five-year monitoring plan, in coordination with the California Department of Fish and Wildlife and species experts, to track wildlife movement across corridors during and after construction. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is negatively impacted, additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to the California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

MM BIO-15: ***Avoid and Minimize Construction-Related Impacts to Jurisdictional Aquatic Resources.*** *Potential impacts to drainages shall be avoided and/or minimized when working in or adjacent to aquatic resources as defined in the Aquatic Resources Delineation Report (Appendix AAppendix A from the Sepulveda Transit Corridor Project Ecosystem and Biological Resources Technical Report) through incorporation of the following:*

- *A Qualified Biologist/Aquatic Specialist shall monitor construction activities adjacent to jurisdictional aquatic resources during vegetation clearing and/or initial ground-disturbance activities. Additionally, they shall support impact avoidance and minimization measures detailed in permits and approvals obtained for the Project.*
- *Limits of the Ground Disturbance Areas shall be designated with lathe staking or a similar method. All equipment and workers shall remain within approved work limits.*
- *Wherever possible, construction personnel shall utilize existing access roads or previously disturbed areas to reach the project area or stage their vehicles and equipment.*
- *Maintenance personnel shall also not leave any waste or debris behind which could impact natural habitats.*
- *To protect water quality:*
  - *Appropriate best management practices shall be installed to prevent erosion and guide runoff during rain events.*
  - *Equipment and materials shall be staged within the alignment and away from water drainages. Parked equipment shall have secondary containment to prevent any fluid leaks from coming into contact with the ground surface.*
  - *Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter into an aquatic resource.*

- *Disposal or temporary placement of excess fill, brush, or other debris shall not be allowed in Waters of the United States, Waters of the State, and California Department of Fish and Wildlife streambeds or their banks.*

MM BIO-29: ***Avoid and Minimize Construction-Related Impacts to Overwintering Burrowing Owls.*** *To avoid and reduce impacts on overwintering burrowing owls from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, a Qualified Biologist familiar with the ecology of burrowing owls shall conduct the following field investigations:*
  - *A habitat assessment to map Project areas with potential to support overwintering burrowing owls. The habitat assessment shall follow the methodology outlined in Appendix C of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012) and shall include the Project footprint and a 150 meter buffer of these areas.*
  - *One season of non-breeding season surveys, including at least four (4) visits spread evenly throughout the non-breeding season (defined as September 1 to January 31).*
  - *Results of these investigations shall be summarized in writing and submitted to the California Department of Fish and Wildlife, and used to inform the need for pre-construction take avoidance surveys or additional permitted as needed.*
- *A Qualified Biologist shall conduct a pre-construction take avoidance survey in all areas of known or potentially suitable overwintering habitat, following the methodology outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012). The take avoidance survey shall be conducted no less than 14 days prior to initiating ground disturbance and may be repeated if work activities are paused for a period of 7 days or more during the non-breeding season (September 1 to January 31).*
  - *At the discretion of the Qualified Biologist, an additional pre-construction clearance survey shall be conducted no more than 24 hours prior to ground disturbance, to ensure that no burrowing owls have colonized the work areas or adjacent habitats.*
  - *If an occupied wintering burrow is located, an appropriate no-disturbance buffer shall be implemented. The width of the buffer shall be determined by the Qualified Biologist with consideration of the level of disturbance that is anticipated for the burrowing, following the recommended buffer distances outlined below.*
    - *Low level of disturbance: 50 meters*
    - *Medium level of disturbance: 100 meters*
    - *High level of disturbance: 500 meters*
  - *Results of the survey shall be summarized in writing and submitted to the California Department of Fish and Wildlife for review.*

- *If an occupied burrow cannot be avoided, work in the vicinity of the burrow shall stop, the California Department of Fish and Wildlife shall be contacted, and additional coordination shall occur as needed in compliance with the California Endangered Species Act.*

7.4.2.2 General Construction Measures

The following general construction measures are proposed for implementation during construction activities:

MM BIO-16: *Prior to vegetation clearing, grading, and/or construction activities that may impact habitats of special-status species, a Qualified Biologist(s) shall oversee installation of appropriate temporary Environmentally Sensitive Area fencing and/or flagging to delineate the limits of construction and the approved construction staging areas for protection of identified sensitive resources outside the approved construction/staging zones. All construction access and circulation shall be limited to designated construction/staging zones. Fencing shall be of a type that shall not entangle or otherwise detrimentally effect wildlife or the environment. Fencing shall be checked weekly to ensure it is intact and functioning as intended, to look for signs of degradation that might cause harm to wildlife or the environment, and to ensure fenced construction limits are not exceeded. This fencing shall be removed upon completion of construction activities.*

MM BIO-17: *A Qualified Biologist(s) shall monitor project activities during vegetation clearing, grading, and/or construction within or adjacent to areas identified as sensitive habitat and/or jurisdictional aquatic resources. If special-status species and/or sensitive habitats adjacent to the project sites are inadvertently impacted by activities, then the Qualified Biologist(s) shall immediately inform the on-site construction supervisor who shall temporarily halt or redirect work away from the area of impact. If unanticipated impacts occur to occupied habitat for special-status species, the Project shall consult with the appropriate regulatory agencies.*

MM BIO-18: *A Worker Environmental Awareness Plan (WEAP) shall be developed and implemented prior to the start of construction. Environmental training shall be led by the Qualified Biologist(s) and shall cover the sensitive resources found on-site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. New workers added to construction after the initial training at work start shall be required to receive WEAP training before they may begin work on the Project. Documentation of personnel who have attended WEAP training shall be maintained and submitted to Metro. All information included in WEAP training shall be kept on Project sites to be readily accessible to any personnel in a form deemed appropriate for the Project (e.g., wallet cards, printed flyers, etc.).*

MM BIO-19: *Wildfires shall be prevented by exercising care when driving to prevent sparks and by not parking construction vehicles where catalytic converters could ignite dry vegetation. All construction vehicles shall carry water and shovels or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. Smoking shall take place within designated areas and away from vegetated areas.*

MM BIO-20: *Construction workers shall be prohibited from bringing pets and firearms to the site.*

MM BIO-21: *To prevent unnecessary erosion, runoff, and sedimentation, all construction activities within 100 feet of drainages or wetlands shall cease during Stormwater Pollution Prevention Plan-defined rain events and shall not resume until conditions are suitable for the movement of equipment and materials. Vehicle access along unpaved access routes shall not occur during saturated soil condition to avoid rutting or other soil disturbance.*

MM BIO-22: *If night work shall occur, all lighting used during night construction shall be temporary and shall be implemented to reduce lighting effects onto adjacent open space areas (i.e., downcast, away from habitat) and/or shall also be directed away from nests/roosting sites on man-made structures. Light shields shall be used to minimize light pollution adjacent to the Project.*

MM BIO-23: *Prior to entering the construction areas, equipment and personnel shall be free of mud, debris, or vegetation to prevent the introduction and spread of weeds or invasive species to the Project. If required, vehicle washing shall occur within designated areas within project construction areas where appropriate containment has been established, or at a suitable off-site facility.*

MM BIO-24: *Dust suppression measures shall be implemented during construction to minimize the creation of dust clouds and possible degradation of sensitive vegetation communities and special-status species suitable habitat. These measures shall include applying water at least once per day or as determined necessary by the Qualified Biologist(s) to prevent visible dust emissions from exceeding 100 feet in length in any direction. In addition, watering frequency shall be increased to four times per day if winds exceed 25 miles per hour. Nontoxic soil stabilizers may be used on access roads to control fugitive dust, as needed.*

MM BIO-25: *Vehicle speeds shall be restricted to posted speed limits on existing paved roads and to 15 miles per hour on dirt or gravel access roads during all phases of the Project. Speed limit signs shall be posted on dirt or gravel access roads throughout the site to remind workers of travel speed restrictions.*

MM BIO-26: *Trenches and excavations located within open areas shall be backfilled with earth at the end of each workday or have one edge sloped into an escape ramp with a less than 1:1 (45 degree) slope to prevent wildlife entrapment. A non-slip material may be used (e.g., wooden ramp with traction) when an earthen escape ramp cannot be created. For instances when these methods are not feasible (e.g., deep, long-term excavations for underground segments), temporary exclusion fencing can be installed around the perimeter of the work area to prevent animal entrapment. The Qualified Biologist shall ensure the temporary exclusion fencing is sufficiently supported to maintain integrity under all conditions and shall be checked daily to ensure integrity is maintained and inspect it daily while work is occurring. Fencing shall be repaired each day, as needed to ensure integrity is maintained. A Qualified Biologist shall inspect all trenches and excavations for trapped animals at the beginning and end of each day, as well as before excavations are backfilled. Should wildlife become trapped in any trenches or excavations, a Qualified Biologist(s) shall remove and relocate them outside the construction zone. When entrapped wildlife is a listed*

species with handling restrictions, relocation must be conducted by a biologist permitted to handle the species. Where trenches or excavations cannot be immediately backfilled or sloped, open excavations shall be covered and the end of each day with boards or plates. The edges of the boards shall be sealed with native spoils to prevent wildlife from entering the excavation in gaps at the board edges.

MM BIO-27 *Spoils, trash, and any construction-generated debris shall be removed to an approved off-site disposal facility. Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*

7.4.3 Impacts After Mitigation

Implementation of the mitigation measures listed above shall reduce biological resources impacts related to project operations and construction to a level that is considered less than significant.

8 ALTERNATIVE 4

8.1 Alternative Description

Alternative 4 is a heavy rail transit (HRT) system with a hybrid underground and aerial guideway track configuration that would include four underground stations and four aerial stations. This alternative would provide transfers to five high-frequency fixed guideway transit and commuter rail lines, including the Los Angeles County Metropolitan Transportation Authority's (Metro) E, Metro D, and Metro G Lines, the East San Fernando Valley Light Rail Transit Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 13.9 miles, with 5.7 miles of aerial guideway and 8.2 miles of underground configuration.

The four underground and four aerial HRT stations would be as follows:

1. Metro E Line Expo/Sepulveda Station (underground)
2. Santa Monica Boulevard Station (underground)
3. Wilshire Boulevard/Metro D Line Station (underground)
4. UCLA Gateway Plaza Station (underground)
5. Ventura Boulevard/Sepulveda Boulevard Station (aerial)
6. Metro G Line Sepulveda Station (aerial)
7. Sherman Way Station (aerial)
8. Van Nuys Metrolink Station (aerial)

8.1.1 Operating Characteristics

8.1.1.1 Alignment

As shown on Figure 8-1, from its southern terminus station at the Metro E Line Expo/Sepulveda Station, the alignment of Alternative 4 would run underground north through the Westside of Los Angeles (Westside) and the Santa Monica Mountains to a tunnel portal south of Ventura Boulevard in the San Fernando Valley (Valley). At the tunnel portal, the alignment would transition to an aerial guideway that would generally run above Sepulveda Boulevard before curving eastward along the south side of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor to the northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station.

The proposed southern terminus station would be located underground east of Sepulveda Boulevard between the existing elevated Metro E Line tracks and Pico Boulevard. Tail tracks for vehicle storage would extend underground south of National Boulevard east of Sepulveda Boulevard. The alignment would continue north beneath Bentley Avenue before curving northwest to an underground station at the southeast corner of Santa Monica Boulevard and Sepulveda Boulevard. From the Santa Monica Boulevard Station, the alignment would continue and curve eastward toward the Wilshire Boulevard/Metro D Line Station beneath the Metro D Line Westwood/UCLA Station, which is currently under construction as part of the Metro D Line Extension Project. From there, the underground alignment would curve slightly to the northeast and continue beneath Westwood Boulevard before reaching the UCLA Gateway Plaza Station.

Figure 8-1. Alternative 4: Alignment

Source: STCP, 2024; HTA, 2024

From the UCLA Gateway Plaza Station, the alignment would turn to the northwest beneath the Santa Monica Mountains to the east of Interstate 405 (I-405). South of Mulholland Drive, the alignment would curve to the north to reach a tunnel portal at Del Gado Drive, just east of I-405 and south of Sepulveda Boulevard.

The alignment would transition from an underground configuration to an aerial guideway structure after exiting the tunnel portal and would continue northeast to the Ventura Boulevard/Sepulveda Boulevard

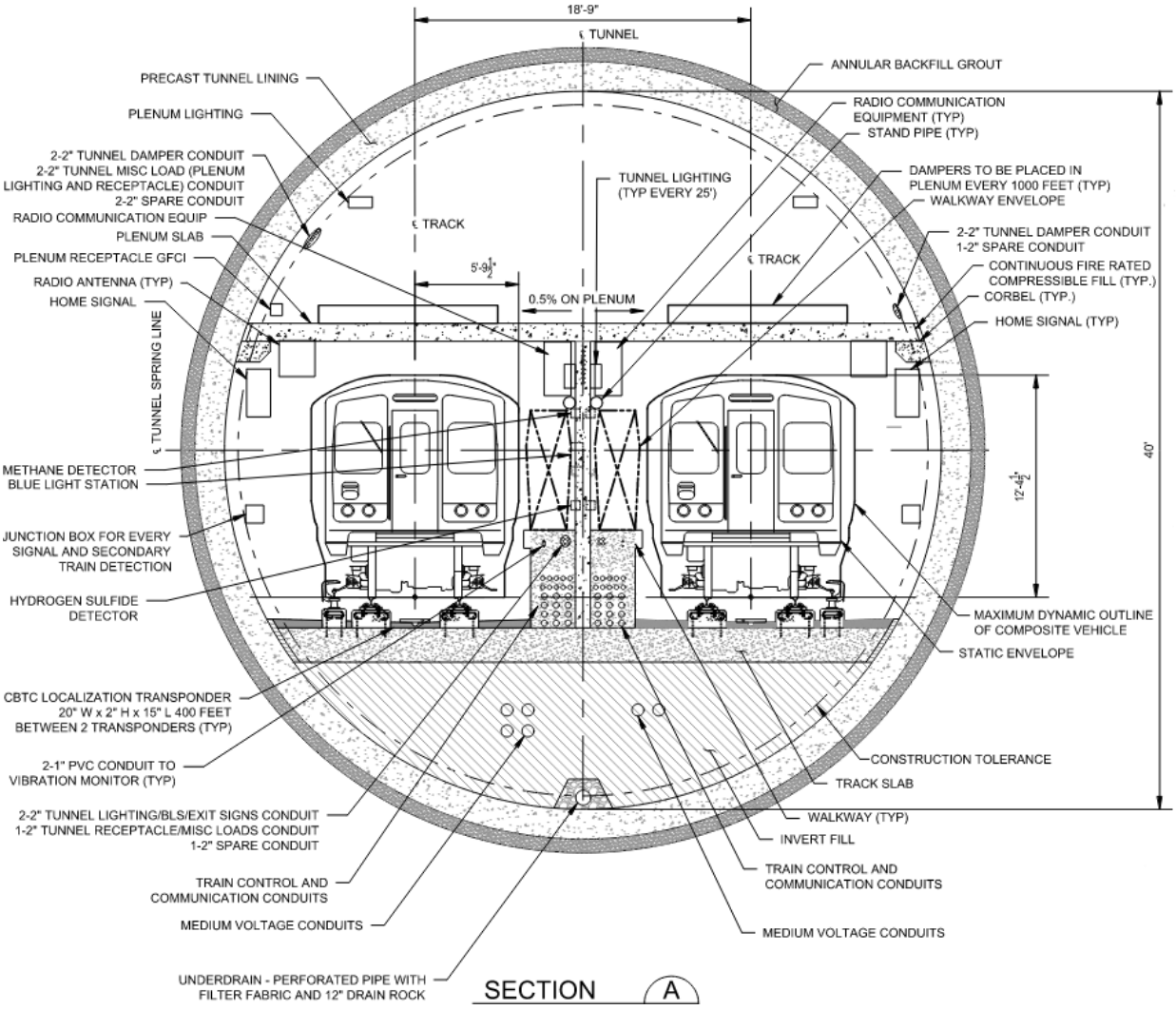
Station located over Dickens Street, immediately west of the Sepulveda Boulevard and Dickens Street intersection. North of the station, the aerial guideway would transition to the center median of Sepulveda Boulevard. The aerial guideway would continue north on Sepulveda Boulevard and cross over US-101 and the Los Angeles River before continuing to the Metro G Line Sepulveda Station, immediately south of the Metro G Line Busway. Overhead utilities along Sepulveda Boulevard in the Valley would be undergrounded where they would conflict with the guideway or its supporting columns.

The aerial guideway would continue north above Sepulveda Boulevard where it would reach the Sherman Way Station just south of Sherman Way. After leaving the Sherman Way Station, the alignment would continue north before curving to the southeast to parallel the LOSSAN rail corridor on the south side of the existing tracks. Parallel to the LOSSAN rail corridor, the guideway would conflict with the existing Willis Avenue Pedestrian Bridge, which would be demolished. The alignment would follow the LOSSAN rail corridor before reaching the proposed northern terminus Van Nuys Metrolink Station located adjacent to the existing Metrolink/Amtrak Station. Tail tracks and yard lead tracks would descend to a proposed at-grade maintenance and storage facility (MSF) east of the northern terminus station. Modifications to the existing pedestrian underpass to the Metrolink platforms to accommodate these tracks would result in reconfiguration of an existing rail spur serving City of Los Angeles Department of Water and Power (LADWP) property.

8.1.1.2 Guideway Characteristics

Alternative 4 would utilize a single-bore tunnel configuration for underground tunnel sections, with an outside diameter of approximately 43.5 feet. The tunnel would include two parallel tracks with 18.75-foot track spacing in tangent sections separated by a continuous central dividing wall throughout the tunnel. Inner walkways would be constructed adjacent to the two tracks. Inner and outer walkways would be constructed within tunnel sections near the track crossovers. At the crown of tunnel, a dedicated air plenum would be provided by constructing a concrete slab above the railway corridor. The air plenum would allow for ventilation throughout the underground portion of the alignment. Figure 8-2 illustrates these components at a typical cross-section of the underground guideway.

Figure 8-2. Typical Underground Guideway Cross-Section

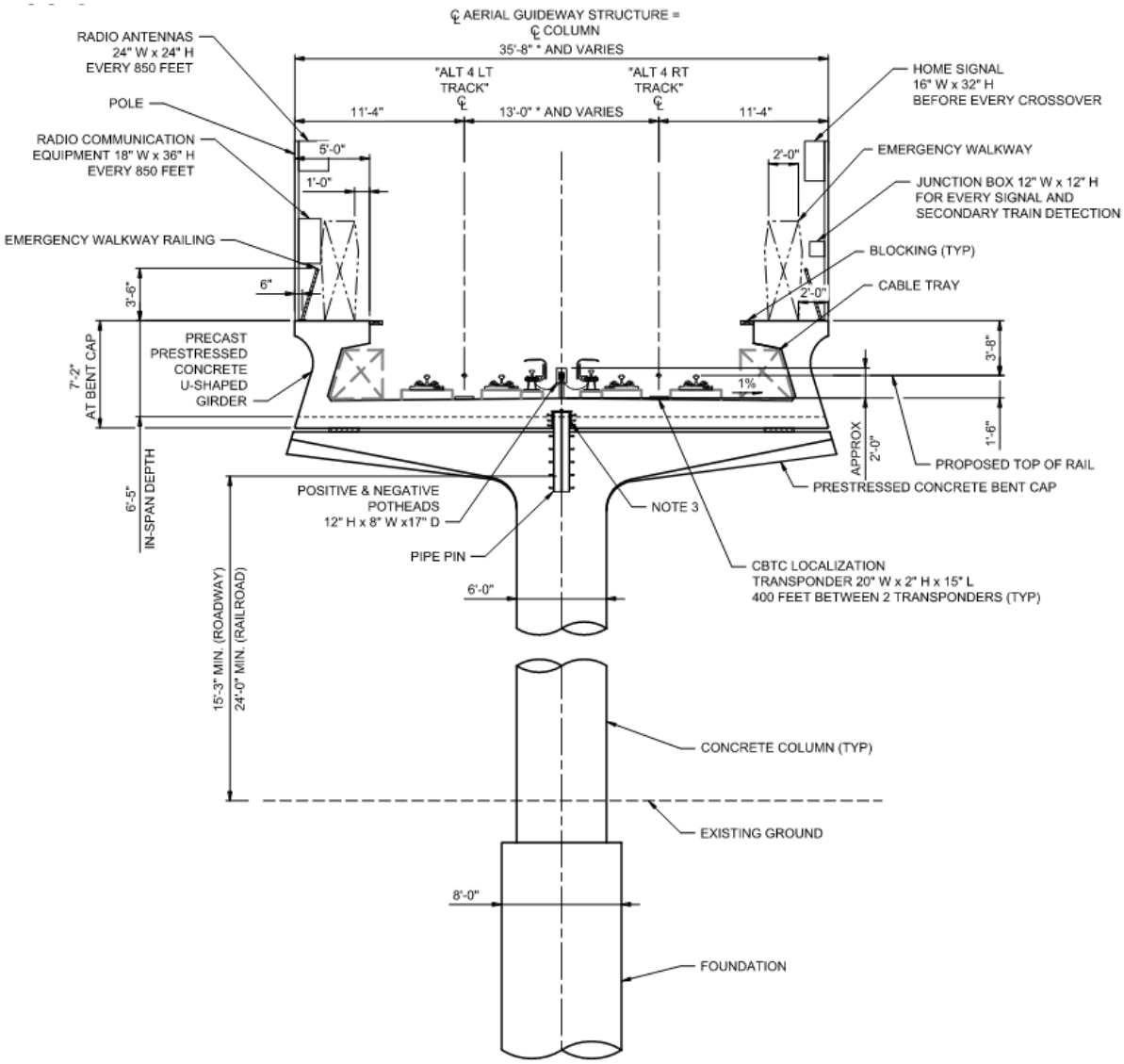


Source: STCP, 2024

In aerial sections, the guideway would be supported by either single columns or straddle-bents. Both types of structures would support a U-shaped concrete girder and the HRT track. The aerial guideway would be approximately 36 feet wide. The track would be constructed on the concrete girders with direct fixation and would maintain a minimum of 13 feet between the centerlines of the two tracks. On the outer side of the tracks, emergency walkways would be constructed with a minimum width of 2 feet.

The single-column pier would be the primary aerial structure throughout the aerial portion of the alignment. Crash protection barriers would be used to protect columns located in the median of Sepulveda Boulevard in the Valley. Figure 8-3 shows a typical cross-section of the single-column aerial guideway.

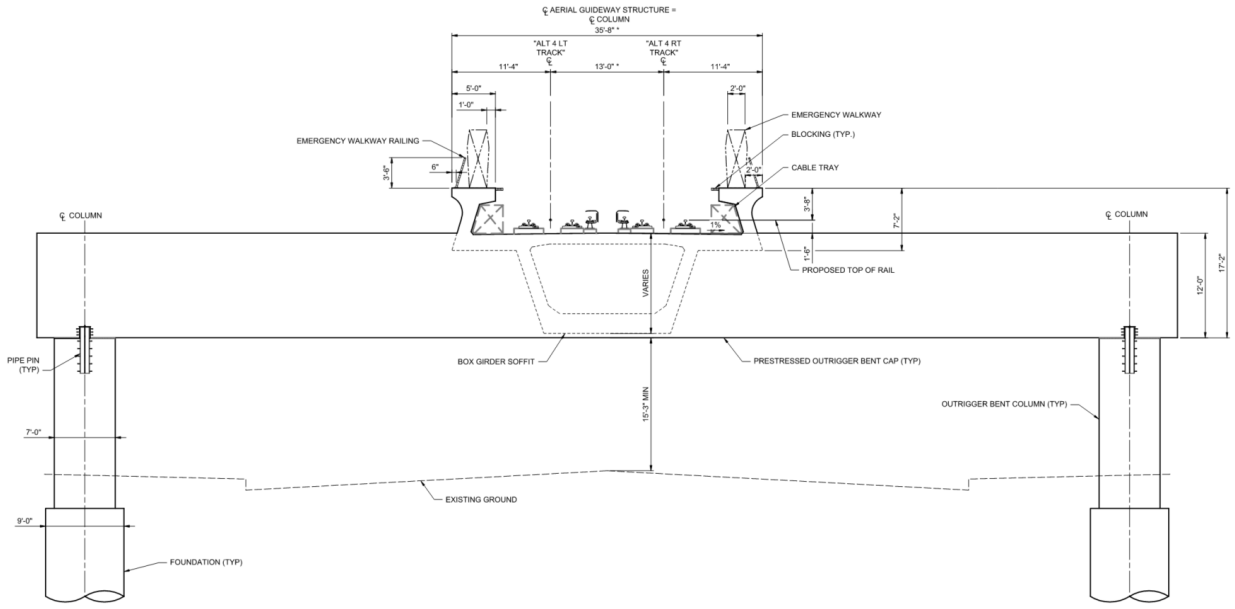
Figure 8-3. Typical Aerial Guideway Cross-Section



Source: STCP, 2024

In order to span intersections and maintain existing turn movements, sections of the aerial guideway would be supported by straddle bents, a concrete straddle-beam placed atop two concrete columns constructed outside of the underlying roadway. Figure 8-4 illustrates a typical straddle-bent configuration.

Figure 8-4. Typical Aerial Straddle-Bent Cross-Section



Source: STCP, 2024

8.1.1.3 Vehicle Technology

Alternative 4 would utilize steel-wheel HRT trains, with automated train operations and planned peak-period headways of 2.5 minutes and off-peak-period headways ranging from 4 to 6 minutes. Each train could consist of three or four cars with open gangways between cars. The HRT vehicle would have a maximum operating speed of 70 miles per hour; actual operating speeds would depend on the design of the guideway and distance between stations. Train cars would be approximately 10 feet wide with three double doors on each side. Each car would be approximately 72 feet long with capacity for 170 passengers. Trains would be powered by a third rail.

8.1.1.4 Stations

Alternative 4 would include four underground stations and four aerial stations with station platforms measuring 280 feet long for both station configurations. The aerial stations would be constructed a minimum of 15.25 feet above ground level, supported by rows of dual columns with 8-foot diameters. The southern terminus station would be adjacent to the Metro E Line Expo/Sepulveda Station, and the northern terminus station would be adjacent to the Van Nuys Metrolink/Amtrak Station.

All stations would be side-platform stations where passengers would select and travel to station platforms depending on their direction of travel. All stations would include 20-foot-wide side platforms separated by 30 feet for side-by-side trains. Aerial station platforms would be covered, but not enclosed. Each underground station would include an upper and lower concourse level prior to reaching the train platforms. Each aerial station, except for the Sherman Way Station, would include a mezzanine level prior to reaching the station platforms. At the Sherman Way Station, separate entrances on opposite sides of the street would provide access to either the northbound or southbound platform with an overhead pedestrian walkway providing additional connectivity across platforms. Each station would have a minimum of two elevators, two escalators, and one stairway from the ground level to the concourse or mezzanine.

Stations would include automatic, bi-parting fixed doors along the edges of station platforms. These platform screen doors would be integrated into the automatic train control system and would not open unless a train is stopped at the platform.

The following information describes each station, with relevant entrance, walkway, and transfer information. Bicycle parking would be provided at each station.

Metro E Line Expo/Sepulveda Station

- This underground station would be located just north of the existing Metro E Line Expo/Sepulveda Station, on the east side of Sepulveda Boulevard.
- A station entrance would be located on the east side of Sepulveda Boulevard north of the Metro E Line.
- A walkway to transfer to the Metro E Line would be provided at street level within the fare paid zone.
- A 126-space parking lot would be located immediately north of the station entrance, east of Sepulveda Boulevard. Passengers would also be able to park at the existing Metro E Line Expo/Sepulveda Station parking facility, which provides 260 parking spaces.

Santa Monica Boulevard Station

- This underground station would be located under the southeast corner of Santa Monica Boulevard and Sepulveda Boulevard.
- The station entrance would be located on the south side of Santa Monica Boulevard between Sepulveda Boulevard and Bentley Avenue.
- No dedicated station parking would be provided at this station.

Wilshire Boulevard/Metro D Line Station

- This underground station would be located beneath the Metro D Line tracks and platform under Gayley Avenue between Wilshire Boulevard and Lindbrook Drive.
- Station entrances would be provided on the northeast corner of Wilshire Boulevard and Gayley Avenue and on the northeast corner of Lindbrook Drive and Gayley Avenue. Passengers would also be able to use the Metro D Line Westwood/UCLA Station entrances to access the station platform.
- A direct internal station transfer to the Metro D Line would be provided at the south end of the station.
- No dedicated station parking would be provided at this station.

UCLA Gateway Plaza Station

- This underground station would be located underneath Gateway Plaza on the University of California, Los Angeles (UCLA) campus.
- Station entrances would be provided on the north side of Gateway Plaza and on the east side of Westwood Boulevard across from Strathmore Place.
- No dedicated station parking would be provided at this station.

Ventura Boulevard/Sepulveda Boulevard Station

- This aerial station would be located west of Sepulveda Boulevard spanning over Dickens Street.

- A station entrance would be provided on the west side of Sepulveda Boulevard south of Dickens Street.
- A 52-space parking lot would be located adjacent to the station entrance on the southwest corner of the Sepulveda Boulevard and Dickens Street intersection, and an additional 40-space parking lot would be located on the northwest corner of the same intersection.

Metro G Line Sepulveda Station

- This aerial station would be located over Sepulveda Boulevard immediately south of the Metro G Line Busway.
- A station entrance would be provided on the west side of Sepulveda Boulevard south of the Metro G Line Busway.
- An elevated pedestrian walkway would connect the platform level of the proposed station to the planned aerial Metro G Line Busway platforms within the fare paid zone.
- Passengers would be able to park at the existing Metro G Line Sepulveda Station parking facility, which has a capacity of 1,205 parking spaces. Currently, only 260 parking spaces are used for transit parking. No additional automobile parking would be provided at the proposed station.

Sherman Way Station

- This aerial station would be located over Sepulveda Boulevard between Sherman Way and Gault Street.
- Station entrances would be provided on either side of Sepulveda Boulevard south of Sherman Way.
- A 46-space parking lot would be located on the northwest corner of the Sepulveda Boulevard and Gault Street intersection, and an additional 76-space parking lot would be located west of the station along Sherman Way.

Van Nuys Metrolink Station

- This aerial station would span Van Nuys Boulevard, just south of the LOSSAN rail corridor.
- The primary station entrance would be located on the east side of Van Nuys Boulevard just south of the LOSSAN rail corridor. A secondary station entrance would be located between Raymer Street and Van Nuys Boulevard.
- An underground pedestrian walkway would connect the station plaza to the existing pedestrian underpass to the Metrolink/Amtrak platform outside the fare paid zone.
- Existing Metrolink Station parking would be reconfigured, maintaining approximately the same number of spaces, but 66 parking spaces would be relocated west of Van Nuys Boulevard. Metrolink parking would not be available to Metro transit riders.

8.1.1.5 Station-to-Station Travel Times

Table 8-1 presents the station-to-station distance and travel times at peak period for Alternative 4. The travel times include both run time and dwell time. Dwell time is 30 seconds for transfer stations and 20 seconds for other stations. Northbound and southbound travel times vary slightly because of grade differentials and operational considerations at end-of-line stations.

Table 8-1. Alternative 4: Station-to-Station Travel Times and Station Dwell Times

From Station	To Station	Distance (miles)	Northbound Station-to-Station Travel Time (seconds)	Southbound Station-to-Station Travel Time (seconds)	Dwell Time (seconds)
Metro E Line Station					*30*
Metro E Line	Santa Monica Boulevard	0.9	89	86	—
Santa Monica Boulevard Station					*20*
Santa Monica Boulevard	Wilshire/Metro D Line	0.9	91	92	—
Wilshire/Metro D Line Station					*30*
Wilshire/Metro D Line	UCLA Gateway Plaza	0.7	75	68	—
UCLA Gateway Plaza Station					*20*
UCLA Gateway Plaza	Ventura Boulevard	6.1	376	366	—
Ventura Boulevard Station					*20*
Ventura Boulevard	Metro G Line	1.9	149	149	—
Metro G Line Station					*30*
Metro G Line	Sherman Way	1.4	110	109	—
Sherman Way Station					*20*
Sherman Way	Van Nuys Metrolink	1.9	182	180	—
Van Nuys Metrolink Station					*30*

Source: STCP, 2024

— = no data

8.1.1.6 Special Trackwork

Alternative 4 would include 10 double crossovers throughout the alignment, enabling trains to cross over to the parallel track. Each terminus station would include a double crossover immediately north and south of the station. Except for the Santa Monica Boulevard Station, each station would have a double crossover immediately south of the station. The remaining crossovers would be located along the alignment midway between the UCLA Gateway Plaza Station and the Ventura Boulevard Station.

8.1.1.7 Maintenance and Storage Facility

The MSF for Alternative 4 would be located east of the Van Nuys Metrolink Station and would encompass approximately 46 acres. The MSF would be designed to accommodate 184 rail cars and would be bounded by single-family residences to the south, the LOSSAN rail corridor to the north, Woodman Avenue on the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west. Trains would access the site from the fixed guideway's tail tracks at the northwest corner of the site. Trains would then travel southeast to maintenance facilities and storage tracks.

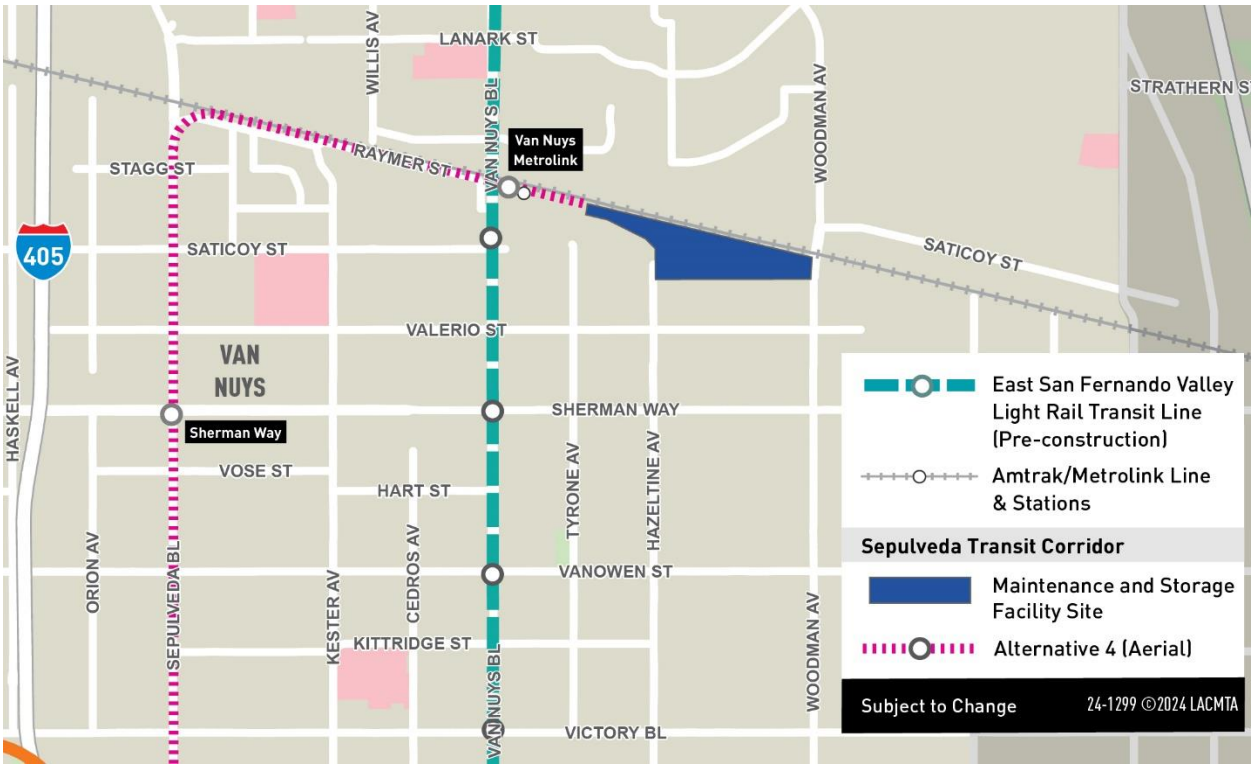
The site would include the following facilities:

- Two entrance gates with guard shacks
- Main shop building
- Maintenance-of-way building
- Storage tracks
- Carwash building
- Cleaning and inspections platforms
- Material storage building
- Hazmat storage locker

- Traction power substation (TPSS) located on the west end of the MSF to serve the mainline
- TPSS located on the east end of the MSF to serve the yard and shops
- Parking area for employees
- Grade separated access roadway (over the HRT tracks at the east end of the facility, and necessary drainage)

Figure 8-5 shows the location of the MSF site for Alternative 4.

Figure 8-5. Alternative 4: Maintenance and Storage Facility Site



Source: STCP, 2024; HTA, 2024

8.1.1.8 Traction Power Substations

TPSSs transform and convert high voltage alternating current supplied from power utility feeders into direct current suitable for transit operation. Twelve TPSS facilities would be located along the alignment and would be spaced approximately 0.5 to 2.5 miles apart. TPSS facilities would generally be located within the stations, adjacent to the tunnel through the Santa Monica Mountains, or within the MSF. TPSSs would be approximately 2,000 to 3,000 square feet. Table 8-2 lists the TPSS locations for Alternative 4.

Figure 8-6 shows the TPSS locations along the Alternative 4 alignment.

Table 8-2. Alternative 4: Traction Power Substation Locations

TPSS No.	Location Description	Configuration
1	TPSS 1 would be located east of Sepulveda Boulevard and north of the Metro E Line.	Underground (within station)

TPSS No.	Location Description	Configuration
2	TPSS 2 would be located south of Santa Monica Boulevard between Sepulveda Boulevard and Bentley Avenue.	Underground (within station)
3	TPSS 3 would be located at the southeast corner of UCLA Gateway Plaza.	Underground (within station)
4	TPSS 4 would be located south of Bellagio Road and west of Stone Canyon Road.	Underground (adjacent to tunnel)
5	TPSS 5 would be located west of Roscomare Road between Donella Circle and Linda Flora Drive.	Underground (adjacent to tunnel)
6	TPSS 6 would be located east of Loom Place between Longbow Drive and Vista Haven Road.	Underground (adjacent to tunnel)
7	TPSS 7 would be located west of Sepulveda Boulevard between the I-405 Northbound On-Ramp and Dickens Street.	At-grade (within station)
8	TPSS 8 would be located west of Sepulveda Boulevard between the Metro G Line Busway and Oxnard Street.	At-grade (within station)
9	TPSS 9 would be located at the southwest corner of Sepulveda Boulevard and Sherman Way.	At-grade (within station)
10	TPSS 10 would be located south of the LOSSAN rail corridor and north of Raymer Street and Kester Avenue.	At-grade
11	TPSS 11 would be located south of the LOSSAN rail corridor and east of the Van Nuys Metrolink Station.	At-grade (within MSF)
12	TPSS 12 would be located south of the LOSSAN rail corridor and east of Hazeltine Avenue.	At-grade (within MSF)

Source: STCP, 2024; HTA, 2024

Figure 8-6. Alternative 4: Traction Power Substation Locations

Source: STCP, 2024; HTA, 2024

8.1.1.9 Roadway Configuration Changes

Table 8-3 lists the roadway changes necessary to accommodate the guideway of Alternative 4. Figure 8-7 shows the location of roadway changes in the Sepulveda Transit Corridor Project (Project) Study Area, and Figure 8-8 shows detail of the street vacation at Del Gado Drive.

In addition to the changes made to accommodate the guideway, as listed in Table 8-3, roadways and sidewalks near stations would be reconstructed, resulting in modifications to curb ramps and driveways.

Table 8-3. Alternative 4: Roadway Changes

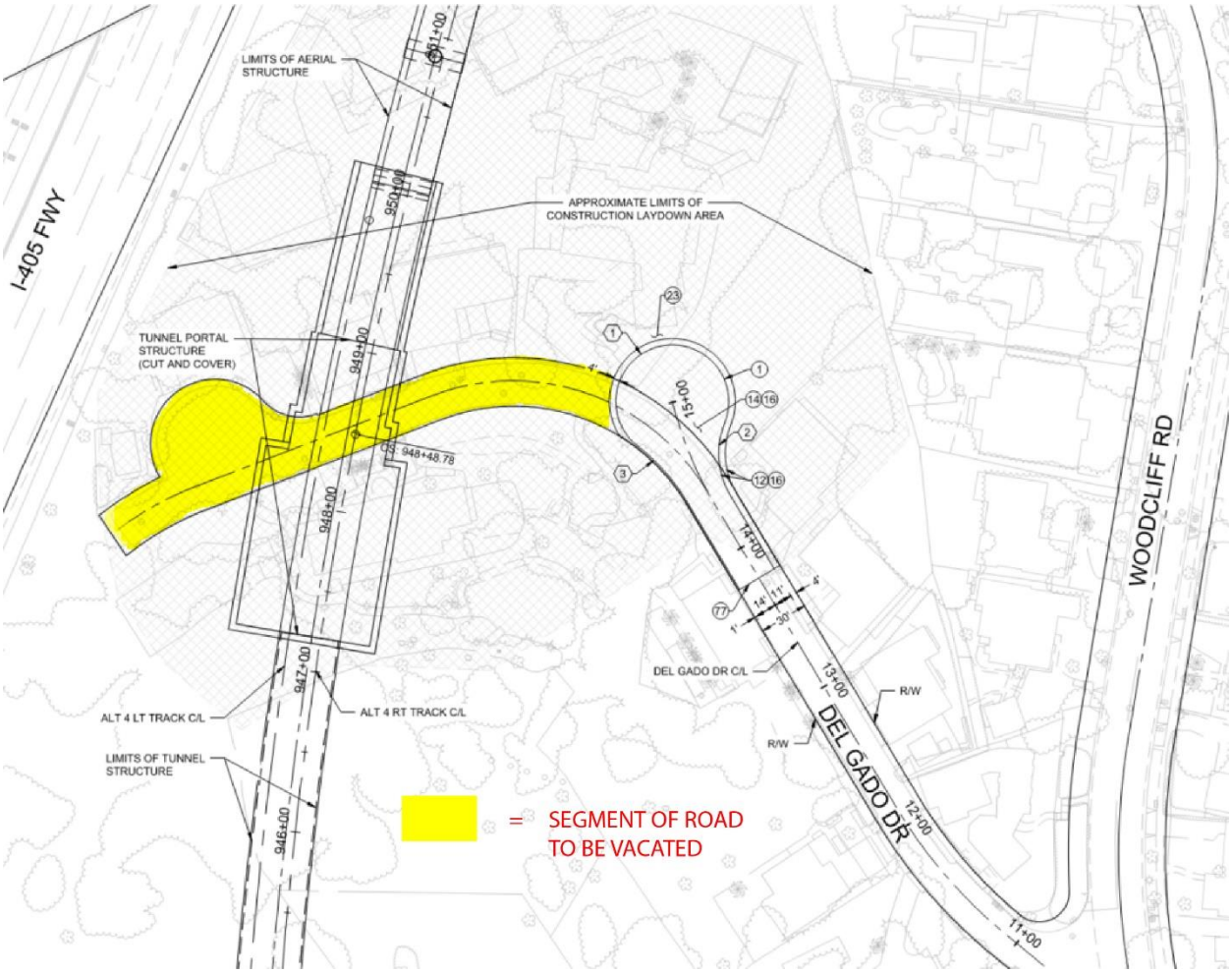
Location	From	To	Description of Change
Del Gado Drive	Woodcliff Road	Not Applicable	Vacation of approximately 325 feet of Del Gado Drive east of I-405 to accommodate tunnel portal
Sepulveda Boulevard	Ventura Boulevard	Raymer Street	Construction of raised median and removal of all on-street parking on the southbound side of the street and some on-street parking on the northbound side of the street to accommodate aerial guideway columns
Sepulveda Boulevard	La Maida Street	Not Applicable	Prohibition of left turns to accommodate aerial guideway columns
Sepulveda Boulevard	Valleyheart Drive South, Hesby Street, Hartsook Street, Archwood Street, Hart Street, Leadwell Street, Covello Street	Not Applicable	Prohibition of left turns to accommodate aerial guideway columns
Raymer Street	Kester Avenue	Keswick Street	Reconstruction resulting in narrowing of width and removal of parking on the westbound side of the street to accommodate aerial guideway columns

Source: STCP, 2024; HTA, 2024

Figure 8-7. Alternative 4: Roadway Changes

Source: STCP, 2024; HTA, 2024

Figure 8-8. Alternative 4: Street Vacation at Del Gado Drive



Source: STCP, 2024; HTA, 2024

8.1.1.10 Ventilation Facilities

For ventilation of the alignment's underground portion, a plenum within the crown of the tunnel would provide a separate compartment for air circulation and allow multiple trains to operate between stations. Each underground station would include a fan room with additional ventilation facilities. Alternative 4 would also include a stand-alone ventilation facility at the tunnel portal on the northern end of the tunnel segment, located east of I-405 and south of Del Gado Drive. Within this facility, ventilation fan rooms would provide both emergency ventilation, in case of a tunnel fire, and regular ventilation, during non-revenue hours. The facility would also house sump pump rooms to collect water from various sources, including storm water; wash water (from tunnel cleaning); and water from a fire-fighting incident, system testing, or pipe leaks.

8.1.1.11 Fire/Life Safety – Emergency Egress

Within the tunnel segment, emergency walkways would be provided between the center dividing wall and each track. Sliding doors would be located in the central dividing wall at required intervals to connect the two sides of the railway with a continuous walkway to allow for safe egress to a point of safety (typically at a station) during an emergency. Similarly, the aerial guideway would include two

emergency walkways with safety railing located on the outer side of the tracks. Access to tunnel segments for first responders would be through stations and the portal.

8.1.2 Construction Activities

Temporary construction activities for Alternative 4 would occur within project work zones at permanent facility locations, construction staging and laydown areas, and construction office areas. Construction of the transit facilities through substantial completion is expected to have a duration of 8¼ years. Early works, such as site preparation, demolition, and utility relocation, could start in advance of construction of the transit facilities.

For the guideway, Alternative 4 would consist of a single-bore tunnel through the Westside and Santa Monica Mountains. The tunnel would be comprised of two separate segments, one running north from the southern terminus to the UCLA Gateway Plaza Station (Westside segment), and the other running south from the portal in the San Fernando Valley to the UCLA Gateway Plaza Station (Santa Monica Mountains segment). Two tunnel boring machines (TBM) with approximately 45-foot-diameter cutting faces would be used to construct the two tunnel segments underground. For the Westside segment, the TBM would be launched from Staging Area No. 1 in Table 8-4 at Sepulveda Boulevard and National Boulevard. For the Santa Monica Mountains segment, the TBM would be launched from Staging Area No. 4 in the San Fernando Valley. Both TBMs would be extracted from the UCLA Gateway Plaza Station Staging Area No. 3 in Table 8-4. Figure 8-9 shows the location of construction staging locations along the Alternative 4 alignment.

Table 8-4. Alternative 4: On-Site Construction Staging Locations

No.	Location Description
1	Commercial properties on southeast corner of Sepulveda Boulevard and National Boulevard
2	North side of Wilshire Boulevard between Veteran Avenue and Gayley Avenue
3	UCLA Gateway Plaza
4	Residential properties on both sides of Del Gado Drive and south side of Sepulveda Boulevard adjacent to I-405
5	West of Sepulveda Boulevard between Valley Vista Boulevard and Sutton Street
6	West of Sepulveda Boulevard between US-101 and Sherman Oaks Castle Park
7	Lot behind Los Angeles Fire Department Station 88
8	Commercial property on southeast corner of Sepulveda Boulevard and Raymer Street
9	South of the LOSSAN rail corridor east of Van Nuys Metrolink Station, west of Woodman Avenue

Source: STCP, 2024; HTA, 2024

Figure 8-9. Alternative 4: On-Site Construction Staging Locations

Source: STCP, 2024; HTA, 2024

The distance from the surface to the top of the tunnel for the Westside tunnel segment would vary from approximately 40 feet to 90 feet depending on the depth needed to construct the underground stations. The depth of the Santa Monica Mountains tunnel segment would vary from approximately 470 feet as it passes under the Santa Monica Mountains to 50 feet near UCLA. The tunnel segment through the Westside would be excavated in soft ground, while the tunnel through the Santa Monica Mountains would be excavated primarily in hard ground or rock as geotechnical conditions transition from soft to hard ground near the UCLA Gateway Plaza Station.

The aerial guideway viaduct would be primarily situated in the center of Sepulveda Boulevard in the San Fernando Valley, with guideway columns located in both the center and outside of the right-of-way of Sepulveda Boulevard. This would result in a linear work zone spanning the full width of Sepulveda Boulevard along the length of the aerial guideway. Three to five main phases would be required to construct the aerial guideway. A phased approach would allow travel lanes along Sepulveda Boulevard to remain open as construction individually occupies either the center, left, or right side of the roadway via the use of lateral lane shifts. Additional lane closures on side streets may be required along with appropriate detour routing.

The aerial guideway would comprise a mix of simple spans and longer balanced cantilever spans ranging from 80 to 250 feet in length. The repetitive simple spans would be utilized when guideway bent is located within the center median of Sepulveda Boulevard and would be constructed using Accelerated Bridge Construction (ABC) segmental span-by-span technology. Longer balanced cantilever spans would be provided at locations such as freeways, arterials, or street crossings, and would be constructed using ABC segmental balance cantilever technology. Foundations would consist of cast-in-drilled-hole (CIDH) shafts with both precast and cast-in-place structural elements. During construction of the aerial guideway, multiple crews would work on components of the guideway simultaneously.

Construction work zones would also be co-located with future MSF and station locations. All work zones would comprise the permanent facility footprint with additional temporary construction easements from adjoining properties.

The Metro E Line, Santa Monica Boulevard, Wilshire Boulevard/Metro D Line, and UCLA Gateway Plaza Stations would be constructed using a “cut-and-cover” method whereby the station structure would be constructed within a trench excavated from the surface with a portion or all being covered by a temporary deck and backfilled during the later stages of station construction. Traffic and pedestrian detours would be necessary during underground station excavation until decking is in place and the appropriate safety measures are taken to resume cross traffic. Constructing the Ventura Boulevard/Sepulveda Boulevard, Metro G Line Sepulveda, Sherman Way, and Van Nuys Metrolink Stations would include construction of CIDH elevated viaduct with two parallel side platforms supported by outrigger bents.

In addition to work zones, Alternative 4 would require construction staging and laydown areas at multiple locations along the alignment as well as off-site staging areas. Construction staging areas would provide the necessary space for the following activities:

- Contractors’ equipment
- Receiving deliveries
- Testing of soils for minerals or hazards
- Storing materials
- Site offices
- Work zone for excavation
- Other construction activities (including parking and change facilities for workers, location of construction office trailers, storage, staging and delivery of construction materials and permanent plant equipment, and maintenance of construction equipment)

A larger, off-site staging area would be used for temporary storage of excavated material from both tunneling and station cut-and-cover excavation activities. Table 8-4 and Figure 8-9 present potential construction staging areas along the alignment for Alternative 4. Table 8-5 and Figure 8-10 present candidate sites for off-site staging and laydown areas.

Table 8-5. Alternative 4: Potential Off-Site Construction Staging Locations

No.	Location Description
S1	East of Santa Monica Airport Runway
S2	Ralph's Parking Lot in Westwood Village
N1	West of Sepulveda Basin Sports Complex, south of the Los Angeles River
N2	West of Sepulveda Basin Sports Complex, north of the Los Angeles River
N3	Metro G Line Sepulveda Station Park & Ride Lot
N4	North of Roscoe Boulevard and Hayvenhurst Avenue
N5	LADWP property south of the LOSSAN rail corridor, east of Van Nuys Metrolink Station

Source: STCP, 2024; HTA, 2024

LADWP = Los Angeles Department of Water and Power

Figure 8-10. Alternative 4: Potential Off-Site Construction Staging Locations

Source: STCP, 2024; HTA, 2024

Construction of the HRT guideway between the Van Nuys Metrolink Station and the MSF would require reconfiguration of an existing rail spur serving LADWP property. The new location of the rail spur would require modification to the existing pedestrian undercrossing at the Van Nuys Metrolink Station.

Alternative 4 would require construction of a concrete casting facility for tunnel lining segments because no existing commercial fabricator capable of producing tunnel lining segments for a large-diameter tunnel exists within a practical distance of the Project Study Area. The site of the MSF would initially be

used for this casting facility. The casting facility would include casting beds and associated casting equipment, storage areas for cement and aggregate, and a field quality control facility, which would need to be constructed on-site. When a more detailed design of the facility is completed, the contractor would obtain all permits and approvals necessary from the City of Los Angeles, the South Coast Air Quality Management District, and other regulatory entities.

As areas of the MSF site begin to become available following completion of pre-casting operations, construction of permanent facilities for the MSF would begin, including construction of surface buildings such as maintenance shops, administrative offices, train control, traction power and systems facilities. Some of the yard storage track would also be constructed at this time to allow delivery and inspection of passenger vehicles that would be fabricated elsewhere. Additional activities occurring at the MSF during the final phase of construction would include staging of trackwork and welding of guideway rail.

8.2 Existing Conditions

8.2.1 General Characterization of the Resource Study Area

The northern and southern portions of the Resource Study Area (RSA) are comprised of highly developed and urbanized neighborhoods with the alignment running along Sepulveda Boulevard in the north and including the UCLA campus in the south. An overview of the RSA is provided on Figure 9-11. These urbanized areas contain limited biological resources generally restricted to parks and undeveloped areas that contain predominantly non-native landscape vegetation; occasional patches of native vegetation are present, typically as plantings rather than naturally occurring vegetation. Habitat provided under these conditions is primarily suitable for species that can tolerate at least some level of urbanization and are acclimated to human influence, including numerous bird species protected under the Migratory Bird Treaty Act (MBTA) and wildlife (e.g., raccoon, striped skunk, Virginia opossum, and coyote).

The Los Angeles River flows west to east through the Alternative 4 RSA in two sections: in the west within the Sepulveda Basin Recreation Area between White Oak Avenue and Balboa Boulevard (Appendix A) and in the east between the Sepulveda Dam spillway and Columbus Avenue (Appendix A). The western and eastern extents of the Los Angeles River within the Alternative 4 RSA are a concrete-lined box channel; however, approximately 0.35 mile of the river in the western end of the Sepulveda Basin Recreation Area has natural earth bottom and riparian vegetation that provides suitable habitat for plants and wildlife to grow, thrive and reproduce. The Alternative 4 RSA would cross the Los Angeles River within the box channel portion as an aerial guideway.

I-405 is a major arterial freeway located west of the Alternative 4 RSA that runs north-south through the Santa Monica Mountains, connecting communities in the San Fernando Valley with the City of Santa Monica and Westside communities in the City of Los Angeles. The RSA intersects with I-405 near Ventura Boulevard, where the tunnel portal is located and the alignment transfers from underground tunnel to aerial guideway; the surrounding habitat is urbanized neighborhoods. The freeway serves as a barrier for wildlife movement within the Santa Monica Mountains, as roads in urban areas threaten wildlife by acting as barriers to movement through increased mortality, reduced habitat quality and connectivity, changes in behavior, and restrictions to genetic flow (Riley et al., 2014; Coffin, 2007; Riley et. al, 2006).

The middle portion of the Alternative 4 RSA includes the Santa Monica Mountains, which run east-west through the Alternative 4 RSA. This area is less developed with steep slopes that are covered by remnant native chaparral habitats and non-native grasslands. Native habitat is interspersed with upscale single-

family residences along north-south–oriented roadways atop ridge lines and through canyons and valleys. Portions of the SMMNRA are within the Santa Monica Mountains in the Alternative 4 RSA; the SMMNRA consists of approximately 150,000 acres and provides habitats to more than 1,000 different plant and 500 wildlife species (National Park Conservation Association, 2023). Approximately 35 acres of the Alternative 4 RSA are within the SMMNRA surrounding Mulholland Drive; Alternative 4 would be an underground tunnel within the SMMNRA (Figure 8-28).

Figure 9-11. Alternative 4: Resource Study Area Location Map

Source: HTA, 2024

8.2.2 Elevations and Topography

Elevations range within the Alternative 4 RSA from approximately 735 feet above mean sea level (amsl) at the northern end to 1,100 feet amsl in the middle and approximately 180 feet amsl at the southern end of the Alternative 4 RSA. The general topography of the Alternative 4 RSA includes several parallel, north-to-south–oriented inland valleys that run through the Santa Monica Mountains. The Santa Monica Mountains are composed of rugged steep mountain terrain with narrow canyons located between two flat urbanized valleys.

8.2.3 Climate

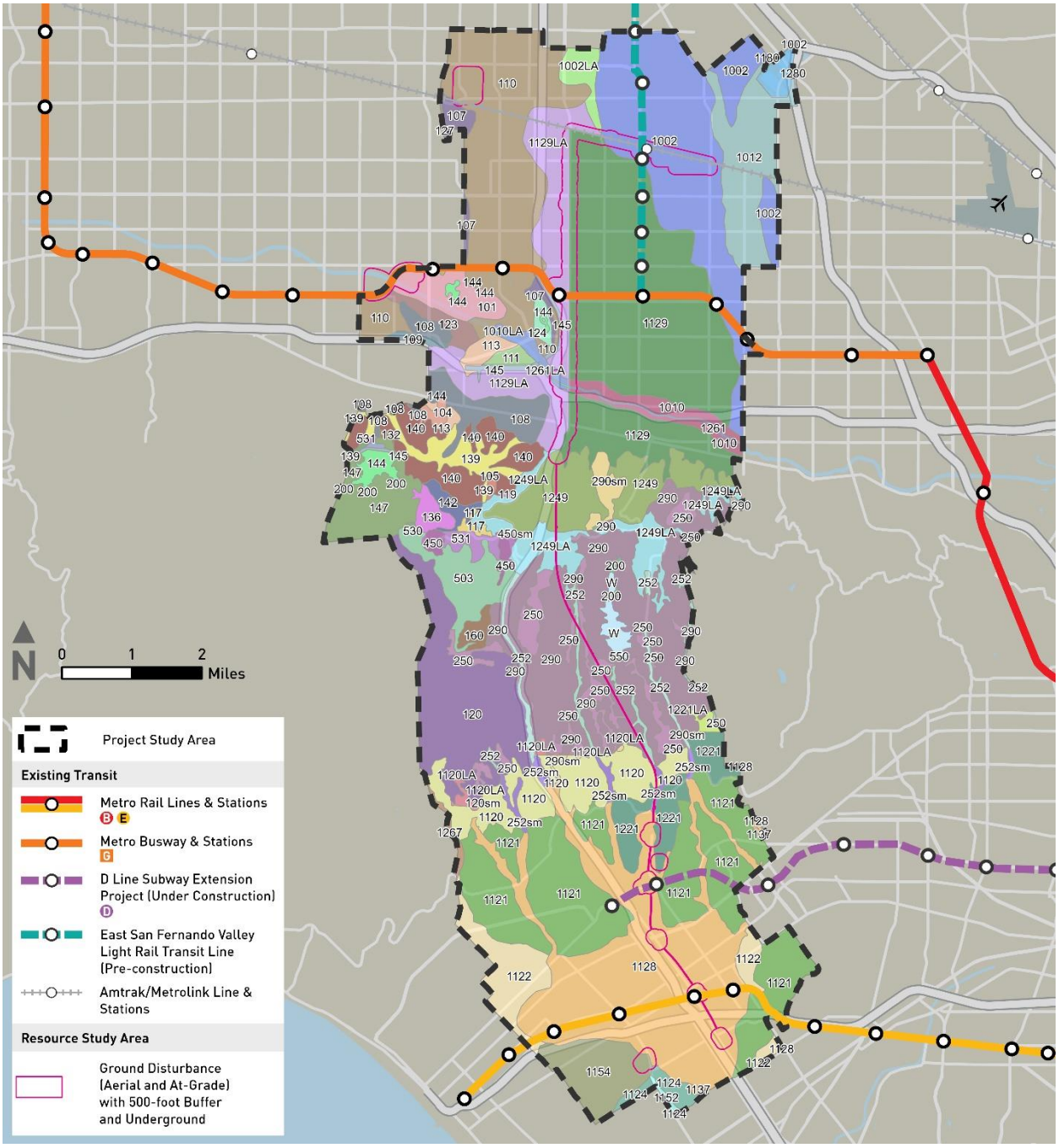
Precipitation in Los Angeles County is derived from frontal low-pressure systems that originate over the Pacific Ocean and generally travel southeast into southern California. Precipitation normally occurs during the cooler months of the year from November through March and is infrequent during the summer months. As throughout southern California, rainfall in the Los Angeles River Watershed and the Ballona Creek Watershed alternates between wet and dry periods. The average annual precipitation in the Alternative 4 RSA is approximately 13 to 18 inches. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the region. The Project Study Area is located within a Mediterranean climate zone, characterized by dry, warm summers and mild, wet winters. The mean temperature range for the months of November through April is 41 degrees Fahrenheit (°F) to 73°F. The mean temperature range for the months of May through October is 58°F to 79°F.

During the 2023 water year (October 2022 through September 2023), approximately 26.46 inches of precipitation was recorded at LAX approximately 5.5 miles south of the Alternative 4 RSA; 88 percent of the precipitation occurred between November and March. Compared to the 30-year average for this location, the 2023 water year was 206 percent above normal (NOAA, 2023), indicating the 2023 biological and wetlands and waters surveys were conducted during an above-average rainfall season.

8.2.4 Soils

The RSA comprises several soil types that serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. Soil analysis was included in the Aquatic Resources Delineation (Appendix AAppendix A) to evaluate for presence or absence of hydric soils that would form under anerobic conditions, such as those that occur in wetlands. An in-depth detailed analysis of subsurface components including soils is presented in the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* (Metro, 2025a). According to the U.S. Department of Agriculture, Natural Resources Conservation Service Soils Report for Los Angeles County, California, part of the Alternative 4 RSA falls in the Los Angeles County, California, Southeastern soil survey area, as well as the West San Fernando Valley soil survey area and SMMNRA soil survey area (USDA-NRCS, 2023a, 2023b). The northern portion of the alignment is composed of fine-loamy-mixed alluvial fan and river valley, the middle portion of the alignment is loamy-mixed hillslopes and urban land, the southern portion of the alignment is fine-loamy-mixed alluvial fan. Soil types are shown on Figure 8-12 with the figure legend on Figure 8-13.

Figure 8-12. Alternative 4: Soils Map



Source: USDA-NRCS, 2023a

Figure 8-13. Alternative 4: Soils Map Legend

Source: USDA-NRCS, 2023a

8.2.5 Biological Resources within the Resource Study Area

This section describes biological resources known or with potential to occur within the Alternative 4 RSA. The search area for biological resources with potential to occur was defined as all U.S. Geological Survey (USGS) 7.5-minute quadrangles that co-occur with the Alternative 4 RSA, and all adjacent quadrangles when the Alternative 4 RSA was within 2 miles of the boundary. For Alternative 4, database searches were conducted for Beverly Hills, Van Nuys, and Canoga Park where the Alternative 4 RSA is located and Topanga, Oat Mountain, San Fernando, and Venice based on the Alternative 4 RSA's proximity to quadrangle boundary.

Wildlife, vegetation communities, plant species, and jurisdictional aquatic features within this area are described below.

8.2.5.1 Wildlife

Wildlife expected in the urbanized areas of the Alternative 4 RSA such as the San Fernando Valley to the north and the City of Los Angeles to the south, are mostly regionally common species adapted to human disturbances. These common species include birds (most of which are protected by the MBTA), reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, and bats), and larger mammals such as coyotes.

One of the primary indicators of wildlife distribution within the Alternative 4 RSA is the location of permanent and ephemeral water sources. Overall, there are few water sources within the Alternative 4 RSA, thereby limiting the diversity of species that occur within the Alternative 4 RSA. Water is present within the Alternative 4 RSA in the Los Angeles River as earthen, vegetated segment within the Sepulveda Basin Recreation Area and as a concrete-lined drainage elsewhere. Adjacent to the Alternative 4 RSA, additional water sources in the Sepulveda Basin include Haskell, Woodley, and Bull Creeks, and human-made lakes including Lake Balboa, Wildlife Lake, and several smaller ponds. Water is also less than 1 mile east of the Alternative 4 RSA in an upper and lower reservoir at the LADWP Stone Canyon Reservoir. These water bodies provide foraging, breeding, migrating, and wintering habitat for a variety of wildlife species such as amphibians, birds, bats, and others.

The middle portion of the Alternative 4 RSA coincides with the Santa Monica Mountains, which have greater wildlife diversity than the developed urban areas of the Alternative 4 RSA. Native habitat present in larger tracts of undeveloped land that can provide suitable conditions for additional local, native species compared to urban environments, as well as potential for less common local, native species to exist. Approximately 450 wildlife species occur across the Santa Monica Mountains (NPS, 2019a), although not all species are expected to occur within the Alternative 4 RSA. The Santa Monica Mountains provide Important core habitat for wildlife species to reproduce and connect to other open space areas essential for wildlife dispersal. Additionally, avian species migrate into the Santa Monica Mountains during the summer for breeding, and during the fall to overwinter. A list of wildlife species detected during the spring 2023 field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general wildlife observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Special-Status Wildlife Species

Of the 66 special-status wildlife species identified with potential to occur in the Project Study Area, 25 were identified as having potential to occur within the Alternative 4 RSA based on database searches of California Natural Diversity Database (CNDDB), Information for Planning and Consultation (IPaC), iNaturalist, and eBird (CDFW, 2023a; USFWS, 2024a; iNaturalist, 2024a to 2024n; iNaturalist, 2024y to 2024aa; eBird, 2024a through 2024k). These species are listed in Table 8-6 with an assessment of their potential to occur within the Alternative 4 RSA.

Twenty-four of the wildlife species were concluded to be known or have potential to occur within the Alternative 4 RSA (Table 8-6); the remaining one was determined to have no potential to occur and is not discussed further for Alternative 4. The six species with low potential to occur are considered unlikely to be detected within the Alternative 4 RSA or impacted by Alternative 4 due to the lack of known recent occurrences and suitable habitat within the Alternative 4 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur in the Alternative 4 RSA are discussed in detail in Table 8-6. Within Table 8-6, rows discussing species that were determined to be present or to have a high potential to occur within the RSA are highlighted blue.

Table 8-6. Alternative 4: Special-Status Wildlife Species Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC	Occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Is a dietary generalist but often prefers to forage in grasslands and shrublands with abundant milkweeds, wild buckwheat, dusty maidens, lupines, medics, and sages.	**Present**. Suitable habitat and one recent 2023 observation occur within the southern portion of the Alternative 4 RSA. Additionally, observations from 2023 are present within 0.5 mile of the Alternative 4 RSA in the northern portions (iNaturalist, 2024a) and several historical observations occur within 1 mile of the Alternative 4 RSA from the mid-1900s (CDFW, 2023a).
Danaus plexippus	Monarch	FC	Two subpopulations within the United States; within California, monarchs are considered *Danaus plexippus* pop 1, California overwintering population (CDFW, 2023a). Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress; occasionally western sycamore and coast live oak), with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico; small aggregations also observed inland in Inyo and Kern Counties. Typically within 1.5 miles of the Pacific Ocean.	**Low**. Suitable habitat such as eucalyptus tree groves occur within the Alternative 4 RSA; however, the species normally overwinters in dense groves along the coastal plain near the Pacific Ocean. There are no known overwintering locations within the Alternative 4 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Fish				
Catostomus santaanae	Santa Ana sucker	FT	Endemic to Southern California and only found within the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. This species was once historically present throughout the Los Angeles and Santa Ana basins in southern California but is now restricted to three geographically separate populations. Specifically within the Los Angeles River Watershed, known populations occur at Big Tujunga Creek in the Hansen Reach, two tributaries in the Hansen Reach, and one tributary in either the Big Tujunga Reach or Los Angeles Reach (potentially including but not limited to Fall Creek, Mill Creek, Arroyo Seco Creek, and Bell Creek) (USFWS, 2017).	**Low.** The Alternative 4 RSA falls within the geographic range for Santa Ana sucker and suitable habitat in the form of the Los Angeles River is present. However, the portion of this body of water that occurs within the Alternative 4 RSA demonstrates common habitat degradation symptoms characteristic of urban areas, including degraded water quality and hydrological modifications. The majority of the river within the Alternative 4 RSA is a concrete-lined channelized river and therefore does not provide the habitat characteristics preferred by this species (i.e., substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of algae) (USFWS, 2010). The combination of limited known population extent, poor habitat quality, and presence of movement barriers within the Alternative 4 RSA, greatly limit potential for this species to occur.
Gila orcuttii	Arroyo chub	SSC	Prefers slow-moving sections of permanent, small to moderate-sized streams with sand or mud substrate with more than half of the habitat as runs and pools ~ 10 cm deep and reaches of permanent water more than 2 km long.	**Low**. Suitable habitat is present in the Alternative 4 RSA in the soft bottom portion of the Los Angeles River within the Sepulveda Basin. In 1993, arroyo chub at this location were reported as present but scarce (Swift et al., 1993). However, several rounds of recent sampling within the Basin in the Los Angeles River and Bull Creek (2012-2014, 2016, 2019) found no arroyo chub (Drill et al., 2023; O'Brien and Barabe, 2022). The current distribution appears to be upstream, at headwater sections of streams; this species may be extirpated from the area.
Reptiles				
Actinemys pallida	Southwestern pond turtle	FP/SSC	Found in marshes, rivers, streams, ponds, and similar water sources, usually with aquatic vegetation.	**Present.** Suitable habitat within the Alternative 4 RSA is small and limited in size. Recent observations from 2018 are on UCLA's campus within the Alternative 4 RSA or adjacent to it (0.72 mile east) in the human-made stream in the Mildred E. Mathias Botanical Garden on UCLA's campus (iNaturalist, 2024b).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Anniella stebbinsi	Southern California legless lizard	SSC	Habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. May occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Lives mostly underground, burrowing in loose sandy soil.	**High**. Suitable habitat within the Alternative 4 RSA is of marginal quality. Recent observations include a 2024 detection located 0.75 mile south of the southern terminus and a 2016 observation approximately 4 miles south of the Alternative 4 RSA in Kenneth Hahn State Recreation Area (iNaturalist, 2024c).
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC	A variety of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	**Present**. Suitable habitat is present and a recent observation from 2016 detected an individual approximately 400 feet south of Wilshire Boulevard within the Alternative 4 RSA (iNaturalist, 2024d). Additionally, a 2007 CNDDB occurrence places two adults within 2 miles of the Alternative 4 RSA (CDFW, 2023a).
Phrynosoma blainvillii	Coast horned lizard	SSC	Occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation throughout the central and Southern California coast. Ants are the main food source but also spiders, beetles, and termites. Forages on the ground in open areas, usually between shrubs and often near ant nests.	**Present**. Suitable habitat is present and a recent observation from 2018 is within the Alternative 4 RSA on UCLA's campus (iNaturalist, 2024e). Numerous observations are adjacent to the Alternative 4 RSA throughout (iNaturalist, 2024e).
Thamnophis hammondii	Two-striped garter snake	SSC	Ranges from near Salinas in Monterey County south along the coast, mostly west of the Southern Coast Ranges, to southern California where it ranges east through the Transverse Ranges and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather.	**Moderate.** Suitable habitat is present within the Alternative 4 RSA. There are recent sightings from 2017 and 2020 with obscured locations within 2 miles of the Alternative 4 RSA (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence with an obscured location approximately 3 miles west of the Alternative 4 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Birds				
Agelaius tricolor	Tricolored blackbird	ST/SSC	Historically breeds in freshwater marshes with cattails and other emergent vegetation; increasingly breeds in agricultural fields when traditional wetlands are not present. Forages in wetlands, cultivated fields, grasslands, and at dairies and feedlots.	**High.** Suitable breeding habitat is not present within the Alternative 4 RSA; suitable foraging habitat is present within the Sepulveda Basin. Individuals have been recorded as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 4 RSA (iNaturalist, 2024g).
Aquila chrysaetos	Golden eagle	CFP	Nests on cliff ledges and trees on steep slopes. Hunting grounds include nearby grasslands, sage scrub, or broken chaparral. Require very large territories.	**Low**. Suitable nesting habitat is not present in the Alternative 4 RSA. However, this species has potential to fly over or forage locally while in transit to preferred habitat and/or during migration in the isolated grasslands or sparsely vegetated hillsides within the Alternative 4 RSA. There are no historical records of this species within the vicinity (iNaturalist, 2024y; CDFW, 2023a).
Athene cunicularia	Burrowing owl	SC, SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows.	**High**. Isolated patches of suitable habitat are present within the Alternative 4 RSA. This species has been recently observed within 0.10 mile of the northern portion (2016) and 0.50 mile of the southern portion (2021) of the Alternative 4 RSA (iNaturalist, 2024z); observations were documented during the non-breeding season.
Buteo swainsoni	Swainson's hawk	ST	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**High**. Suitable migration habitat is present within the Alternative 4 RSA; suitable breeding habitat is not present. The species may transit through during migration; migrating individuals have been observed within 0.5 mile of the northern and central portions of the Alternative 4 RSA (iNaturalist, 2024aa; eBird, 2024d).
Circus hudsonius	Northern harrier	SSC	Breeds predominantly in wetland habitats but will also use upland habitats. Prefers grasslands and agricultural fields during migration and in winter. The species occurs year-round in Los Angeles County.	**High**. Suitable migration habitat is present within the Alternative 4 RSA; suitable breeding habitat is not present. The species has potential to transit through the Alternative 4 RSA during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed 0.25 mile west of the Alternative 4 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Contopus cooperi	Olive-sided flycatcher	SSC	Breeds in coniferous forests throughout California from sea level to high mountain elevations.	**High.** Suitable migration habitat is present within the Alternative 4 RSA; breeding habitat is not present. This species can briefly use areas in the Alternative 4 RSA as stopover habitat during migration. Multiple individuals have been observed within 0.50 mile of the Alternative 4 RSA between 2012 and 2021 (iNaturalist, 2024i; eBird, 2024f).
Haliaeetus leucocephalus	Bald eagle	SE/CFP	Nests in old growth trees near the coast or other bodies of water where fish or other prey sources are available.	**High**. No suitable breeding habitat is present, although potential to fly over the Alternative 4 RSA exists. This species is known to occur adjacent to the Alternative 4 RSA, with individuals observed within 0.30 mile of the Alternative 4 RSA in 2021 and 2023 (eBird, 2024g). The closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).
Lanius ludovicianus	Loggerhead shrike	SSC	Uncommon year-round resident of southern California. Found in grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for concealing and protecting nests.	**High.** Suitable habitat is present within the Alternative 4 RSA. This species is known to occur nearby, with 2022 observations in Sepulveda Basin Wildlife Reserve, 0.25 mile of the Alternative 4 RSA (eBird, 2024h).
Polioptila californica	Coastal California gnatcatcher	FT/SSC	Prefers Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). Generally avoids steep slopes above 25% and dense, tall vegetation.	**Low**. While the Alternative 4 RSA is located within the species range, suitable breeding habitat is generally absent. Low quality chaparral habitat is present in small patches in the Alternative 4 RSA and may be used for dispersal. There are species records as recent as 2023 approximately 3 miles south of the Alternative 4 RSA in the Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve (eBird, 2023). Since the species is a short distance disperser and suitable habitat is lacking north of the Alternative 4 RSA, individuals are unlikely to occur within the Alternative 4 RSA. Furthermore, the species appears to be rare within the Santa Monica Mountains with few recent records, all located over 5 miles away (CDFW, 2023a; iNaturalist, 2024j; eBird, 2024i).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Pyrocephalus obscurus	Vermilion flycatcher	SSC	Inhabits a variety of habitats associated with open country and stream systems including, deserts, farmlands, scrublands, parks, and cemeteries.	**Present.** Suitable habitat is present within the Alternative 4 RSA and a 2019 observation along the Los Angeles River is within the RSA in the northwestern part of the Sepulveda Basin. Individuals have also been observed within 0.10 mile as recently as 2023 in the north at Woodley Park in the Sepulveda Basin Wildlife Reserve and 2024 in the south at Los Angeles National Cemetery (eBird, 2024j).
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Migrate into California in late March/early April and depart for their winter grounds in September. Nest in low, dense riparian thickets along water or along intermittent streams. Forages in riparian and adjacent shrubland in the nesting season.	**High**. Occupied nesting and foraging habitat are present within 0.5 mile of the Alternative 4 RSA in riparian habitat along the Los Angeles River and the connecting Bull Creek within the Sepulveda Basin Wildlife Reserve (eBird, 2024k). Several recent observations (2004, 2015, 2018 and 2020) are within 0.5 mile of RSA (CDFW, 2023a; eBird, 2024k).
Mammals				
Euderma maculatum	Spotted bat	SSC/WBWG – High Priority	Occurs in foothills, mountains, grasslands, and deserts in Southern California. Requires large, isolated cliffs for roosting (Luce and Keinath 2007). Distribution is patchy, likely due to roosting habitat requirements.	**No Potential**. Suitable habitat is not present in the Alternative 4 RSA.
Eumops perotis californicus	Western mastiff bat	SSC/WBWG – High Priority	Open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**Low**. Suitable habitat is present in the Alternative 4 RSA. One recent observation from 2021 is located approximately 4 miles east of the Alternative 4 RSA (iNaturalist, 2024l) and two historical records (1921 and 1925) without precise locations exist within approximately 2 miles of the Alternative 4 RSA (CDFW, 2023a).
Lasionycteris noctivagans	Silver-haired bat	WBWG – Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Present**. Suitable foraging and roosting habitat are present in the Alternative 4 RSA. Two observations from 1985 are within or adjacent to the Alternative 4 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Lasiurus frantzii	Western red bat	SSC/WBWG – High Priority	Generally associated with stands of riparian habitat consisting of mature sycamores and cottonwoods. Forages over grasslands, shrublands, open woodlands, forests, croplands, and occasionally urban settings. Roosts primarily in trees.	**Low**. Suitable habitat is present in the Alternative 4 RSA. One recent observation from 2019 was made 7 miles east of the Alternative 4 RSA (iNaturalist, 2024m) and a second from 2007 was made approximately 10 miles west of the Alternative 4 RSA (CDFW, 2023a).
Lasiurus cinereus	Hoary bat	WBWG – Medium Priority	Most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. Prefers open habitats or habitat mosaics; requires water. Spends winter months in warmer habitats such as Southern California, Mexico, and Central America while summer is typically spent in the northern portions of California and north into Canada (Bolster, 1998). Roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat with large mature trees.	**Present.** Portions of the Alternative 4 RSA provide suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. One recent (2022) observation in the Santa Monica Mountains near Sherman Oaks (iNaturalist, 2024n) is located within the Alternative 4 RSA.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Sparsely vegetated areas with alluvial deposits of sandy soils.	**Low**. Suitable habitat is present in the Alternative 4 RSA; however, the species has only been found historically in the San Fernando Valley which is now highly urbanized. One historical observation from 1903 of a collected male specimen was located approximately 2.5 miles east of the Alternative 4 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 4 RSA
Puma concolor	Mountain lion	SC	Generally found throughout California in temperate coniferous/deciduous forest, coastal chaparral, foothills, and mountains occurs. Often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Within the Santa Monica Mountains, mule deer make up the bulk of mountain lions' diet (87% of 700 kills analyzed by NPS), although smaller prey can supplement when opportunity arises, preferentially coyotes then raccoons (NPS, 2023).	**Present.** High-quality habitat is present within the Alternative 4 RSA, specifically in the Santa Monica Mountains. West of I-405 and outside of the RSA, an estimated population of 10 to 15 adult individuals has been well documented by the National Park Service (NPS, 2023). Several GPS-collared mountain lions have been tracked in the Sepulveda Pass, which is less than 0.50 mile west of the Alternative 4 RSA. Lion movement is hindered by I-405 and mortality has been documented on the freeway (NPS, 2023), including as recently as July 2024 on northbound I-405 near The Getty Museum (Darling, 2024). Two lions are known to have recently crossed west to east across I-405 successfully and were present within the Alternative 4 RSA: P-22 who was residing in Griffith Park until his death, and P-61, who successfully crossed I-405 in the Sepulveda Pass area in July 2019 and roamed as far east as Benedict Canyon (NPS, 2019b) but was struck and killed while attempting to cross back two months later (NPS, 2022). An additional uncollared male lion has been photographed east of I-405 (NPS, 2019b).

Source: HTA, 2024

[a]Special-status wildlife species identified during reviews of the California Natural Diversity Database (CNDDB) (CDFW, 2023a), IPaC (USFWS, 2024a), eBird, and iNaturalist for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Oat Mountain, San Fernando, and Venice quadrangles.

Notes:

Federal Status Designations
FC=– Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened
FP = Federally Proposed

State Status Designations:
CFP = CDFW Fully Protected
SC = State Candidate Species for Listing
SE = State Endangered
SSC = Species of Special Concern designated by CDFW
ST = State Threatened

Western Bat Working Group (WBWG) Priority Levels:

WBWG-High = Designated by the WBWG as High Priority — species that are imperiled or are at high risk of imperilment.

WBWG-Medium = Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, eBird, iNaturalist, or another database as occurring in the Alternative 4 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 4 RSA; however, no records occur directly within the Alternative 4 RSA. Species has been detected within 1 mile of the Alternative 4 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 4 RSA is of marginal quality. No records occur within RSA, but the species has been documented over 1 mile from the Alternative 4 RSA.

Low = Suitable habitat within the Alternative 4 RSA is of low quality. There are no known recent occurrences within or near the Alternative 4 RSA.

No Potential = Suitable habitat is not present for the species.

Most special-status wildlife species listed in Table 8-6 have no potential to occur within the Alternative 4 RSA due to a lack of suitable habitat. This is mainly related to species that occur in very specific habitat types (such as coastal marshes, sand dunes, vernal pools, etc.) which are not present in the Alternative 4 RSA. Species with no potential to occur due to a lack of suitable habitat within the Alternative 4 RSA are not discussed further. Species with low potential to occur were considered, but ultimately dismissed due to the lack of suitable habitat within the Alternative 4 RSA and lack of known recent occurrences, indicating they are unlikely to be detected within the Alternative 4 RSA or impacted by Alternative 4. Species with a moderate or high potential to occur and species that are considered present are discussed in further detail below.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate species that is known to occur within Alternative 4 RSA. This species of bumble bee occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Crotch's bumble bee is found in a wide variety of natural and disturbed habitat types; they are dietary generalists and are often found foraging in grasslands and shrublands on a wide variety of plant species with strong preferences for native sage species (*Salvia* spp.), milkweed (*Asclepias* spp.), and species within the pea family (*Fababcea*) including lupines, vetches, and deerweed. On June 12, 2019, the California Fish and Game Commission voted to add Crotch's bumble bee as a Candidate Endangered species under the California Endangered Species Act (CESA) (Hatfield and Jepsen, 2021). Suitable habitat and one recent 2023 observation occur within the southern portion of the Alternative 4 RSA. Additionally, observations from 2023 are present within 0.5 mile of the Alternative 4 RSA in the northern portions (iNaturalist, 2024a) and several historical observations occur within 1 mile of the Alternative 4 RSA from the mid-1900s (CDFW, 2023a).

Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys pallida*) is listed as a CDFW SSC and is known to occur within the Alternative 4 RSA. In October 2023, this species was also proposed for listing as Federally Threatened by the USFWS. While proposed species are not protected from take prohibitions under ESA until the rule to list is finalized, consultation with USFWS is required under Section 7 if actions will risk the continued existence of a proposed species. As of 2014, western pond turtle (*Actinemys marmorata*) was recognized as two distinct species: northwestern (which remained *A. marmorata*) and southwestern pond turtle (*A. pallida*) based on geographic range. The range of the southwestern pond turtle extends from central and southern California south into Baja California, Mexico. This includes areas of the central Coast Range from near northern Monterey County, California, portions of the Transverse Range into the Mojave River watershed, and areas south into Baja California, Mexico (50 CFR Part 17; Federal Register / Vol. 88, No. 190 / Tuesday, October 3, 2023 / Proposed Rules). This species occurs in ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, basking sites, and suitable upland habitat for egg-laying. The southwestern pond turtle's population is in decline due to disease, habitat destruction and alteration, and the introduction of predators such as the American bullfrog (*Lithobates catesbeianus*) and striped bass (*Morone saxatilis*) (USFWS, 2024c). Suitable habitat for the species occurs within and adjacent to the Alternative 4 RSA. Records for either *A. marmorata* or *A. pallida* were included in database searches as records of the former would be misidentifications of the latter based on geographic range for each species; the species has been observed in 2018 in ponds or other aquatic habitat found within UCLA's campus within and adjacent to the Alternative 4 RSA at the UCLA Mildred E. Mathias Botanical Garden (0.72 mile east of the RSA) (iNaturalist, 2024b).

Southern California Legless Lizard

The southern California legless lizard (*Anniella stebbinsi*) is a CDFW SSC and has a high potential to occur within the Alternative 4 RSA. It is a fossorial lizard that is potentially present in suitable habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. The Southern California legless lizard may occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Marginally suitable habitat for the species is present from the tunnel portal (located at Del Gado Drive, south of Ventura Boulevard in the Valley) north where a mixture of chaparral and coastal scrub habitat types may be present. The species has been detected in the Kenneth Hahn State Recreation Area to the southeast of the Alternative 4 RSA (approximately 3.5 miles), and approximately 0.75 mile south of the southern terminus in Culver City in 2024 (iNaturalist, 2024c).

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFW SSC and is known to occur within the Alternative 4 RSA in the central and southern portions. This subspecies occurs in Southern California and as far south as Baja California and is often observed in a variety of habitats, including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats. Suitable habitat including chaparral and coastal sage scrub is present within the Alternative 4 RSA and there are recent observations of the species throughout the Santa Monica Mountains, as well as in Westside and the Valley. In 2016, an individual was observed approximately 400 feet south of Wilshire Boulevard (iNaturalist, 2024d) and in 2007, two adults were observed 0.5 mile west of I-405 (CDFW, 2023a).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvilli*) is a CDFW SSC and is known to occur within the Alternative 4 RSA. This species occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation. It occurs throughout the central and southern California coast. The coast horned lizard's main food source consists primarily of ants, but also includes spiders, beetles, and termites. It forages on the ground in open areas, usually between shrubs and often near ant nests. Suitable habitat for the species occurs in the Santa Monica Mountains specifically in the Sepulveda Pass in the form of chaparral and coastal sage scrub. The CNDDB occurrences are historical 1916 and 1947 (CDFW, 2023a); however, there have been numerous recent observations of the species within (2018 on UCLA's campus) and adjacent to the Alternative 4 RSA throughout (observed in the years 2014, 2015, 2017, 2019, 2020, 2022, 2023; iNaturalist, 2024e).

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW SSC and has moderate potential to occur within the Alternative 4 RSA. The two-striped garter snake ranges from near Salinas in Monterey County south along the coast mostly west of the south Coast Ranges, to southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal, but may also be active at night and at dusk during hot weather. The loss of wetland habitats has contributed to a reduction in the range of this snake (California Herps, 2023) and declines in population of the species have been attributed to human impacts, including urban development and flood control in the southern part of its range, as well as habitat modification by livestock, drought, loss of native prey, and predation by invasive species in its northern range (Jennings and Hayes, 1994). Suitable habitat for the species occurs within the Alternative 4 RSA and recent sightings of the species to the west of the Alternative 4 RSA near Will Rogers State Historic Park and to the east in Beverly Glen near Stone Canyon Reservoir have been

recorded (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence of two-striped garter snake within 1 mile of I-405, west of the Alternative 4 RSA, in a flood control debris basin (CDFW, 2023a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as state threatened and a CDFW SSC and has high potential to occur as a flyover within the Alternative 4 RSA. A resident songbird of California that shares its limited range with Washington, Oregon, and a short distance into Baja California, Mexico. Populations are in decline mainly due to the loss of preferred breeding habitats consisting of native wetlands and marshes where it can form nesting colonies that include thousands of breeding individuals. It feeds on available insects, snails, grains, and a variety of other locally abundant resources. Suitable foraging habitat is present within the Alternative 4 RSA; breeding habitat is not. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 4 RSA (iNaturalist, 2024g; eBird, 2024b). This species also has potential to forage in the grassland parcels to the northwest of the Alternative 4 RSA.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is CDFW SSC that has high potential to occur within the Alternative 4 RSA. In addition, this species was petitioned for protection as threatened or endangered under CESA in March 2024 (CBD et al., 2024); in August 2024, CDFW's evaluation report determined that there was sufficient evidence to indicate listing of burrowing owl may be warranted (CDFW, 2024e). On October 10, 2024, the Fish and Game Commission approved the petition and the western burrowing owl became a candidate for listing as threatened under CESA (CDFW, 2024f). As a candidate species, burrowing owl will receive protections under CESA while a full status review occurs over a 12 to 18 month long review period. It is a semi-colonial owl found in open grasslands, prairies, farmlands, deserts, scrubland, and other disturbed areas with low-growing vegetation. In coastal southern California, burrowing owl is found mainly in grassland and open scrub from the coast to the foothills and is strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows. It has been nearly extirpated as a breeding species from coastal San Luis Obispo, Santa Barbara, Ventura, Los Angeles, and Orange counties (Shuford and Gardali, 2008). Isolated areas of suitable habitat are present within the Alternative 4 RSA. Burrowing owl has been recorded within 0.10 mile west of the Alternative 4 RSA in the northern portion (2016) and 0.50 mile of the southern portion (2021) of the Alternative 4 RSA (iNaturalist, 2024z); however, observations were from the late fall and winter season, outside of the breeding season.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state threatened and has high potential to occur within the Alternative 4 RSA. Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Swainson's hawk breed in stands with few trees within grasslands, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands in the Central Valley. This species requires suitable foraging areas adjacent to breeding habitat which includes grasslands, grain or alfalfa fields, or livestock pastures that support rodent populations. Along with rodents, they feed on amphibians, reptiles, and large arthropods. Suitable breeding habitat for this species is not present within the Alternative 4 RSA as it falls outside of the breeding range typical for Swainson's hawk. However, this species may transit through the Alternative 4 RSA during migration and migrating individuals have been recently observed within 0.5 mile of the northern and central portions of the Alternative 4 RSA (iNaturalist, 2024aa; eBird, 2024d).

Northern Harrier

Northern harrier (*Circus hudsonius*) is a CDFW SSC (when nesting) that has high potential to occur as a migrant within the Alternative 4 RSA. Los Angeles lies at the southwestern vicinity of the species breeding range in the United States. This species is low-flying and typically prefers grasslands, weedy agricultural fields, marshes, and other flat areas with large tracts of dense, low-growing vegetation, preferably undisturbed. As a ground-nesting species, northern harriers prefer to nest in tall, dense vegetation along the coastal slope and in inland valleys. In Los Angeles County, this species is found year-round but is more common as a winter visitor than as a resident breeder per records research in CNDDB (CDFW, 2023a), eBird (eBird, 2024e), and iNaturalist (iNaturalist, 2024h). There is no suitable breeding habitat within the Alternative 4 RSA, but the species has potential to transit through during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed within 0.25 mile west of the Alternative 4 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is a CDFW SSC with high potential to occur as a migrant within the Alternative 4 RSA. Olive-sided flycatcher is found in coniferous forests throughout California from sea level to high mountain elevations. This species breeds in coniferous forests and uses meadows and open areas adjacent to forests to forage. Olive-sided flycatchers feed on a variety of insects, most of which are caught in flight. Suitable breeding habitat for this species is not present within the Alternative 4 RSA; however, this species may briefly use areas in the Alternative 4 RSA as stopover habitat during migration. Multiple individuals have been observed within 0.5 mile of the Alternative 4 RSA in 2012 and 2021 (iNaturalist, 2024i; eBird, 2024f).

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is state endangered and CDFW Fully Protected (CFP) species that has high potential to occur within the Alternative 4 RSA. It ranges throughout North America and inhabits forests and open grasslands nearby to a water source to forage. The eagle's main source of prey is fish, although they will forage on a variety of prey that may include reptiles, mammals, amphibians, and carrion. The population was once in serious decline due to hunting and pesticides; however, with protections put in place, this species has successfully rebounded with a continually increasing population evidenced in databases searches. This species is known to occur recently within 0.3 mile of the Alternative 4 RSA at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024g). However, bald eagles do not breed within the vicinity of the Alternative 4 RSA; the closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC (when nesting) that has moderate potential to occur within the Alternative 4 RSA. This songbird ranges throughout North America, inhabiting open country with short vegetation and lower sized shrubs and trees sparsely spaced throughout the landscape. Loggerhead shrikes are found throughout deserts, agriculture lands, grasslands, cemeteries, and golf courses. While they eat a variety of prey similar to a raptor including insects, amphibians, reptiles, small mammals, and other songbirds, they lack the talons of a raptor. Instead, shrikes impale and/or wedge prey items on shrubs, trees, cacti, barbed wire fencing, and other similar features for caching and consumption. Suitable habitat is present within the Alternative 4 RSA. This species is known to occur nearby with observations from 2022 in Sepulveda Basin Wildlife Reserve located 0.25 mile of the Alternative 4 RSA (eBird, 2024h).

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus obscurus*) is a CDFW SSC (when nesting) that is known to occur within the Alternative 4 RSA. The species is a small songbird in the tyrant flycatcher family, named for the adult males' bright vermilion red and contrasting black coloration. The southwestern United States is the northern extent of its typical range, which extends up from Central and South America. Vermilion flycatchers are found within a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, golf courses, parks, and cemeteries. Suitable habitat is present within the Alternative 4 RSA and a recent observation from 2019 exists from the Los Angeles River in the northwestern part of the Sepulveda Basin. Individuals have also been observed within 0.10 mile as recently as 2023 in the north at Woodley Park in the Sepulveda Basin Wildlife Reserve and 2024 in the south at Los Angeles National Cemetery (eBird, 2024j).

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is federally and state endangered and has high potential to occur within the Alternative 4 RSA. Least Bell's vireo occur as summer breeders within southern California; they migrate into California in late March/early April and depart for their winter grounds in September. This species builds nests in low, dense riparian thickets along water or along intermittent streams and during the nesting season, they forage in riparian and adjacent shrubland habitats. Suitable nesting and foraging habitat are present within 1 mile to the west of the Alternative 4 RSA where riparian habitat is found along the Los Angeles River and connecting Bull Creek in the Sepulveda Basin. Several recent observations (2004, 2015, 2018 and 2020) are within 0.5 mile of RSA (CDFW, 2023a; eBird, 2024k).

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a WBWG Medium Priority Species that is known to occur within the Alternative 4 RSA. This species occurs throughout much of North America into northern Mexico primarily in coastal and montane forests, especially within old growth forests. Roosts are located in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. While preferring to roost in old growth forest, they forage over disturbed areas, clearings, roadways, forested riparian areas along rivers and streams, and various other water sources. Suitable foraging and roosting habitat are present in the Alternative 4 RSA. Two observations from 1985 are within or adjacent to the Alternative 4 RSA (CDFW, 2023a).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a WBWG Medium Priority Species that is known to occur in the Alternative 4 RSA. This species is the most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. This species spends winter months in warmer winter habitats such as Southern California, Mexico, and Central America and summer is typically spent, in the northern portions of California and north into Canada (Bolster, 1998), concealed in the foliage of deciduous and coniferous trees, typically neat the edge of a clearing. Roosting habitat consists of dense foliage associated with medium to large trees situated in open or mosaic habitat; roosting habitat is present within the Alternative 4 RSA in areas with large mature trees. Portions of the Alternative 4 RSA provide both suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. In 2022, an observation was made in the Santa Monica Mountains near Sherman Oaks, east of the I-405 freeway within the Alternative 4 RSA (iNaturalist, 2024n).

Mountain Lion

The mountain lion (*Puma concolor*) is a "specially protected" species in California following the passage of the California Wildlife Protection Act of 1990 (Proposition 117), which makes it illegal to possess transport, sell, and hunt the species (CDFW, 2023d). The mountain lion was also recently proposed for state listing under CESA within a proposed evolutionary significant unit (ESU) located in Southern California and the central coast (CDFW, 2023d). In April 2020, CDFW accepted this ESU as a candidate for state listing as threatened or endangered. Under CESA, species classified as a candidate species are afforded the same protection as listed species while they undergo a review process (CDFW, 2023d). Mountain lions are generally found throughout the state where suitable habitat such as temperate coniferous/deciduous forest, coastal chaparral, foothills and mountains occurs. They are often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Mountain lions are well documented in the Santa Monica Mountains by the NPS, and their population is estimated at around 10 to 15 adult individuals (NPS, 2023). Several GPS-collared mountain lions have been tracked to occur west of the Alternative 4 RSA and I-405 freeway (NPS, 2023). Mountain lion mortalities have been documented on the freeway (NPS, 2023), as recently as July 2024 (Darling, 2024). However, successful crossings have occurred by one collared mountain lion in 2019 (NPS, 2019b) and uncollared individuals have been observed east of I-405 (NPS, 2022; NPS, 2019b).

Bats

There are 24 species of bats found in Los Angeles County, 18 of which are considered rare or sensitive by a variety of entities (NHMLA, 2023). In particular, the WBWG identifies several species as Medium or High Priority for consideration of conservation measures. Bat species found in Los Angeles County are known to have behavioral and ecological interactions with transportation structures, especially those involving bridges. Bat species responses to anthropogenic disturbances differ, with some responding positively and some negatively. Anthropogenic disturbances that can affect bats include the following (Caltrans, 2019):

- Habitat loss, fragmentation, and degradation
- Chemical pollution to drinking water from construction waste and to air from construction vehicle emissions
- Light pollution resulting from artificial lighting
- Noise pollution from construction activities
- Increased predation
- Introduced diseases, such as white-nose syndrome
- Climate change
- Vehicular collisions

The RSA provides habitat for day and night roosting for bats such as trees, bridges, culverts, buildings, and other structures. The tree-lined streets found throughout the Alternative 4 RSA could potentially support roosting bats, such as the hoary bat and western mastiff bat. Large bridges spanning the Los Angeles River may provide suitable bat roosting habitat and foraging habitat for species such as Mexican free-tailed bat and Myotis species. However, no signs of bats, including individuals, guano (i.e., scat), staining on walls from urine, or vocalizations, were detected during the spring 2023 reconnaissance-level field surveys.

Wildlife Corridors

Within the heavily urbanized areas that comprise the north and south portions of the Alternative 4 RSA, opportunities for wildlife movement are limited. No landscape habitat linkages were identified within

the Alternative 4 RSA by the SCW, but the City of Los Angeles has identified a regional wildlife movement pathway through the central portion of the RSA in the Santa Monica Mountains. Within this highly urbanized area, animal movement would be facilitated by remnant riparian habitat, underpasses, culverts, and stretches of contiguous or semi-contiguous habitat. Ornamental vegetation may provide some opportunities for cover, resting, foraging, and nesting to localized bird wildlife populations; however, such areas do not provide function as major wildlife movement corridors. Evaluation of wildlife movement for species with large home size ranges, like the mountain lion, are more appropriate for a larger scale than the Alternative 4 RSA to better inform existing patterns for these species. Discussions at both the RSA and a larger scale are included herein.

The Santa Monica Mountains intersect with the middle of the Alternative 4 RSA and serve as a wildlife movement corridor for local and regional populations. While they lack connection with other mountain ranges in the area, largely due to urbanization, the Santa Monica Mountains retain open areas and native habitats that provide east-west movement opportunities within the range and historically to adjacent ranges; to the west are large undeveloped areas of natural vegetation and to the east are the Verdugo Mountains and the San Gabriel Mountains. Wildlife movement within the Santa Monica Mountains is through a combination of natural, open spaces interspersed with development and human activity. While the majority of the Santa Monica Mountains within the Project Study Area contains scattered residential development, 44 percent of the Santa Monica Mountain range is considered non-developed (as defined by removing “urban” classified categories from the SMMNRA vegetation mapping, see Section 3.3.1 for details; Figure 8-28). Habitat fragmentation poses a threat to species due to lack of space and movement (i.e., habitat to travel between) and threatens wildlife survival from increased risk of inbreeding and loss of genetic diversity. Mammals such as mule deer (*Odocoileus hemionus*), mountain lion, coyotes (*Canis latrans*), and bobcats (*Lynx rufous*) can have large territorial ranges that span many miles; these species are documented in the Santa Monica Mountains. In their current state, I-405 and other major roads in the Alternative 4 RSA are a functional barrier to wildlife movement for most terrestrial wildlife. Within the Alternative 4 RSA, east-west wildlife movement is aided by native habitat in the Santa Monica Mountains, although habitat is interspersed with housing along the ridges and valleys. Limited opportunities exist for wildlife to move north-south due to the urban landscape surrounding the mountains in both directions.

Historically, mountain lions utilized the Santa Monica Mountains as a major linkage corridor between the surrounding mountain ranges in Southern California. Freeways, roads, buildings, and fencing have created barriers to mountain lion and wildlife movement, causing the remaining undeveloped land to become highly fragmented habitat (CLAW, 2023). The major causes of death among mountain lions are vehicle collisions, rodenticide poisoning, depredation permits, and mountain lions killing other mountain lions.

I-405 creates a major barrier to mountain lion movement. At present time, I-405 is generally considered impermeable to mountain lions inhabiting land east of I-405, preventing their movement to the western portion of the Santa Monica Mountains (NPS, 2023). While the Alternative 4 RSA is adjacent to I-405 in the northern and southern urbanized sections, it is approximately 1 mile east of I-405 through the Santa Monica Mountains. Compared to the freeway, roads in the mountains within the Alternative 4 RSA are predominantly two lanes with housing on both sides; they are not likely to limit mountain lion movement in the same manner as the freeway since the chance for a deadly collision is lower due to lower vehicle speed and less distance to travel. Mountain lions in the Santa Monica Mountains are experiencing exacerbated impacts of edge effects and limited habitat and are suffering from territorial fighting, low genetic diversity, and low prey populations. Furthermore, escape routes during wildfires

may be blocked and migration into previously burned areas may be restricted due to roads and other urban development. A study conducted by University of California (UC) Davis and partners concluded the Santa Monica Mountains lion population is at risk of becoming locally extinct within the next 50 years. The study recommended increases in landscape connectivity to maintain healthy lion populations in the greater Los Angeles metropolitan area (Benson et al., 2019).

Within the Alternative 4 RSA, water is present in the Los Angeles River. Adjacent to the Alternative 4 RSA, water is present in the southern (human-made stream within the Mathias Botanical Garden on UCLA's campus), central (Stone Canyon Reservoir in the Santa Monica Mountains), and northern (several creeks, human-made lakes, and the Los Angeles River in the Sepulveda Basin) portions of the Alternative 4 RSA. Within the Sepulveda Basin, approximately 2.5 miles of the Los Angeles River has a natural, earth bottom and is vegetated with riparian habitat, while outside of the Basin, it flows in a concrete-lined channel. Where present, waterbodies provide resting, foraging, and nesting opportunities for wildlife species. Collectively these waterbodies provide some habitat for wildlife species to move through the Los Angeles Basin and San Fernando Valley. Furthermore, several species of warblers, sparrows, and raptors that breed in northern latitude, spend the winter months in the Alternative 4 RSA. This includes species protected by MBTA including the yellow-rumped warbler (*Setophaga coronata*), white-crowned (*Zonotrichia leucophrys*), and golden-crowned sparrows (*Zonotrichia atricapilla*), and several raptor species.

The RSA occurs along the Pacific Flyway, a major north-south flyway for migratory birds moving between breeding grounds and overwintering sites or following food sources. Potential stopover locations for migratory birds are often correlated with vegetation cover and near water, such as the Sepulveda Basin Recreation Area and Stone Canyon Reservoir; these areas are particularly important for migrating waterfowl. Within the Sepulveda Basin, Lake Balboa, Woodley Creek, Haskell Creek, Japanese Garden Lake, Wildlife Lake, and the Sepulveda Basin Wildlife Preserve support wildlife movement adjacent to the Alternative 4 RSA. While these waterbodies are outside the Alternative 4 RSA, their proximity increases likelihood of migrating bird presence within the Alternative 4 RSA. In the northwestern portion of the Alternative 4 RSA, the narrow riparian corridor along the Los Angeles River within Sepulveda Basin includes a variety of plant and habitat layers (i.e., mature trees, shrubs, and herbaceous vegetation) that facilitate bird movement along the river.

8.2.5.2 Plants

Vegetation Communities

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Alternative 4 RSA are generally absent and consist mainly of the land cover class developed. Developed, ruderal, and agricultural land use cover classes are generally considered to provide lower quality habitat due to absent or sparse vegetation, limited plant diversity, and regular disturbance associated with human activities. Special-status wildlife species may use these areas for activities such as foraging or while in transit and special-status plants could be present but are more likely to be found in vegetated habitats subject to less disturbance.

Vegetation communities in the Santa Monica Mountains, which run east-west through the middle of RSA, include ceanothus chaparral, coyote brush shrubland, coast live oak woodland and various other native vegetation communities. Within a mapped vegetation group, patches of differing communities may be present in smaller sizes than the minimum mapping unit (0.5 hectare) (NPS, 2004-2019). Where present, these areas would be refined in the future after a preferred alternative is selected.

Vegetation communities listed below are presented in descending order of abundance within the Alternative 4 RSA; acreages per vegetation community within the Alternative 4 RSA are presented in Table 8-7; and spatial representation of their locations are shown on Figure 8-14 through Figure 8-26. A list of plant species observed during the field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general plant observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Table 8-7. Alternative 4: Vegetation Community Acreage within Ground Disturbance Area and 500-Foot Buffer

Vegetation Community/Land Cover Type[a]	Sensitive Natural Vegetation Community (Authority)	Acres[b]	Percent of Total Vegetation
Developed	Not applicable	1,656.6	92.7
Agricultural Land	Not applicable	66.0	3.7
California Annual Grassland	Not applicable	26.2	1.5
Ruderal	Not applicable	15.4	0.9
Undifferentiated Riparian Vegetation	Potentially depending on species composition (CDFW)	8.3	0.5
Open Water	Not applicable	4.3	0.2
Coyote Brush Shrubland	Potentially depending on codominant species (CDFW)	3.6	0.2
Coast Live Oak Woodland	Not applicable	3.3	0.2
California Sagebrush Shrubland	Potentially depending on codominant species (CDFW)	2.3	0.1
Total		**1,786.1**	**100.0**

Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in total calculation due to rounding errors.

CDFW = California Department of Fish and Wildlife

Figure 8-14. Alternative 4: Vegetation Communities, Map 1 of 13

Source: HTA, 2024

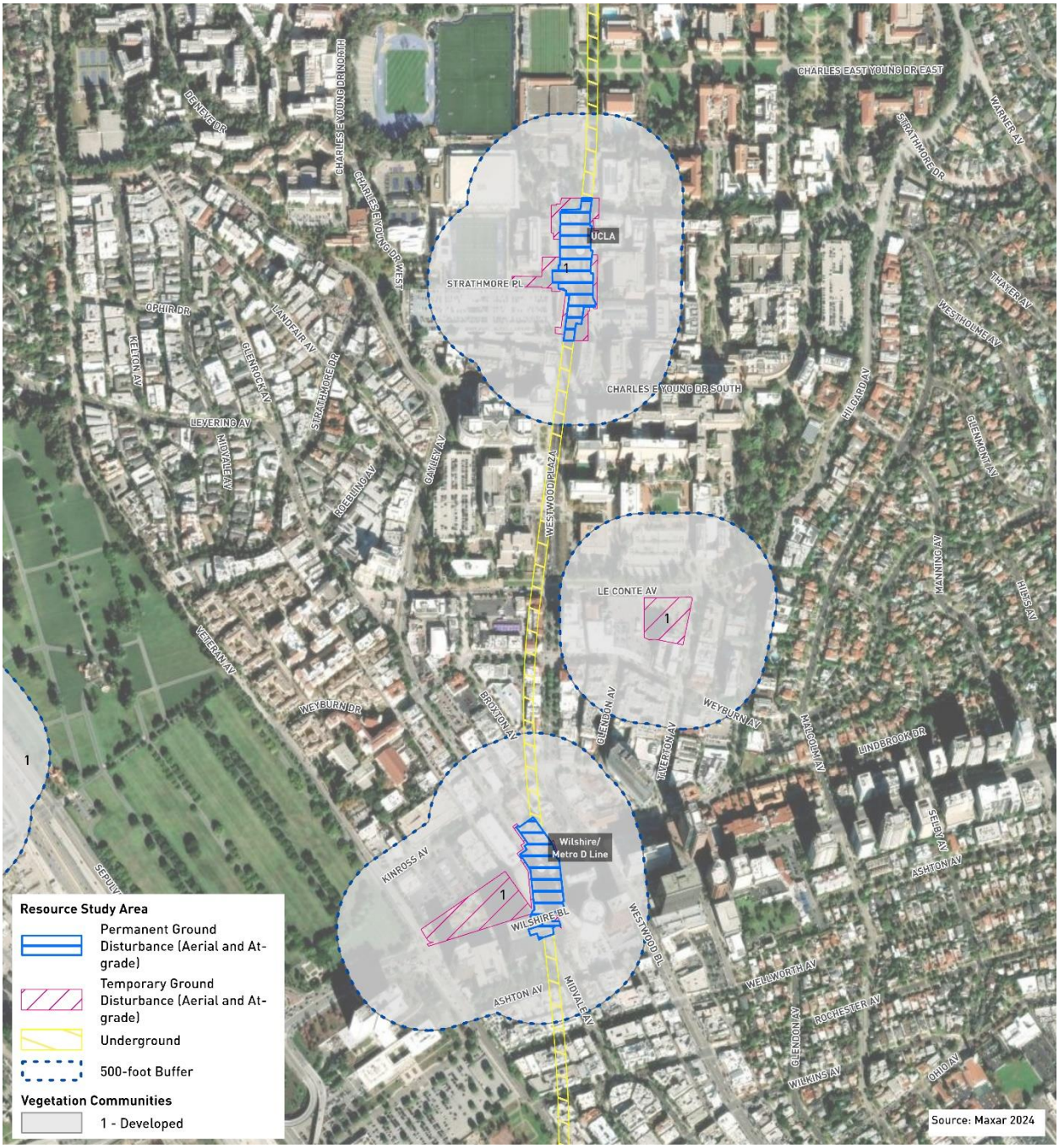
Figure 8-15. Alternative 4: Vegetation Communities, Map 2 of 13

Source: HTA, 2024

Figure 8-16. Alternative 4: Vegetation Communities, Map 3 of 13

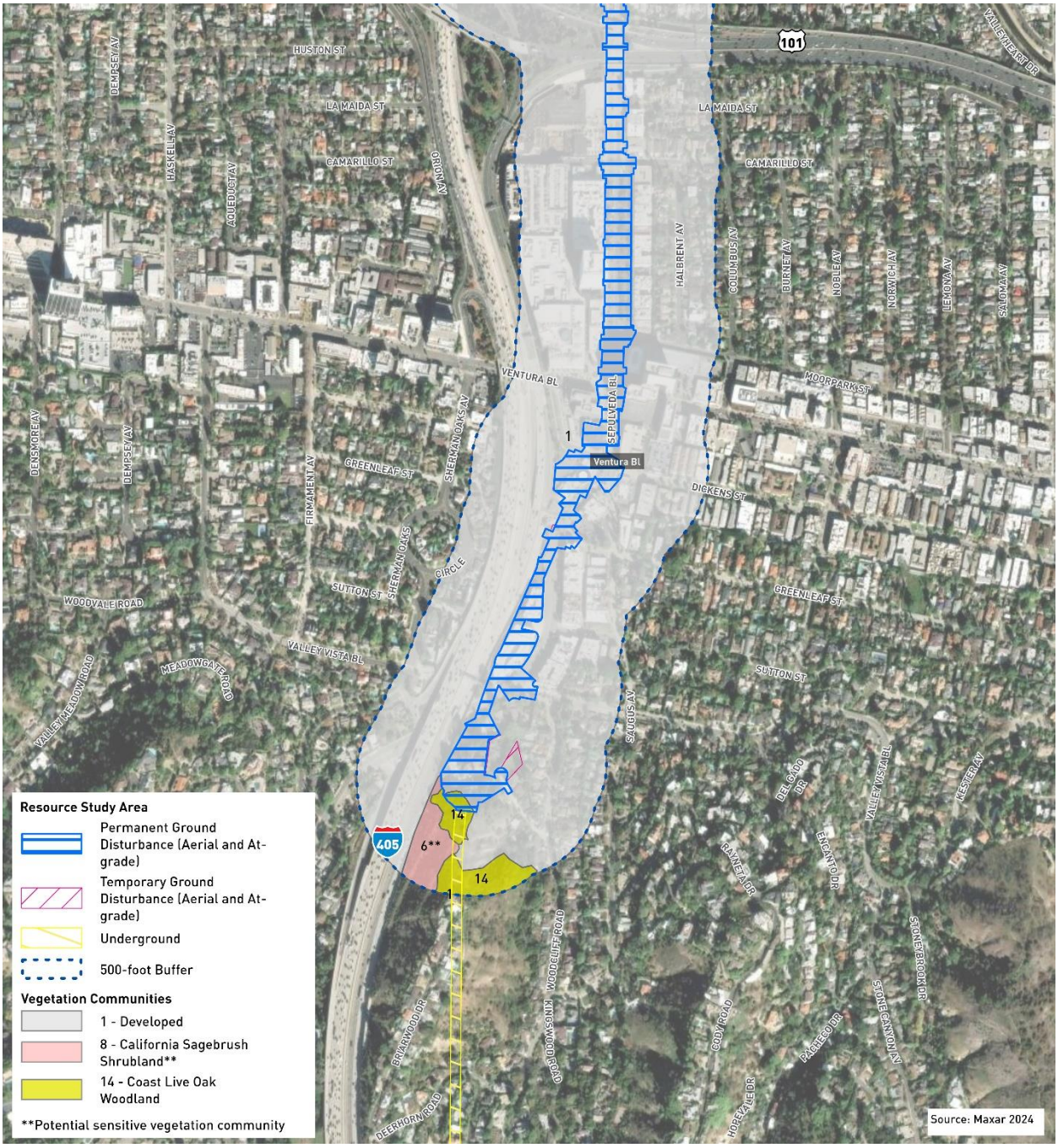
Source: HTA, 2024

Figure 8-17. Alternative 4: Vegetation Communities, Map 4 of 13



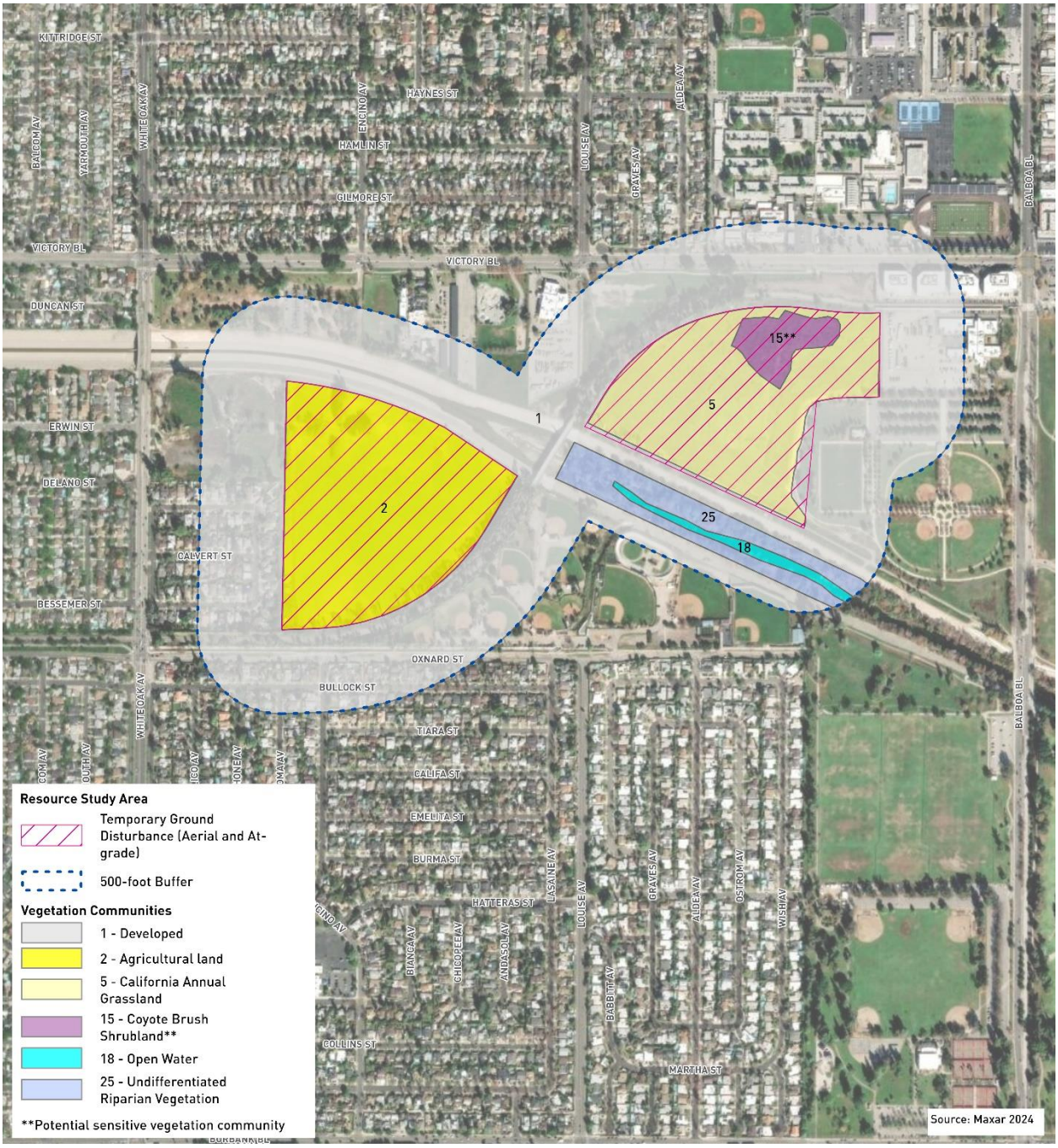
Source: HTA, 2024

Figure 8-18. Alternative 4: Vegetation Communities, Map 5 of 13



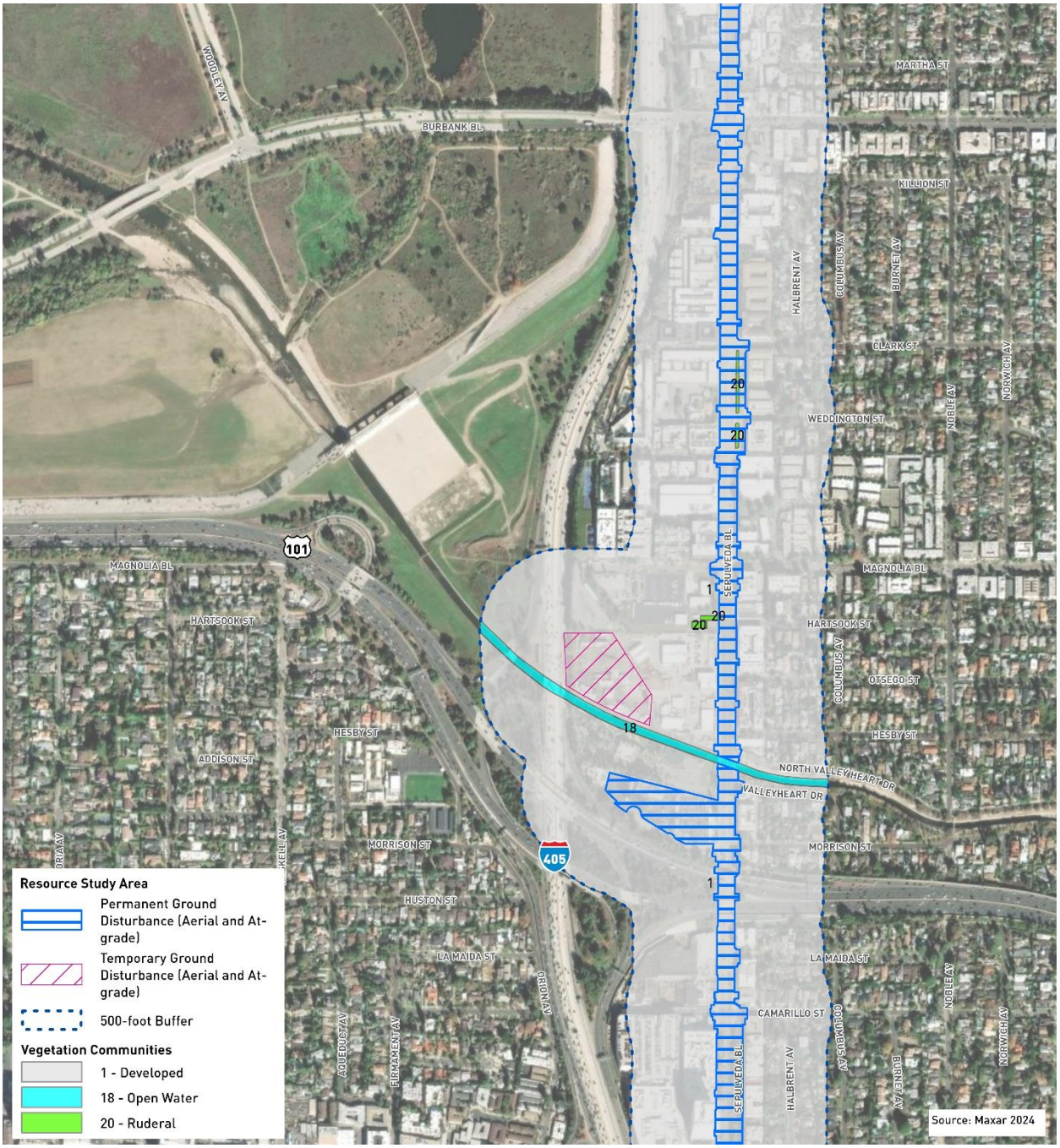
Source: HTA, 2024

Figure 8-19. Alternative 4: Vegetation Communities, Map 6 of 13



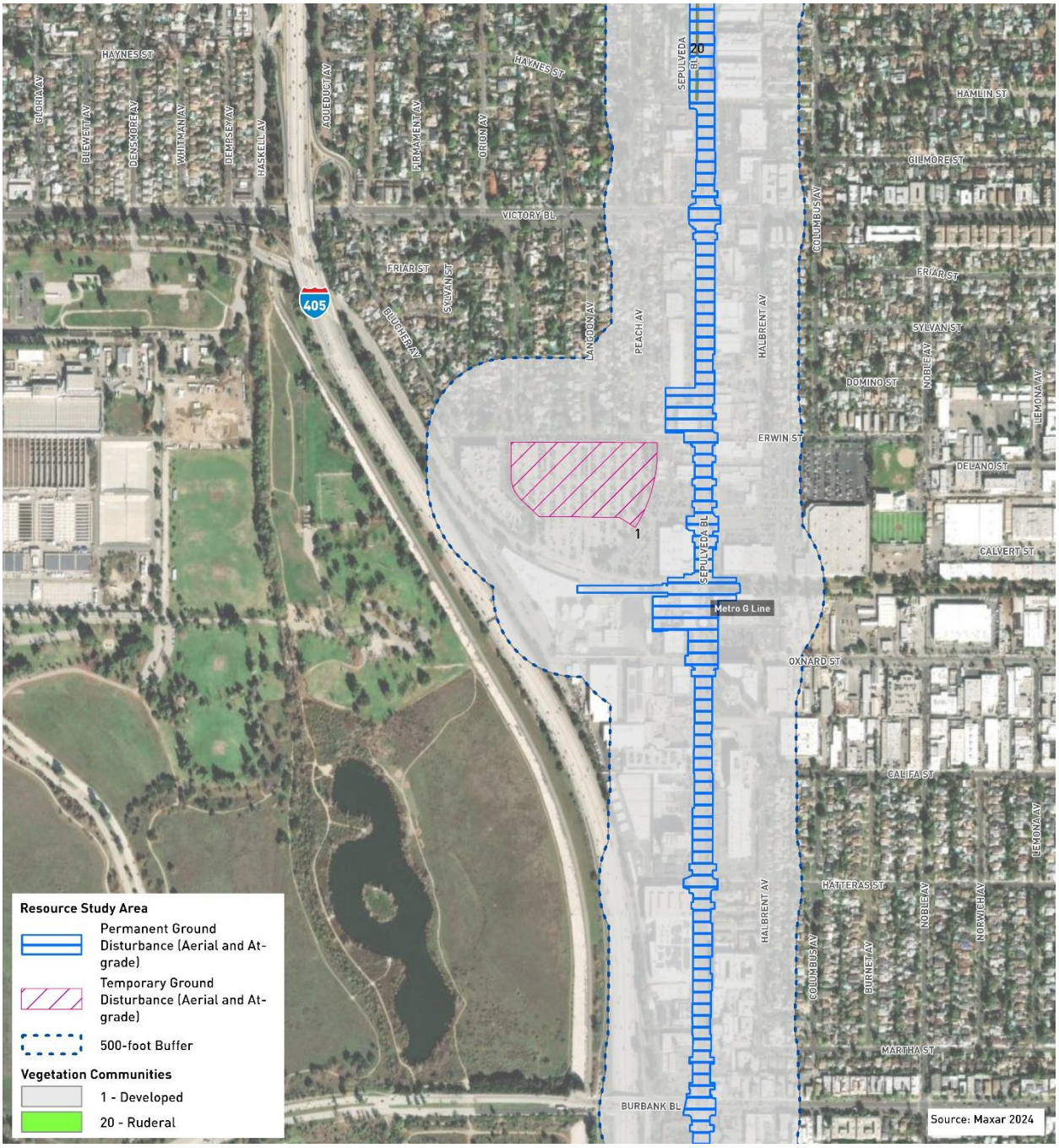
Source: HTA, 2024

Figure 8-20. Alternative 4: Vegetation Communities, Map 7 of 13



Source: HTA, 2024

Figure 8-21. Alternative 4: Vegetation Communities, Map 8 of 13

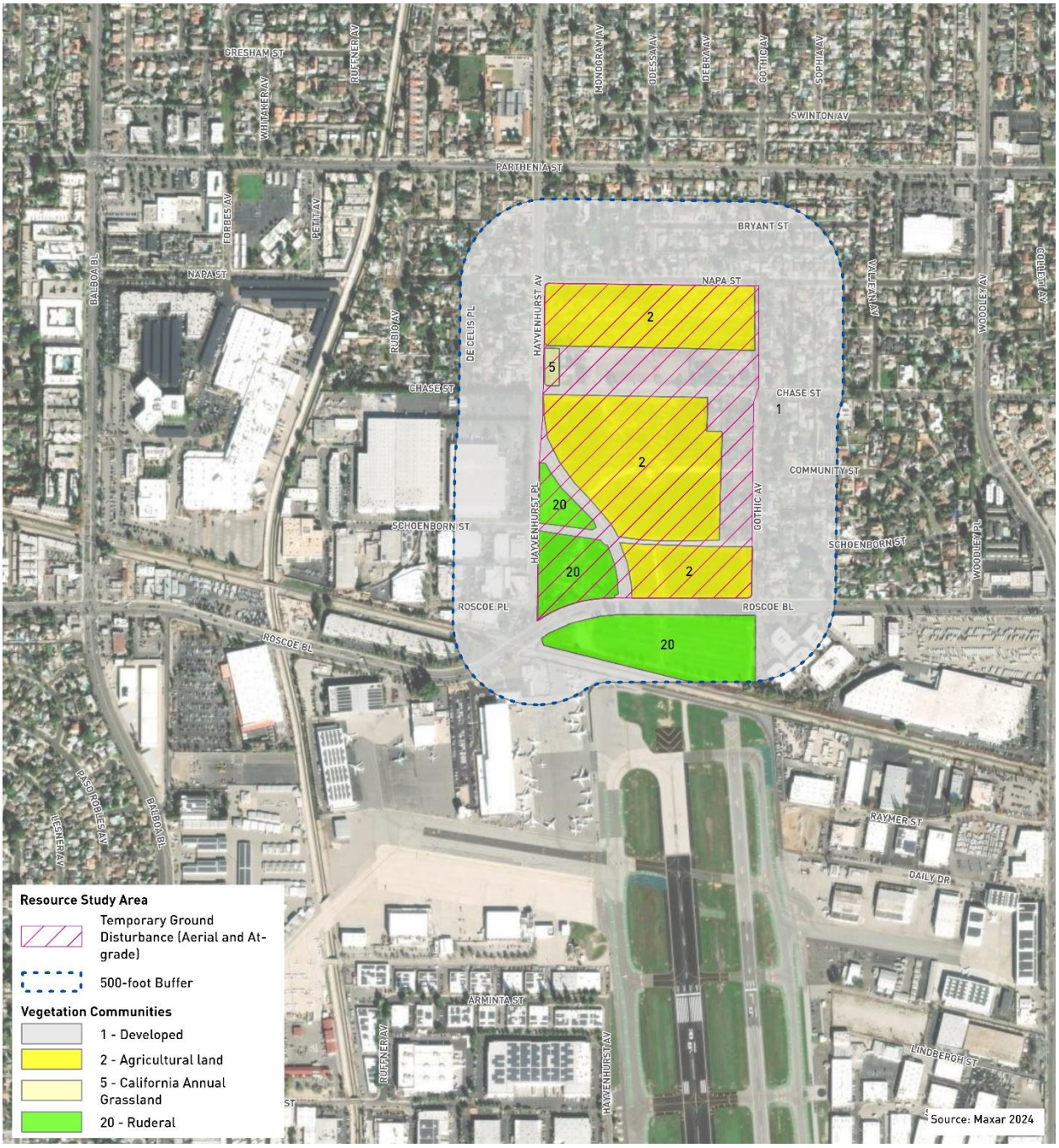


Source: HTA, 2024

Figure 8-22. Alternative 4: Vegetation Communities, Map 9 of 13

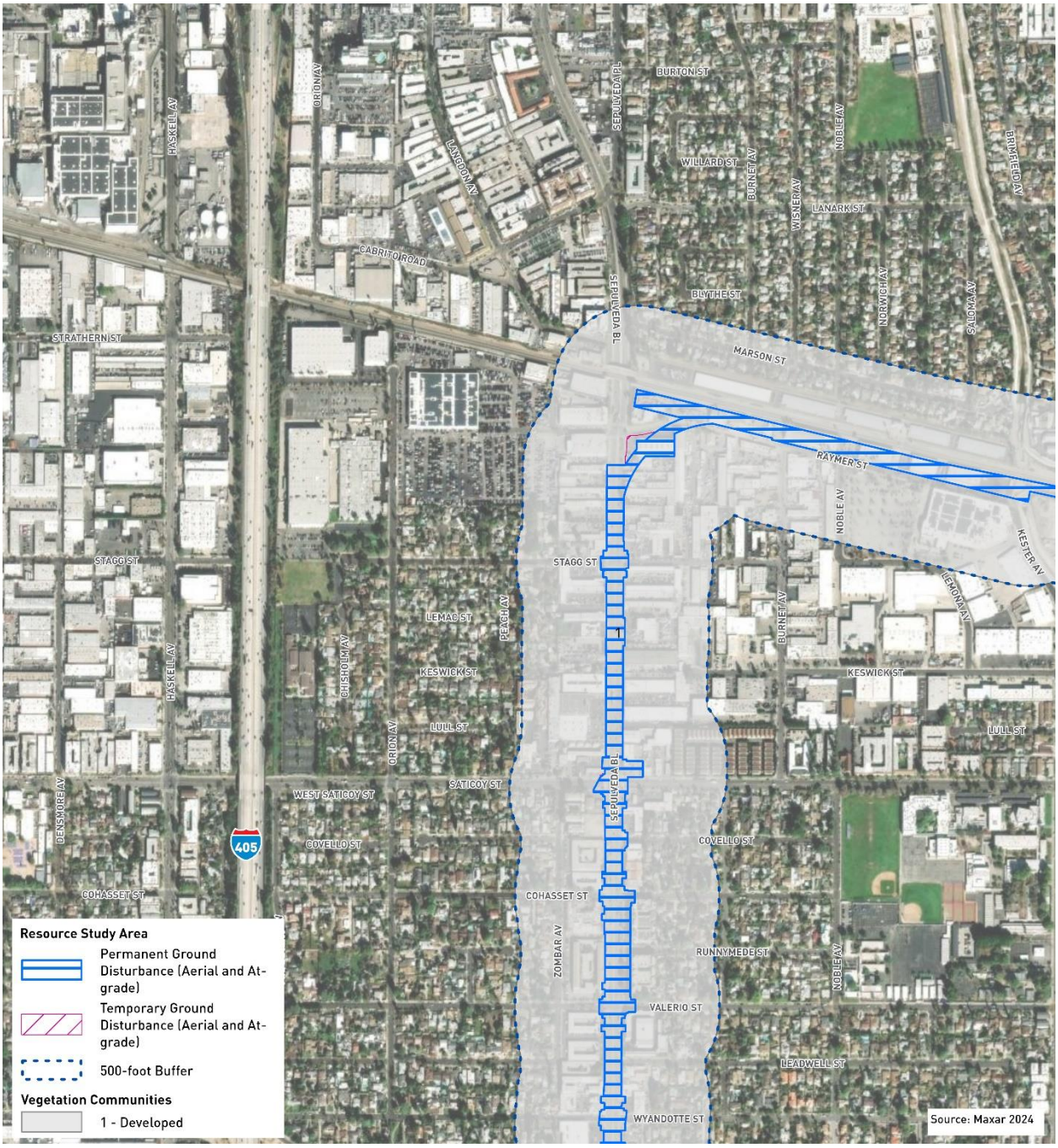
Source: HTA, 2024

Figure 8-23. Alternative 4: Vegetation Communities, Map 10 of 13



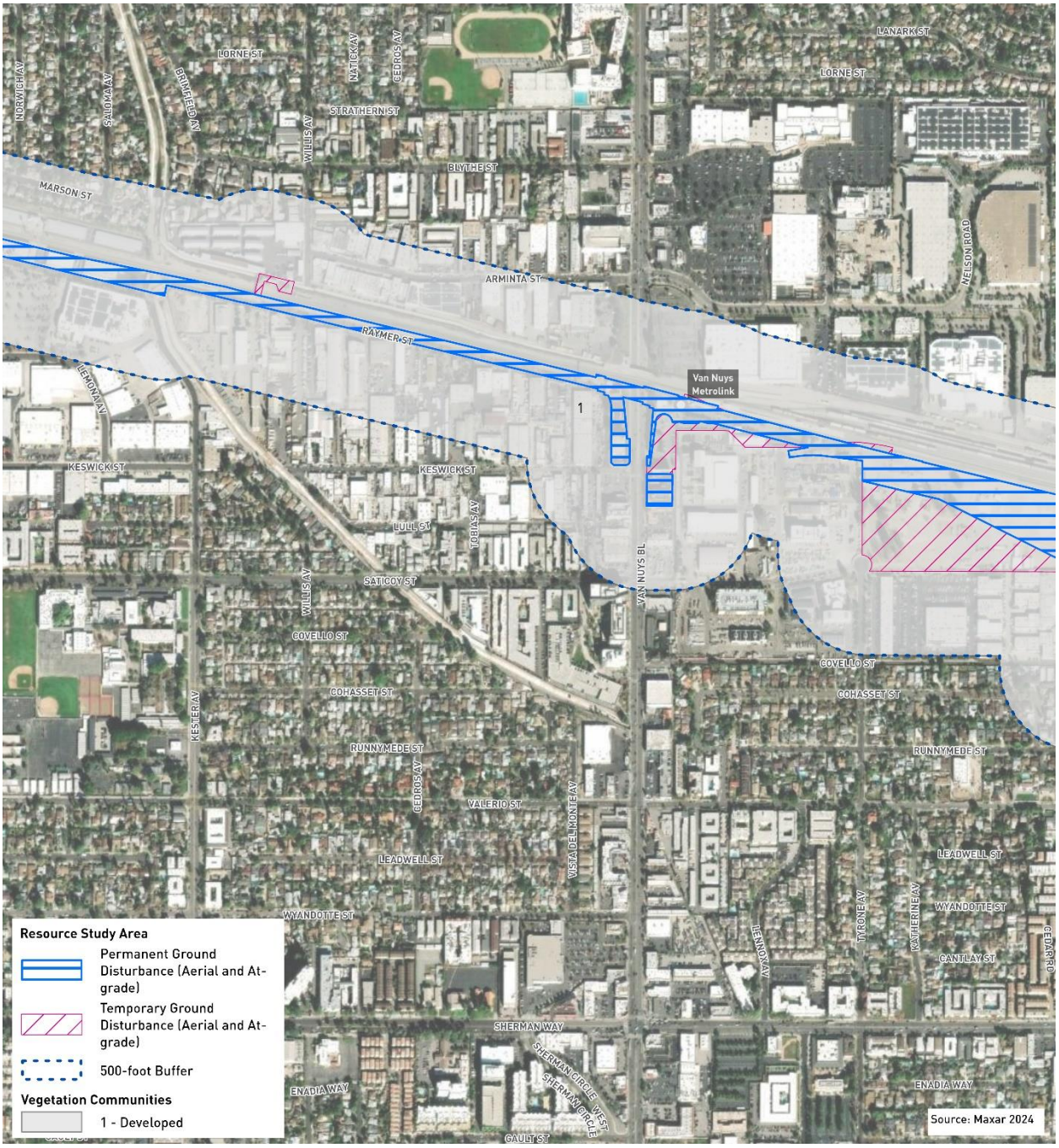
Source: HTA, 2024

Figure 8-24. Alternative 4: Vegetation Communities, Map 11 of 13



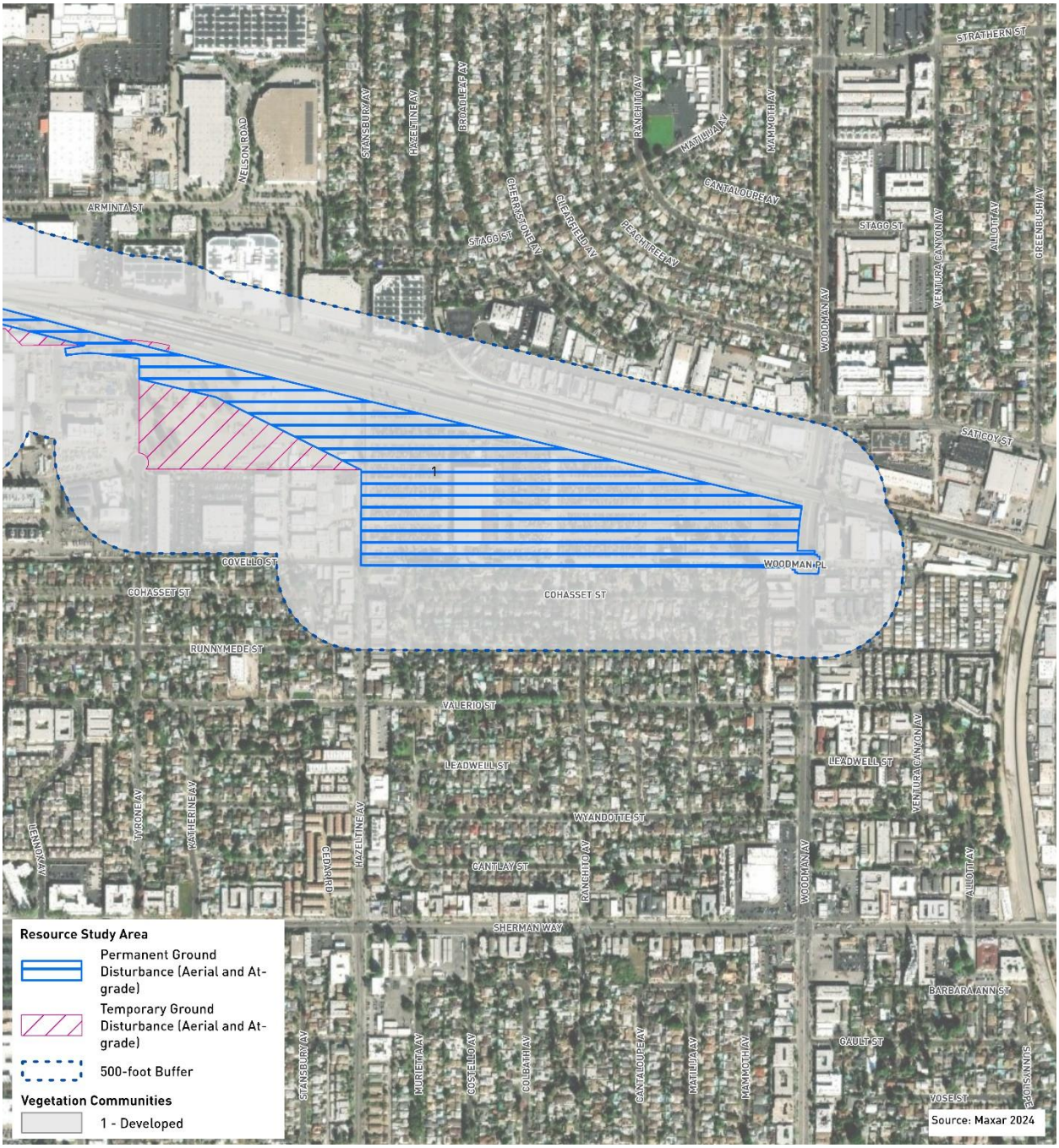
Source: HTA, 2024

Figure 8-25. Alternative 4: Vegetation Communities, Map 12 of 13



Source: HTA, 2024

Figure 8-26. Alternative 4: Vegetation Communities, Map 13 of 13



Source: HTA, 2024

Developed

The developed cover class consists of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or minimal ornamental landscaping. Ornamental landscaping was demarcated during the tree and shrub inventory as a subset of the developed cover class. The ornamental landscaping subcategory is characterized by developed areas dominated by ornamental trees, shrubs, grasses, and herbs, with some areas including native species. The dominant ornamental trees include carob tree (*Ceratonia siliqua*), Chinese banyan (*Ficus microcarpa*), shamel ash (*Fraxinus uhdei*), Chinese elm (*Ulmus parvifolia*), jacaranda (*Jacaranda mimisifolia*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Mexican fan palm (*Washingtonia robusta*), and several species of eucalyptus trees (*Eucalyptus* spp.). Dominant native trees found in this subcategory include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and southern California black walnut (*Juglans californica*). This cover class represents approximately 93 percent of the Alternative 4 RSA and occurs throughout it.

Agricultural Land

Agricultural land does not support native vegetation and can include actively cultivated land or land that supports nursery operations. Agricultural land represents 3.6 percent of the Alternative 4 RSA and occurs in two areas near the northern end. One area is located north of the Van Nuys Airport in potential offsite staging yard N4 and the second area is located in the western end of the Sepulveda Basin in potential offsite staging yard N1. Some locations contain cover crops while others are fallow; condition of crops within each field are likely to change with season.

California Annual Grassland

California annual grassland includes wild oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut brome, prickly lettuce (*Lactuca seriola*), black mustard, and the occasional mulefat (*Baccharis salicifolia*) and/or coyote brush. California annual grassland represents 1.4 percent of the Alternative 4 RSA and occurs in two areas near the northern end. One area is located north of the Van Nuys Airport in potential offsite staging yard N4 and the second area is located in the western end of the Sepulveda Basin in potential offsite staging yard N2.

Ruderal

The ruderal cover class consists of areas that are dominated by bare ground or invasive non-native forbs (herbaceous, non-grass species) that are adapted to a regime of frequent disturbances. Non-native annual grasses will occur in low abundance and typically contribute less than 50 percent to the entire herbaceous cover. Species typically found in this cover class include non-native grasses and forbs such as wild oats, bromes, mustards, thistles, tumbleweed (*Salsola* sp.), tobacco tree and castor bean. Ruderal land often contains trash and rubble, such as fragments of concrete or asphalt, and is dominated by invasive species. This cover class occurs in 0.8 percent of the Alternative 4 RSA on the northern and southern ends.

Undifferentiated Riparian Vegetation

Undifferentiated designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Undifferentiated riparian vegetation has the potential to be sensitive depending on species present within the community; this will be further refined upon future analysis and field surveys prior to initiation of construction. Undifferentiated riparian vegetation represents less than 1 percent of the Alternative 4 RSA and occurs surrounding the Los Angeles River in the northwestern edge of the RSA, south of potential off-site staging yard N2. For this

analysis, Metro is conservatively considering this community to be sensitive pending further analysis and refinement of vegetation mapping.

Open Water

This community consists of any open body including lakes, reservoirs, bays, flowing water within a river channel, and small ponds along stream courses. Open water represents 0.2 percent of the Alternative 4 RSA and occurs in the northern end within two areas of the Los Angeles River. The first area is located in the western portion of the Sepulveda Basin, south of potential off-site staging yard N2, and the second area is located southeast of the Sepulveda Basin and east of I-405, between staging yards 6 and 7.

Coyote Brush Shrubland

This community is dominated by coyote brush with a codominant of mulefat. Coyote brush shrubland is found in native shrubland areas with a history of anthropogenic disturbance. This community represents 0.2 percent of the Alternative 4 RSA and occurs in the northwestern portion of potential off-site staging yard N2 in the Sepulveda Basin.

Coast Live Oak Woodland

Coast live oak woodland is an open to dense tree community with coast live oak as the dominant overstory species and Engelmann oak (*Quercus engelmannii*) as an occasional associate. The shrub understory of this community is well developed in undisturbed sites and may include Mexican elderberry, gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), and toyon (Beauchamp, 1986; Holland, 1986). An herbaceous stratum is usually present, including miner's lettuce (*Claytonia perfoliatea* var. *erfoliatea*), chickweed (*Stellaria media*), and non-native grasses. Coast live oak woodland represents 0.2 percent of the Alternative 4 RSA and occurs in the central portion just north of the Santa Monica Mountains at the tunnel portal at Del Gado Avenue.

California Sagebrush Shrubland

California sagebrush shrubland occurs on gentle to steep slopes of variable aspect at low elevations between approximately 0 to 2,000 feet (NPS, 2006). California sagebrush is dominant in the shrub layer (NPS, 2006). Other species that can be found in the shrub layer of this community include laurel sumac, purple sage, coyote brush, and black sage (NPS, 2006). The tree layer is emergent and open and infrequently includes coast live oak, California black walnut, and Peruvian pepper tree at low canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, black mustard, tocalote, mustard, giant wild rye, and ripgut brome (NPS, 2006). California sagebrush shrubland represents 0.1 percent of the Alternative 4 RSA and occurs in the central portion, just north of the Santa Monica Mountains at the tunnel portal at Del Gado Avenue.

8.2.5.3 Trees Within Proposed Construction Areas

Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. Numerous trees occur within the Alternative 4 RSA. The northern and southern portions of the Alternative 4 RSA are highly urbanized and dominated by non-native, ornamental trees planted within residential, commercial, and roadside ornamental landscapes. The southern portion has reduced potential impacts to trees due to running underground from the start at the Metro E Line Expo/Sepulveda Station through the Westside communities of Los Angeles and the Santa Monica Mountains; this results in limiting direct impacts to discrete locations associated with staging or potential off-site staging locations. Starting at the tunnel portal south of Ventura Boulevard in the Valley, the alignment continues north as an aerial guideway to the northern terminus adjacent to the Van Nuys Metrolink Station. Within the northern portions of the Alternative 4

RSA, native trees, such as coast live oak, western sycamore, and canyon live oak, occur in smaller numbers interspersed with the predominantly non-native and ornamental trees. Trees within this area are subject to direct impacts associated with the aerial alignment. Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, contains information about the protected trees and shrubs that were mapped within the Alternative 4 RSA.

Of the six local ordinances, plans, or policies with potential to protect trees or shrubs within combined Tree Survey Area (detailed in Section 2.3), the Los Angeles County Oak Woodlands Conservation Management Plan does not have jurisdiction, since inventoried trees did not meet the requirements (i.e., there were no native oak tree stands on unincorporated County land with current or historical canopy cover greater than 10 percent). Therefore, the County Plan will not be discussed further in this report.

Within SMMNRA, trees within the Tree Survey Area were located on lands owned or managed by the County of Los Angeles and the MRCA within the Sepulveda Pass Open Space, Mission Canyon Open Space, and the MRCA Mountaingate Conservation Easement.

8.2.5.4 Sensitive Natural Vegetation Communities

Based on vegetation mapping, no sensitive vegetation communities are present within the Alternative 4 RSA. Two identified communities and one undifferentiated category have the potential to be considered sensitive depending on the associated plants present, i.e., associations (see Section 3.2.2 for additional details). For these communities, classification of vegetation associations is required to determine sensitivity, since not all associations within the community are sensitive. Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping. The identified communities include coyote brush shrubland and California sagebrush shrubland. The undifferentiated category is riparian vegetation. For the purposes of this analysis, these communities will be considered as potentially sensitive and will be included in acreage calculations of impacts to sensitive communities. Additional sensitive vegetation communities may be present within the Alternative 4 RSA that were not captured in the vegetation mapping effort if their extent was smaller than the minimum mapping unit for SMMNRA mapping (0.5 hectare).

8.2.5.5 Special-Status Plant Species

Of the 49 special-status plant species with potential to occur within the Project Study Area, 17 were identified as having a potential to occur within the Alternative 4 RSA from CNDDB, California Native Plant Society (CNPS), IPaC, and iNaturalist database searches (CDFW, 2023a; CNPS, 2024; USFWS, 2023a; iNaturalist, 2024p through 2024x). These species are listed in Table 8-8 with an assessment of their potential to occur within the Alternative 4 RSA.

Fifteen of the special-status plant species were concluded to be known or have potential to occur within the Alternative 4 RSA (Table 8-8); the remaining two were determined to have no potential to occur and is not discussed further for Alternative 4. The nine species with low potential are considered unlikely to be detected within the Alternative 4 RSA or impacted by Alternative 4 due to the lack of known recent occurrences and suitable habitat within the Alternative 4 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 8-8. Within Table 8-8, rows discussing species that were determined to be present or to have a high potential to occur within the Project Study Area are highlighted blue.

Table 8-8. Alternative 4: Special-Status Plant Species with Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Astragalus brauntonii	Braunton's milk-vetch	FE 1B.1	Fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum*), yucca (*Yucca whipplei*), and the rare Tecate cypress (*Cupressus forbesii*).	**High**. Suitable habitat occurs within the Alternative 4 RSA and recent observations of the species have been observed 0.5 mile east of the Alternative 4 RSA in 2022 in Bel Air Crest and within Fossil Ridge Park approximately 1 mile south of US-101 in 2019 (iNaturalist, 2024o).
Atriplex coulteri	Coulter's saltbush	1B.2	Associated with areas of saline and alkaline soils, such as ocean bluffs.	**No Potential.** No suitable habitat is present in the Alternative 4 RSA.
Berberis nevinii	Nevin's barberry	FE/SE 1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian scrub. Found in gravelly or sandy micro habitats. Blooms from February (March) – June at elevations ranging from 230 to 2,750 feet.	**Low.** Suitable habitat is present within the Alternative 4 RSA; however, the closest non-ornamental observations are over 3 miles east of the Alternative 4 RSA (iNaturalist, 2024p).
Calochortus clavatus var. *gracilis*	Slender mariposa lily	1B.2	Chaparral, coastal scrub, and valley and foothill grasslands, on shaded foothill canyons within the Transverse Ranges and the San Gabriel Mountains. Occurs between 1,050 and 3,280 feet.	**Moderate.** Suitable habitat is present within the Alternative 4 RSA and the species was observed in in 2023 at the Hansen Dam Golf Course 4.5 miles northeast of the Alternative 4 MSF (iNaturalist, 2024q).
Centromadia parryi ssp. *australis*	Southern tarplant	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Blooms from May to November at elevations ranging from 0 to 1,575 feet.	**Low.** Suitable habitat is present in the Alternative 4 RSA. One recent record from 2022 is located in Kenneth Hahn State Recreation Area, 3.75 miles southeast of the southern terminus of the Alternative 4 RSA (iNaturalist, 2024r). One historical record from 1957 located on a brushy hill east of The Getty is within the Alternative 4 RSA (CDFW, 2023a).
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	SE 1B.1	Sandy portions of coastal scrub, valley and foothill grassland, between 490 and 4,005 feet. Blooms April to July.	**Low.** Suitable habitat is present within the Alternative 4 RSA although only historical occurrences from the early 1900s are within 7 miles of the Alternative 4 RSA (CDFW, 2023a).
Dodecahema leptoceras	Slender-horned spineflower	FE/SE 1B.1	Found in sandy sites within chaparral, cismontane woodland, or alluvial fans within coastal scrub. Occurs between 655 and 2,495 feet.	**Low.** Suitable habitat is present within the Alternative 4 RSA. Two recent sightings in 2022 (iNaturalist, 2024t) and one historical observation (1906) (CDFW, 2023a) are located approximately 3 miles east of the Alternative 4 RSA.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT 1B.1	Chaparral, coastal sage scrub, on shaded, rocky slopes.	**Low.** Suitable habitat is present in the Alternative 4 RSA, although the plant is only currently known from 10 total locations. The nearest location is over 6 miles to the west in Topanga State Park, reported in 1987 and 2012 (CDFW, 2023a).
Horkelia cuneata var. *puberula*	Mesa horkelia	1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Blooms from February to July at elevations ranging from 225-2,655 feet.	**Low.** Suitable habitat is present in the Alternative 4 RSA but observations within 10 miles of the Alternative 4 RSA are all historical (1895, 1929, 1956) (CDFW, 2023a).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Blooms from February to June at elevations ranging from 0-4,005 feet.	**Low.** Suitable habitat is present in the Alternative 4 RSA; two historical records from 1934 and 1966 are within 7 miles of the Alternative 4 RSA (CDFW, 2023a).
Malacothamnus davidsonii	Davidson's bushmallow	1B.2	On slopes of chaparral, oak woodland, and other habitats.	**High**. Suitable habitat is present in the Alternative 4 RSA. An observation from 2021 is located 0.5 mile west of the Alternative 4 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021).
Monardella hypoleuca ssp. *hypoleuca*	White-veined monardella	1B.3	Chaparral and cismontane woodlands. Known only from the Santa Monica, Santa Ynes, and Sierra Madre Mountains.	**Low.** Suitable habitat is present in the Alternative 4 RSA. The nearest observation is from 2008 and is approximately 6 miles west of the Alternative 4 RSA near the Santa Ynez Canyon Trailhead (CDFW, 2023a).
Nolina cismontana	Chaparral nolina	1B.2	Coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone substrates	**High.** Suitable habitat is present, and the species was detected in 2020 approximately 0.50 mile east of the Alternative 4 RSA in Deervale-Stone Canyon Park (iNaturalist, 2024u).
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	2B.2	Wetlands, meadows, and seeps.	**No Potential**. No suitable habitat is present in the Alternative 4 RSA.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Quercus dumosa	Nuttall's scrub oak	1B.1	Generally found on sandy soils near the coast, often found in chaparral and coastal sage scrub communities between 50 and 1,300 feet.	**High**. Suitable habitat is present in the Alternative 4 RSA. An individual was observed in 2024 approximately 0.35 mile outside the Alternative 4 RSA, east of the UCLA Gateway Plaza (iNaturalist, 2024v) and in 2009, a multi-stemmed individual was observed 2.5 miles southeast of the Alternative 4 RSA in Kenneth Hahn State Recreation Area (CDFW, 2023a).
Sagittaria sanfordii	Sanford's arrowhead	1B.2	Freshwater wetlands. Occurs between 0 and 2,135 feet. Blooms May to October (November).	**High**. Suitable habitat is present in the Alternative 4 RSA in the buffer for staging yards N1 and N2. One recent observation (2021) from the Los Angeles River within the Sepulveda Basin Recreation Area (CDFW, 2023a) is 0.25 mile from the Alternative 4 RSA; a 2022 observation in the southern portion of the Alternative 4 RSA is 0.75 mile from the Alternative 4 RSA, near Holmby Park (iNaturalist, 2024w).
Symphyotrichum greatae	Greata's aster	1B.3	Within mesic microhabitats in chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Occurs between 985 to 6,595 feet. Blooms June to October.	**Low**. Suitable habitat is present in the Alternative 4 RSA. One historical, undated sample from Benedict Canyon in the Santa Monica Mountains is approximately 1 mile east of the Alternative 4 RSA (CDFW, 2023a). No recent observations are present.

Source: HTA, 2024

[a]Special-status plant species identified during reviews of the CNDDB (CDFW, 2023a), CNPS database (CNPS, 2024), and iNaturalist (iNaturalist, 2024p through 2024x) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; and a review of IpaC (USFWS, 2024a) for the project region.

Notes:

Federal Status Designations
FC -= Federal Candidate for Listing
FE =Federally Endangered
FT = Federally Threatened

State Status Designations:
SC = State Candidate Species for Listing
SE = State Endangered
SR = State Rare
ST = State Threatened

California Native Plant Society Ranks:

1A. — Presumed Extirpated in California and either rare or extinct elsewhere.
1B. – Rare or Endangered in California and elsewhere.
1B.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) and elsewhere.
1B.2 – Fairly endangered in California (20-80 percent occurrences threatened) but more common elsewhere.
2A. – Presumed extirpated in California but common elsewhere.
2B. – Rare, Threatened, or Endangered in California but more common elsewhere.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, CNPS, iNaturalist, or another database as occurring in the Alternative 4 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 4 RSA; however, no records occur directly with the Alternative 4 RSA. Species has been detected within 1 mile of the Alternative 4 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 4 RSA is of marginal quality. No records occur in RSA, but the species has been documented over 1 mile from the Alternative 4 RSA.

Low = Suitable habitat within the Alternative 4 RSA is of low quality. There are no known recent occurrences within or near the Alternative 4 RSA.

No Potential = Suitable habitat is not present for the species.

Braunton's Milk-Vetch

Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb that is native to California and has high potential to occur within the Alternative 4 RSA. The species has the California Rare Plant Rank (CRPR) of 1B.1 (rare, threatened, or endangered in California and elsewhere) and is federally listed as endangered. Braunton's milk-vetch occurs in valleys and foothill grasslands, limestone, coastal scrub, and chaparral habitats. It is often found in recent burns or disturbed areas, usually sandstone with carbonate layers. Braunton's milk-vetch typically blooms from January to August at elevations from 15 to 2,100 feet. Suitable habitat occurs within the Alternative 4 RSA and recent records of the species have been observed approximately 0.5 mile east of I-405 in Bel Air Crest and in Fossil Ridge Park approximately 1.5 miles east of I-405, 1 mile south of US-101 (iNaturalist, 2024o).

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) is a perennial herb that is native, and endemic to California and is a CRPR 1B.2 rare species in California. This species has moderate potential to occur within the Alternative 4 RSA and grows in shaded, foothill canyons in Southern California, primarily in the Transverse Range region. It tends to grow on rocky slopes and open areas at elevations from 0 to 5,900 feet and typically blooms from March to June. Suitable habitat is present within the Alternative 4 RSA and records nearby of the species occur approximately 4.5 miles northeast of the Alternative 4 MSF (iNaturalist, 2024q).

Davidson's Bushmallow

Davidson's bushmallow (*Malacothamnus davidsonii*) is a shrub that is native, and endemic to California and is a CRPR 1B.2 rare species in California. This species has high potential to occur within the Alternative 4 RSA; an observation from 2021 is located 0.5 mile west of the Alternative 4 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021). This species typically grows in chaparral, oak woodland, and other habitats on slope. It is known from three California regions, the southern San Francisco Bay Area, the Santa Lucia Mountains in Monterey County, and the Transverse Ranges including the San Gabriel Mountains, and the eastern San Fernando Valley, in Los Angeles County. Suitable habitat for this species is present in the Alternative 4 RSA particularly along I-405 on the Sepulveda Pass in the Santa Monica Mountains.

Chaparral Nolina

Chaparral nolina (*Nolina cismontana*) is a CRPR 1B.2 rare shrub species native to California with high potential to occur within the Alternative 4 RSA. An individual was observed 0.5 mile west of the Alternative 4 RSA in 2020, in Deervale-Stone Canyon Park (iNaturalist, 2024u). This species occurs in coastal sage scrub and open chaparral habitats in foothills from Ventura County south to San Diego County and typically blooms from May to June. Suitable habitat for chaparral nolina is present within the Alternative 4 RSA, mainly in the central portion of the Alternative 4 RSA within the Santa Monica Mountains.

Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 perennial evergreen shrub species with high potential to occur that is native to the South Coast, Peninsular Ranges, and San Jacinto Mountains of California. This species occurs in coastal sage scrub and chaparral habitats with sandy, clay or loam soils between 50 and 1,300 feet. Recent observations include one individual located 0.35 mile outside of the Alternative 4 RSA, east of the UCLA Gateway Plaza (iNaturalist, 2024v), and a second in Kenneth Hahn State Recreation Area, 2.5 miles southeast of RSA (CDFW, 2023a). The former is likely to be a landscaped

plant due to its location in a yard; the latter was described as a multi-stemmed, wind-cropped, very old individual with other chapparal relic species present.

Sanford's Arrowhead

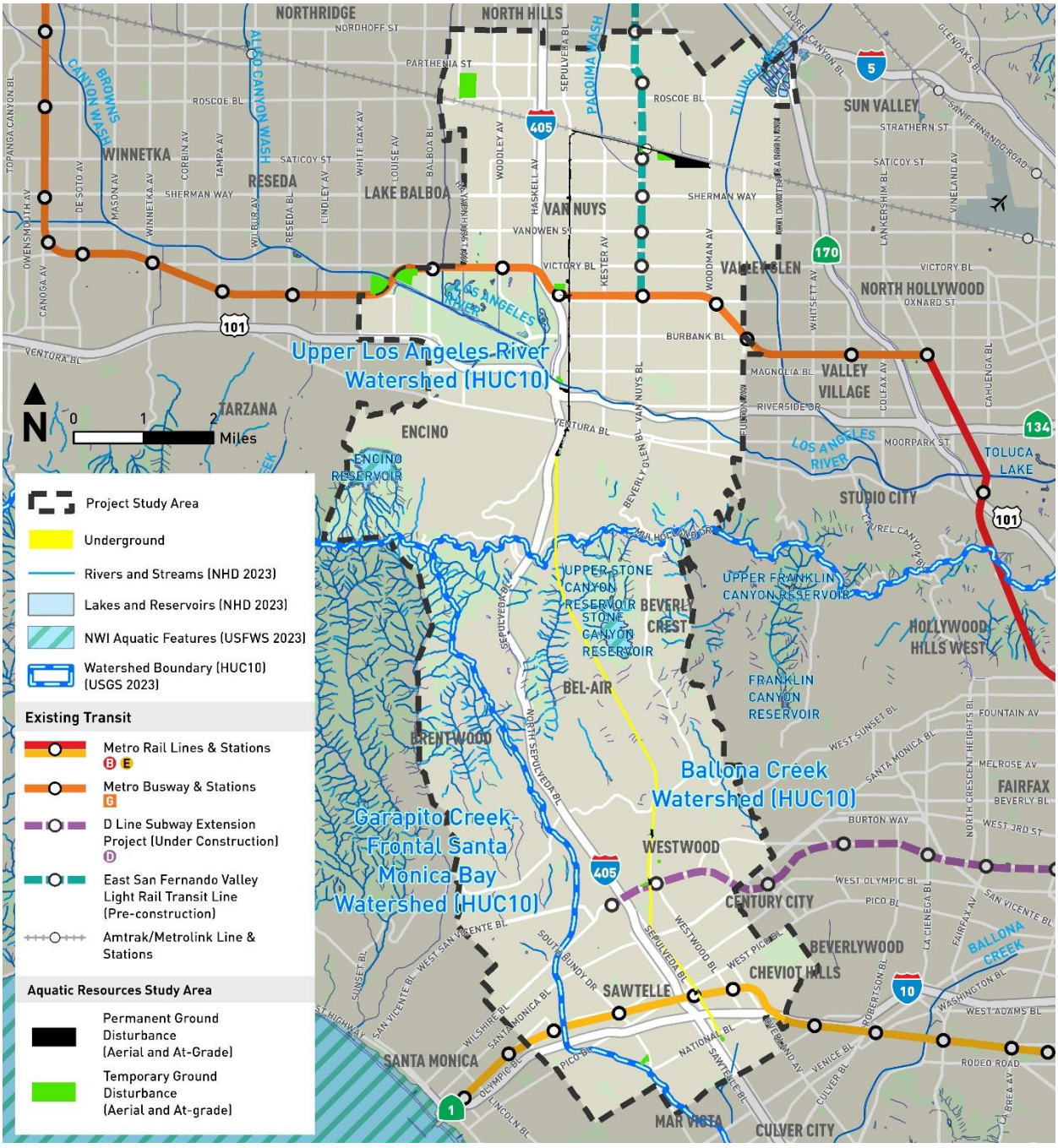
Sanford's arrowhead (*Sagittaria sanfordii*) is a CRPR 1B.2 perennial rhizomatous herb that is an obligate wetland species endemic to California. This species has high potential to occur in the northwestern part of the Alternative 4 RSA, where the Los Angeles River has an earth bottom since Sanford's arrowhead inhabits ditches, ponds, marshes, and swamps with shallow freshwater. This species is found between 0 and 2,135 feet in elevation and blooms between March and October. A recent observation (2021) from the Los Angeles River within the Sepulveda Basin Recreation Area is 0.25 mile from the Alternative 4 RSA (CDFW, 2023a). A second observation from 2022 is 0.75 mile from the southeastern section of the Alternative 4 RSA, near Holmby Park east of UCLA's campus (iNaturalist, 2024w).

8.2.5.6 Jurisdictional Resources

The Project Study Area was used to assess for water resources and local conditions that affect hydrology and water availability for the region including watershed context and drainage. For the purposes of the jurisdictional resource evaluation for potential impacts, field surveys occurred within the Ground Disturbance Area portion of the Alternative 4 RSA where direct impacts would occur, and an associated 500-foot buffer on ground disturbance was assessed through desktop analysis of vegetation communities for indirect impacts to potential aquatic resources. The underground tunnel alignment was not included as no impacts are anticipated to water resources.

An online review of the National Hydrography Dataset (NHD) (USGS, 2023) and National Wetlands Inventory (NWI) (USFWS, 2023a) indicates the presence of mapped aquatic features within the Project Study Area. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels in the vicinity of the Alternative 4 RSA (Figure 8-27). Named aquatic resources nearby the Alternative 4 RSA include the Los Angeles River, Pacoima Wash, Encino Creek, and the Sepulveda Channel. However, only the Los Angeles River is located within the Alternative 4 RSA and would be traversed by the Project. The remainder of the aquatic resources within the Alternative 4 RSA are either underground, or ephemeral and unnamed.

Figure 8-27. Alternative 4: National Hydrography Dataset and National Wetlands Inventory Aquatic Features



Source: USFWS, 2023a, 2023b

While the larger Project Study Area includes the Upper Los Angeles River, Ballona Creek, and the Garapito Creek Frontal Santa Monica Bay Watersheds, only the Upper Los Angeles River and Ballona Creek Watersheds receive waters within the Alternative 4 RSA. Therefore, discussion is limited to the two watersheds relative to the Alternative 4 RSA. The receiving waters from the Alternative 4 RSA include the Los Angeles River and Ballona Creek with their respective tributaries. The Los Angeles River

crosses the Alternative 4 RSA from west to east, roughly parallel, and adjacent to the US-101, while Ballona Creek is 3 miles south of the Alternative 4 RSA.

Upper Los Angeles River Watershed

The Upper Los Angeles River Watershed is located is the northwest portion of Los Angeles County and covers over 613 square miles. This watershed includes the San Fernando Valley and portions of the San Gabriel and Santa Susana Mountains. The six major tributaries along the river include Tujunga Wash, Burbank Western Storm Drain, Verdugo Wash, Arroyo Secco, Rio Hondo, and Compton Creek. The primary source of input into the Los Angeles River watershed is wet weather runoff originating from direct precipitation, and dry weather inputs from urban runoff, and groundwater upwelling (LADPW, 2022).

The northern portion of the Alternative 4 RSA crosses the Los Angeles River in Reach 5, where the river flows west to east, at the base of the Santa Monica Mountains in the San Fernando Valley. Reach 5 of the Los Angeles River runs through low density residential neighborhoods, the Sepulveda Basin, other commercial developed areas, and under I-405, Sepulveda Boulevard, and Van Nuys Boulevard.

Topography throughout the coastal plain area of Upper Los Angeles River Watershed is generally defined by gradually sloping land from the foothills of the San Gabriel Mountains to the Pacific Ocean. Ground elevations range from 10,000 feet in the San Gabriel Mountains approximately 15 miles east of the Alternative 4 RSA, to mean sea level at the mouth of the Los Angeles River approximately 22 miles south of the Alternative 4 RSA. Most of the coastal plain is less than 1,000 feet in elevation (GLAC, 2014), while the upper portion of the watershed is covered by forest and open space. The majority of land in the Upper Los Angeles River Watershed is developed with urban uses, including the portion of the river that traverses the Alternative 4 RSA (LA County, 2023b).

Ballona Creek Watershed

Ballona Creek consists of a 9-mile-long flood protection channel that drains the Los Angeles Basin south of the Alternative 4 RSA. The Ballona Creek Watershed covers approximately 130 square miles in the western portion of the Los Angeles Basin and is made up by the Culver City, Wilshire, and Hollywood sub-watersheds. The headwaters of the watershed are in the Santa Monica Mountains, including a portion in the Alternative 4 RSA, and Baldwin Hills to the southeast of the Alternative 4 RSA. Most of the Ballona Creek drainage network consists of storm drains, underground culverts, and open concrete channels. However, Ballona Creek does not traverse the Alternative 4 RSA. Ballona Creek is an open channel between Venice Boulevard and Pickford Street and its confluence with Santa Monica Bay (a length of approximately 9 miles); it is located approximately 4 miles south of the Alternative 4 RSA. A few natural channels remain in the Santa Monica Mountains and Baldwin Hills. The Sepulveda Channel, which is mostly channelized and underground, runs along I-405 less than 2 miles south of the Alternative 4 RSA and is a major tributary to the Ballona Creek Watershed.

Riparian Habitats

Although not mapped in the NWI, riparian habitats may be present along many of the jurisdictional features identified in the NWI database. Riparian habitats fall under CDFW jurisdiction, which generally extends to the outer limits of riparian habitats occurring around aquatic features. Such habitats provide valuable buffers around aquatic features and provide specific habitat requirements for many plant and wildlife species, including many of the regional special-status species identified above. Based on Project vegetation mapping, 8.3 acres of undifferentiated riparian habitat are located within the 500-foot buffer on Ground Disturbance Area for Alternative 4. Riparian vegetation is located approximately 100 feet south of two potential off-site staging yards in the western end of Sepulveda Basin.

The RSA for Alternative 4 would traverse the Los Angeles River north of the US-101. Alternative 4 includes an aerial alignment that would cross over the river adjacent to Sepulveda Boulevard north of US-101. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 4 would traverse the river. The Los Angeles River is a Traditional Navigable Water throughout its entire reach. However, it is only considered a Navigable Water[6] from the river's outlet into San Pedro Bay to San Pedro Highway Bridge and/or up to 2.5 feet amsl, which is not within the Alternative 4 RSA (USACE, 2023). Because the Project proposes traversing the river above (via aerial tramway) supported by structures constructed and installed outside of the jurisdictional area, impacts to the Los Angeles River are not expected.

No potential wetlands or riparian areas were observed throughout the Alternative 4 RSA. Therefore, no wetland delineation forms were required.

Non-wetland jurisdictional features mapped within the Alternative 4 RSA for Alternative 4 are summarized below:

- 0.13 acre (5,681 square feet) of non-wetland Waters of the United States (WOTUS), CDFW streambed, and Regional Water Quality Control Board (RWQCB) waters of the state within Los Angeles River.

No other jurisdictional wetlands or waters were observed within the Alternative 4 RSA for Alternative 4.

Further details of existing jurisdictional aquatic resources can be found in Appendix A, Aquatic Resources Delineation.

8.2.5.7 Other Protected or Managed Biological Resources

This section provides an overview of other protected or managed biological resources that may occur within the Alternative 4 RSA and were considered in this analysis.

USFWS Critical Habitat

Critical habitat is designated by USFWS for threatened or endangered species listed under the ESA; these areas are considered essential for species conservation (USFWS, 2024b). Critical habitat provides protection to locations necessary for life processes and reproduction where individuals and populations can thrive in habitat that is protected from disturbances. Specifically, it provides cover, shelter, food, water, light, minerals, and other nutritional or physiological requirements for survival of the species, along with sites for breeding and rearing offspring (USFWS, 2024b). Areas currently unoccupied may be included in critical habitat boundaries if it would be needed for species recovery (USFWS, 2024b).

No USFWS-designated critical habitat coincides with the Alternative 4 RSA. The nearest critical habitat for plant species listed under the federal ESA includes Braunton's milk-vetch; this unit is located approximately 3 miles west of the Alternative 4 RSA in Topanga State Park. The nearest critical habitat for wildlife includes western snowy plover (*Charadrius nivosus nivosus*), approximately 3 miles west of the Alternative 4 RSA along the coastline in the City of Santa Monica; southwestern willow flycatcher (*Empidonax extimus*) approximately 5 miles northeast of the Alternative 4 RSA near Hansen Dam in the Valley; Santa Ana sucker (*Catostomus santaanae*) approximately 5 miles northeast of the Alternative 4 RSA near Hansen Dam in the Valley; and tidewater goby (*Eucyclogobius newberryi*) approximately

[6] The term "Traditional Navigable Water" is used in reference to Section 404 of the Clean Water Act, while the term "Navigable Water" is used in reference to Section 10 of the Rivers and Harbors Act. The entire stretch of the Los Angeles River is considered a Traditional Navigable Water, but only the portion in proximity to its outlet into San Pedro Bay is considered a Navigable Water.

7 miles west of the Alternative 4 RSA along Topanga Creek in the Santa Monica Mountains. Also, no USFWS-proposed critical habitat coincides with Alternative 4 RSA.

Since no federally designated critical habitat occurs for any species within the Alternative 4 RSA, no impacts are anticipated; hence, critical habitat is not discussed in the impact evaluation section below.

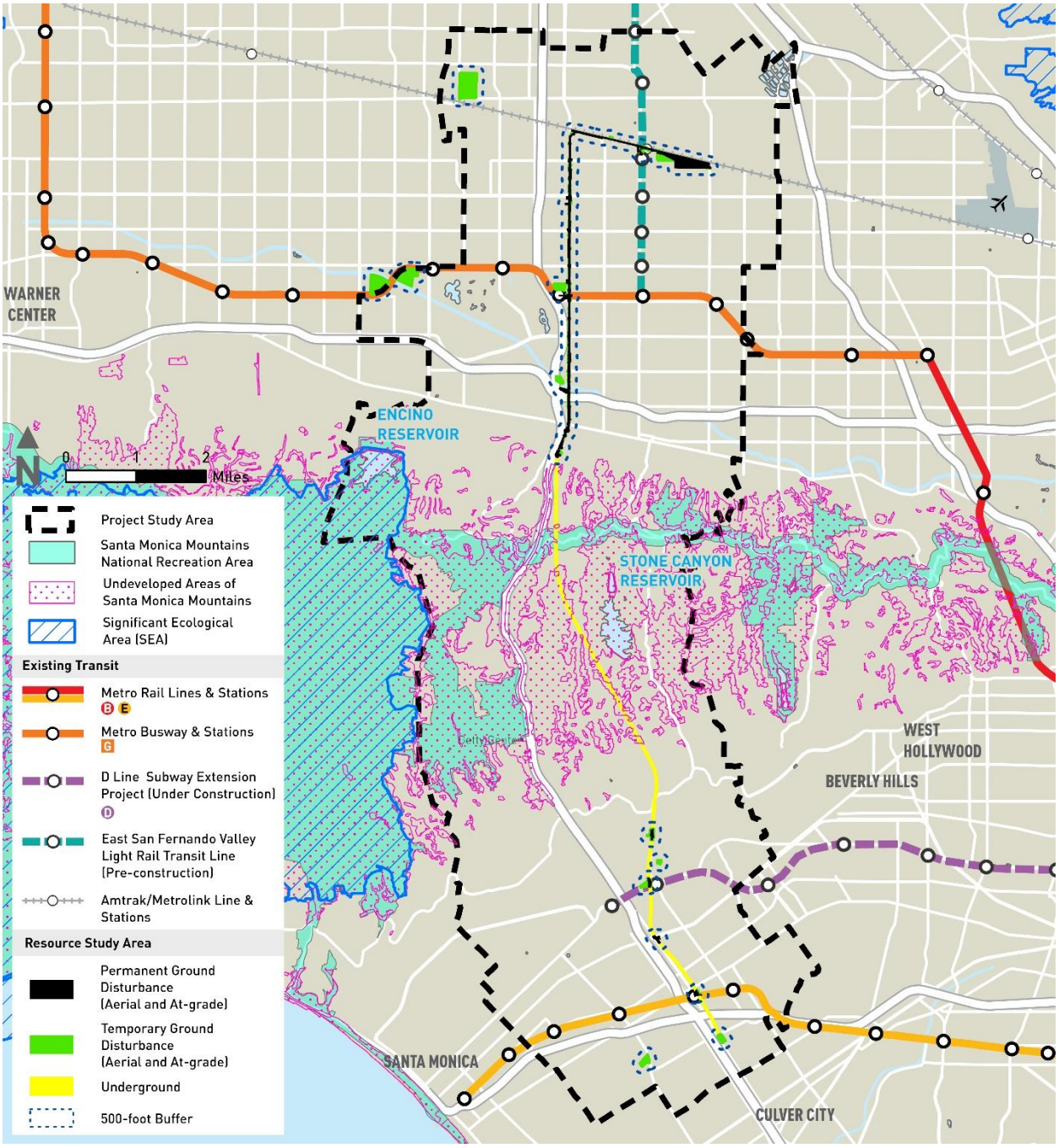
Santa Monica Mountains National Recreation Area

The SMMNRA extends from the Pacific coastline east across the middle of the Alternative 4 RSA, although 1.98 acres of the SMMNRA coincides with the Alternative 4 RSA; the Alternative 4 RSA is an underground tunnel where it intersects with SMMNRA (Figure 8-28). On the west side of I-405 within the Alternative 4 RSA, two local parks, San Vicente Mountain Park and Westridge-Canyonback Wilderness Park, and adjacent conserved lands occur along and extend into the western perimeter of the Alternative 4 RSA. Conserved lands under the SMMNRA also occur along Mulholland Drive and Fossil Ridge Park on the east side of I-405. The various parks and other conserved areas under the SMMNRA umbrella provide scenic vistas, nature viewing, and hiking, biking, and horseback riding opportunities, often through undisturbed native chaparral habitats.

Significant Ecological Areas

As introduced in Section 2 of this report, Los Angeles County-designated Significant Ecological Areas (SEA) are ecologically important land and water systems that are valuable as plant or animal communities and are often important to the preservation of threatened or endangered species and conservation of biological diversity in the county. The Santa Monica Mountains SEA is outside the 500-foot buffer and does not intersect with the Alternative 4 RSA (Figure 8-28).

Figure 8-28. Alternative 4: Santa Monica Mountains National Recreation Area, Undeveloped Areas within the Santa Monica Mountains, and Los Angeles County Significant Ecological Areas



Source: LA County Planning, 2009; NPF, 2021

Natural Community Conservation Plan/Habitat Conservation Plan Areas

The RSA is not located within the boundary of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan (CDFW, 2023c; USFWS, 2023b).

8.3 Impact Evaluation

8.3.1 Impact BIO-1: Would the project 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 US Fish and Wildlife Service?

8.3.1.1 Operational Impacts

The potential for operational impacts such as injury or mortality due to collisions with vehicles, behavioral and habitat usage modifications due to exposure to noise and vibration from passing trains, habitat degradation due to edge effects, and impacts on movement due to infrastructure are limited for most wildlife species for Alternative 4 since the southern portion is an underground alignment and the northern portion, where the alignment is aerial, occurs in developed areas. Anticipated impacts are described below.

Special-Status Invertebrates and Reptiles

Special-status invertebrates, such as Crotch's bumble bee, and special-status reptiles that may occur in habitats along the alignment are not anticipated to be subject to operation-associated direct impacts, including injury or mortality due to collision with vehicles, since the areal extent of suitable habitat that overlaps with Alternative 4 is very limited. The southern portion of the alignment is underground so suitable habitat is not present and while the northern portion of the alignment is aerial, it occurs predominantly in developed areas that are not suitable for these species.

Habitat degradation due to edge effects where native habitats are removed to facilitate construction (see Section 8.3.1.2) will be similarly limited due to the low amount of suitable habitat present along the alignment. Edge effects may include changes to the microclimate due to increase exposure to sun and wind, incursion by nonnative, weedy plant species that alter the vegetation structure, and changes in the distribution and diversity of foraging plant species (for bumble bees) and prey species (for reptiles). These habitat alteration impacts would persist through operation of the facility; however, due to the limited areal extent, this is anticipated to constitute a less than significant impact. Further, indirect habitat degradation would be mitigated through the habitat restoration measures related to construction of Alternative 4.

For these reason, operations-related impacts to special-status invertebrates and reptiles are anticipated to be less than significant.

Special-Status Birds and Bats

Special-status birds (including those protected by the MBTA and special-status bats listed in Table 8-6 have the potential to be significantly impacted during operations of Alternative 4 if nesting birds or roosting bats are present in trees and/or shrubs located within the Alternative 4 RSA that require routine maintenance trimming. Adult birds and bats are highly mobile and are anticipated to be able to relocate away from maintenance trimming activities of their own volition; however, nests, eggs, and nestlings, and bat pups could be injured, killed, or destroyed by maintenance activities if they are located in the vegetation slated for removal. Additionally, if breeding birds or bats are present in the adjacent areas, individuals may be subject to indirect impacts including exposure to noise, human presence, and dust which that could disrupt natural breeding behaviors such as incubation of eggs and feeding and care of young. In some cases, habitat changes from vegetation removal could reduce protective cover to a degree that results in abandonment of nests and eggs.

Since Alternative 4 would be an underground alignment from the southern terminus at the Metro E Line Expo/Sepulveda Station to the tunnel portal at Del Gado Drive (0.5 mile south of Ventura Boulevard), vegetation maintenance is not anticipated in this section. Impacts from dust and noise to special-status birds or bats are not anticipated during operation since maintenance activities would primarily occur within developed or paved areas at ground level and underground in the tunnel segments.

Special-Status Mammals

Impacts to special-status bats were previously addressed with special-status birds.

While mountain lions are present within the Alternative 4 RSA, the alignment is underground through the Santa Monica Mountains where suitable habitat is present and they are known to occur. Depth of the tunnel (ranging from 50 feet to 470 feet below ground surface for the Santa Monica Mountains segment) is anticipated to be sufficient to reduce or prevent indirect impacts at the surface from operations noise and vibration. Therefore, there are no significant impacts to mountain lion associated with operation of Alternative 4.

Special-Status Plants

Impacts to special-status plants that could occur during operation include crushing or trampling of individual plants during normal maintenance, or tree trimming for maintenance. Since maintenance activities would primarily occur within developed or paved areas, it is unlikely that the operation of Alternative 4 would result in significant impacts to special-status plants, including from exposure to fugitive dust. One special-status plant, Nuttall's scrub oak (*Quercus dumosa*), has high potential to be present along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. Since Alternative 4 would be an underground alignment from the southern terminus at the Metro E Line Expo/Sepulveda Station to the tunnel portal at Del Gado Drive (0.5 mile south of Ventura Boulevard), impacts to special-status plants are not anticipated in this section. If trees were present along aboveground portions of Alternative 4, Nuttall's scrub oak could potentially be impacted by required routine maintenance trimming. However, no significant impacts are anticipated since Nuttall's scrub oak was not being identified within the Ground Disturbance Area during the initial tree inventory.

Mitigation Measures

MM BIO-1 and MM BIO-2, presented in Section 8.4, are included to reduce potentially significant operations-related impacts to nesting birds and special-status bats from maintenance vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro. MM BIO-3 would reduce operational-related impacts to special-status trees from vegetation maintenance to less than significant through application of mitigation as determined in the applicable local ordinance or policy where the impact would occur. Therefore, with the implementation of MM BIO-1, MM BIO-2, and MM BIO-3, operational impacts of Alternative 4 on special-status species would be reduced to a less than significant level.

8.3.1.2 Construction Impacts

Impacts to vegetation within the Ground Disturbance Area have the potential to affect sensitive vegetation communities, as well as special-status wildlife or plant species, both directly and through modifications to their habitat. Construction activities for Alternative 4 could result in significant impacts to special-status wildlife including nesting birds, special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potentially significant impacts include

injury to or mortality of individuals, habitat loss due to permanent vegetation removal, behavioral and health modifications from noise pollution or exposure to fugitive dust from prolonged heavy equipment operation, and behavioral modifications due to increased human presence within species habitats during construction.

Alternative 4 is an underground alignment for the southern half of the Project and an aerial alignment starting at the tunnel portal at Del Gado Drive and running north to the maintenance and storage facility (MSF). Ground Disturbance Area is present for the length of the aerial alignment, station footprints, staging areas, the tunnel portal, and the MSF. Construction of the two tunnel segments would be underground except for the launch and extraction sites located within stations or staging yards that are included in the Ground Disturbance Area. Clearing and grading of vegetation within the Ground Disturbance Area would be required for construction of the structural support beams for the guideway track, tunnel portal, staging yards, aerial HRT stations, and "cut-and-cover" construction for underground stations. While most of the vegetation that could be impacted consists of non-native and ornamental landscaping, some native vegetation is also present within the Ground Disturbance Area.

Other anticipated construction impacts related to the construction of Alternative 4 include the possibility of increased noise, dust, and vibration during at-grade impacts, including drilling of the aerial track support structures, "cut-and-cover" installation of the stations, and the tunnel boring machine (TBM) launch and extraction locations for the tunnel excavation (launch sites at Staging Area 1 at Sepulveda Boulevard and National Boulevard and Staging Area 4 in the San Fernando Valley; extraction site at the UCLA Gateway Plaza Station). For construction of the underground tunnel, impacts of noise, dust and vibration are not expected at surface levels due to tunnel depth, except at the tunnel portal near Del Gado Drive. Excessive noise generated from the drilling and heavy equipment operation could significantly disturb avian species and/or other special-status species who are dependent on auditory signals during essential daily activities. Vibration-related disturbances from drilling could also disrupt their normal behavioral patterns near the TBM launch and extraction sites. Impacts through the Santa Monica Mountains are not anticipated due to tunnel depth. Construction-related dust (associated with drilling for the support structures for the aerial guideway, vegetation clearing, grading, etc.) could temporarily impact the overall quality of habitat present. Dust deposition on vegetation can result in reduced photosynthesis and an increase in leaf temperature, making vegetation more susceptible to drought (Farmer, 1993). Evaluation of the Project's impact on wildfire risk and occurrence is discussed in the wildfire chapter of the *Sepulveda Transit Corridor Project Safety and Security Technical Report* (Metro, 2025b).

Vegetation Communities/Land Cover Types and Sensitive Vegetation Communities

Direct impacts to vegetation communities would occur within the Ground Disturbance Area; acreages of temporary and permanent impacts to vegetation communities within Alternative 4 are detailed in Table 8-9. Due to the sparse vegetation, lack of diversity, and continued anthropogenic disturbance, special-status wildlife and plant species are less likely to be found in developed, agricultural, and ruderal land cover types. Approximately 89 percent (244.8 acres) of acreage planned for ground disturbing activities consist of developed, agricultural, and ruderal vegetation. Excluding these areas, construction of Alternative 4 is anticipated to result in 29.8 acres of temporary impacts and 0.3 acre of permanent impacts. Within the vegetated areas subject to impacts, approximately 8 percent (26.2 acres of temporary impacts) is California annual grassland. The two native vegetation communities, coyote brush shrubland and coast live oak woodland, represent approximately 1 percent (3.9 acres) of the impacts, of which 0.3 acres of coast live oak woodland are anticipated to be permanently impacted from construction of Alternative 4. Indirect impacts to vegetation communities may also occur during

construction activities. For example, fugitive dust deposition on foliage may reduce photosynthesis and increase plant vulnerability to drought. Additionally, vegetation removals may increase edge effects, including incursion of nonnative, weedy plants that compete with natives for space and resources.

There are no sensitive vegetation communities within the Alternative 4 Ground Disturbance Area. However, one vegetation community has potential to be considered sensitive (** in Table 8-9) depending on the associated codominant species present (Sections 3.3.2.1 and 3.3.4.1). Up to an additional 3.6 acres of coyote brush scrubland, a potentially sensitive community, is located within potential off-site staging yard N2 at the western end of the Sepulveda Basin. For this analysis, Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping.

The removal and degradation of native and sensitive vegetation communities would constitute potentially significant impacts.

Table 8-9. Alternative 4: Impacts on Land Cover Types and Vegetation Communities within Resource Study Area

Vegetation Community/Land Cover Type [a]	Permanent Impacts (acres)	Temporary Impacts (acres)	Total Impacts (acres)[b]	Percent of Total Project Impacts
Developed	158.2	14.5	172.7	62.8
Agricultural Land	0	65.8	65.8	23.9
Ruderal	0.6	5.7	6.3	2.3
Developed, Agricultural, Ruderal Total	**158.8**	**86.0**	**244.8**	**89.1**
California Annual Grassland	0	26.2	26.2	9.5
Coyote Brush Shrubland**	0	3.6	3.6	1.3
Coast Live Oak Woodland	0.3	0	0.3	0.1
Vegetation Total	**0.3**	**29.8**	**30.1**	**10.9**
GRAND TOTAL	**159.1**	**115.8**	**274.9**	**100.0**

Source: HTA, 2024

[a] Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b] Inconsistencies in calculations due to rounding errors.

** Potential sensitive vegetation community based on codominant species on-site.

Special-Status Invertebrates

One special-status invertebrate, Crotch's bumble bee, has potential to be present within the Alternative 4 RSA during construction activities. Despite having a relatively narrow range, this species is known to occupy a wide variety of natural and disturbed habitat for nesting and foraging and could be present throughout the RSA in undeveloped areas where pavement is not present and the earth is not regularly maintained through grading, tilling or planting. Based on their broad range of suitable habitat and generalist foraging behavior, Crotch's bumble bee are likely to occur foraging throughout the RSA where preferred flowering plants are present (e.g., native sage species [*Salvia* spp.], milkweeds [*Asclepias* spp.], and plants within the pea family [*Fabaceae*]) and may nest where abandoned rodent burrows are present.

Individuals in occupied burrow nests or overwintering queens in surface soils could be crushed or trapped during construction if present within the Ground Disturbance Area. Additionally, foraging

Individuals also could be injured or killed if they are foraging during vegetation clearing activities. This species could also be impacted by the removal of nectar sources and nests in the Ground Disturbance Area result from vegetation clearing and grading for construction of Alternative 4 features including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, stations, and construction staging locations. Ground-disturbing impacts from grading and vegetation clearing throughout the RSA could impact individuals and would likely result in loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for Crotch's bumble bee.

The loss of individual Crotch's bumble bees and suitable habitat for this species would constitute a significant impact.

Special-Status Reptiles

Three special-status reptiles are known to occur and two have a high or moderate potential to occur within the Alternative 4 RSA; individuals of these species may be present during construction activities. Reptiles present during construction activities could be directly injured or killed due to collisions with vehicles and equipment or during vegetation clearing activities. Species that shelter in burrows or under debris could be entrapped and suffocate or be crushed during grading activities; buried nests could similarly be crushed or destroyed. Additionally, if individuals become entrapped in open trenches or excavations during construction activities, they could be subject to injury or mortality due to dehydration, opportunistic predation, inability to properly thermoregulate, starvation, or other causes associated with constrained movement. Indirect impacts could include disruption of normal feeding, basking, sheltering, and breeding behaviors due to avoidance of excessive noise and vibration, fugitive dust, and increased human presence. Normal movement patterns throughout a home range also may be disrupted temporarily by avoidance of areas adjacent to construction activities, or permanently by habitat structure modifications. During construction, special-status reptiles also may be subject to higher predation rates by opportunistic predators such as common ravens (*Corvus corax*), coyote, or skunk, that could be attracted to work areas if food debris is present.

Two of the species, southwestern pond turtle and two-striped garter snake, are most likely to occur near aquatic resources such as the ponds in the Sepulveda Basin. Since aquatic resources are limited in Alternative 4, impacts to these two species are expected to be less than significant. Thus, construction of Alternative 4 is likely to have limited impacts on individuals and suitable habitat for the following two species of reptiles:

- Southwestern pond turtle (*Actinemys pallida*, FP, SSC) is known to occur in the Alternative 4 RSA in ponds or other aquatic habitat found within UCLA campus and could be present during construction activities. This species could be impacted by ground disturbance activities within the Alterative 4 RSA including by construction of structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations. This species has potential to use upland habitat for nesting in the Sepulveda Basin at the N1 and N2 construction staging locations where it could be impacted by ground disturbance activities such as vegetation removal, destruction of buried nest sites, or degraded water quality.
- Two-striped garter snake (*Thamnophis hammondii*, SSC) has moderate potential to occur along the Santa Monica Mountains and the riparian portion of the Los Angeles River at Sepulveda Basin Wildlife Reserve. If individuals are present during construction, this species could be impacted by the removal of vegetation and ground-disturbance activities occurring along the Ground Disturbance Area for Alternative 4 features such as structural support beams for the guideway track,

the tunnel portal and associated roadway configuration changes, stations, the MSF, and construction staging locations.

Based on habitat requirements, the remaining three are most likely to be found in the Sepulveda Pass and Santa Monica Mountains, but a broad range of acceptable habitats could result in potentially significant impacts to these three species in areas with ground disturbance even though the alignment is underground in the Santa Monica Mountains. Construction of Alternative 4 may result in injury or mortality of individuals, disruptions of natural behaviors, and loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for the following three species of reptiles:

- Southern California legless lizard (*Anniella stebbinsi*, SSC) has high potential to occur in loose soil, sand and leaf litter in patches of patches of chaparral and coastal scrub in the Alternative 4 RSA, most likely to be present from the tunnel portal at Del Gado Drive north and in construction staging locations N1 and N2 adjacent to the riparian portion of the Los Angeles River. This species could be impacted by ground disturbing activities, such as drilling, grading, pile driving, and excavating for Alternative 4.
- Coastal whiptail lizard (*Aspidoscelis tigris stejnegeri*, SSC) is known to occur in the southern portion of the Alternative 4 RSA and has potential to occur throughout the Alternative 4 RSA during construction. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring for construction and installation of Alternative 4 features, including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, stations, the MSF, and construction staging locations.
- Coast horned lizard (*Phrynosoma blainvillii*, SSC) is known to occur in the southern portion of the Alternative 4 RSA and has potential to occur throughout the Alternative 4 RSA. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring along the Ground Disturbance Area for Alternative 4 features such as structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, stations, the MSF, and construction staging locations. Coast horned lizards are particularly vulnerable to injury or mortality due to vehicle collisions since their defensive strategy is to rely on natural camouflage and remain still when approached by potential predators.

The loss of individuals and suitable habitat for these special-status species would constitute a significant impact.

Special-Status Birds

One special-status bird species was identified as present and eight have a high potential to occur within the Alternative 4 RSA. Based on habitat requirements for these nine species, they are likely to be found throughout the RSA in transit, resting and/or foraging from the Los Angeles National Cemetery in the south to the Sepulveda Basin in the north. Birds in transit are unlikely to be affected by construction activities; adults are highly mobile and can be expected to relocate away from construction activities of their own volition. However, migratory individuals may experience temporary or permanent loss of transitory habitat. If overwintering burrowing owls are present, individuals could be entrapped and suffocate or be crushed if burrows are present in the work areas during grading and vegetation removal. Additionally, grading could result in loss of suitable wintering burrows for migratory burrowing owls. If native birds breeding within or adjacent to work areas, nests, eggs, and nestlings would be vulnerable to destruction, injury, or mortality if they are present during vegetation clearing and other construction activities. Ground nests may be vulnerable to crushing, trampling, or destruction by pedestrians and

vehicles. Nests in adjacent areas also may be exposed to noise, fugitive dust, human presence, and vibration that could disrupt natural breeding behaviors including incubation of eggs and care and feeding of young; these disruptions could result in failure of a nest to successfully produce young. Excessive disruption, or substantial changes in habitat during the nesting period, could also result in abandonment of nest sites, eggs, or young. Further, impacts associated with clearing and grading of vegetation adjacent to I-405 would likely result in loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for the following nine special-status avian species and nesting birds protected under the MBTA:

- Tricolored blackbird (*Agelaius tricolor*, state threatened and SSC) has high potential to occur while flying over in transit to foraging grounds in freshwater marshes, freshwater lakes, and agricultural fields in the Sepulveda Basin Wildlife Preserve west of the Alternative 4 RSA. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of adjacent Alternative 4 features such as structural support beams for the guideway track, stations, staging areas, and roadway configuration changes. Breeding habitat is not expected to be impacted due to its absence.
- Burrowing owl (*Athene cunicularia*, state candidate and SSC) has high potential to occur in California annual grassland, California sagebrush shrubland, and coyote brush shrubland in the northern portion of the Alternative 4 RSA near the tunnel portal and off-site staging yards N1, N2, and N4. This species could be impacted from construction noise and activity, removal of burrows, and ground-disturbance activities during construction of Alternative 4 features at the tunnel portal and associated roadway configuration changes, and staging areas. Impacts to nests and nestlings are not anticipated as the RSA is outside the breeding range for this species; only overwintering adult burrowing owls are anticipated to occur. If burrowing owls are present in burrows during construction, individuals could be trapped and suffocate or be crushed during vegetation clearing, grading, and other initial ground disturbance.
- Swainson's hawk (*Buteo swainsoni*, state threatened) has high potential to occur throughout the Alternative 4 RSA during migration, particularly in grasslands. This species could be impacted construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 4 features, including off-site staging yards N1, N2 and N4.
- Northern harrier (*Circus hudsonius*, SSC) has high potential to occur throughout the Alternative 4 RSA during migration, particularly in grasslands. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 4 features including off-site staging yards N1, N2 and N4.
- Olive-sided flycatcher (*Contopus cooperi*, SSC) has high potential to occur throughout the Alternative 4 RSA during migration. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 4 features, such as structural support beams for the guideway track, stations, staging areas, roadway configuration changes, and the MSF. Breeding habitat is not expected to be impacted due to its absence.
- Bald eagle (*Haliaeetus leucocephalus*, state endangered and Fully Protected) has high potential to occur near bodies of water, particularly in the Sepulveda Basin Wildlife Preserve and as a flyover in the Alternative 4 RSA. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 4 features such as structural support beams for the guideway track, stations, staging areas, and roadway configuration changes. Species habitat is not expected to be impacted.

- Loggerhead shrike (*Lanius ludovicianus*, SSC) has high potential to occur in and breed in grasslands or chaparral, particularly in the Santa Monica Mountains and in the Sepulveda Basin Wildlife Preserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 4 features such as stations, construction staging yard 5, and off-site staging yards N1, N2 and N4.
- Vermilion flycatcher (*Pyrocephalus obscurus*, SSC) is known to occur in the RSA near off-site staging yards N1 and N2 and has potential to occur in and breed in a variety of open habitats in the Alternative 4 RSA, including parks and cemeteries. This species could be impacted from vegetation removal during construction for Alternative 4 features such as structural support beams for the guideway track, stations, staging areas staging areas including yard 5 and off-site staging yards N1, N2, and N4, and roadway configuration changes.
- Least Bell's vireo (*Vireo bellii pusillus*, FE and SE) has high potential to occur and breed in riparian habitat in the Sepulveda Basin. This species could be impacted by the construction noise and activity, removal of vegetation, and ground-disturbance activities occurring for Alternative 4 features including structural support beams for the guideway track, stations, roadway configuration changes, and staging yards, specifically N1 and N2 adjacent to the Los Angeles River.

The loss of nests, eggs, or nestlings, impacts to natural breeding behaviors, eviction from wintering burrows, and loss of suitable habitat for these special-status species would constitute a significant impact.

Special-Status Mammals

Three special-status mammal species were identified as likely to be present within the Alternative 4 RSA, including mountain lion, silver-haired bat, and hoary bat. Mountain lions are known to occur within the Santa Monica Mountains, while the silver-haired and hoary bat have broader habitat requirements and have potential to forage in both natural and developed habitats. Within the Sepulveda Pass and Santa Monica Mountains, special-status mammals could occur in or proximate to work areas along I-405. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway.

Within the developed northern and southern ends of the projects, special-status bats could be present in ornamental street trees or on existing infrastructure, such as bridges and buildings. Individuals may be subject to injury or mortality if they are present as roosting adults during vegetation clearing activities. Roosting adults also may be disturbed by construction-related noise and vibration, causing them to flee roosts during daylight hours. Maternal roosts would also be vulnerable to injury or mortality if present, as pups are unable to take flight and would be likely to be killed if present. Suitable foraging, sheltering, and roosting habitats have potential to be removed during vegetation clearing and grading, or temporarily impacted by construction noise, fugitive dust, and increased human presence. Nighttime construction lighting also may impact foraging habitat by attracting prey species, which may attract some bat species and repel others.

Individual larger mammals, including mountain lions, are unlikely to be directly impacted by construction activities since they are highly mobile and can be anticipated to relocate away from work areas of their own volition. Individuals are not likely to be vulnerable to collisions with slower moving construction equipment and vehicles. However, natural foraging, sheltering, and breeding behaviors may be disrupted by construction activities, both temporarily through avoidance of areas with

construction-related noise, human presence, vibration, and fugitive dust, and permanently through changes in habitat due to vegetation clearing and grading.

The clearing of vegetation in the Sepulveda Pass and along city streets and demolition of structures with suitable roosts would also likely result in loss of suitable habitat that could be used for roosting, breeding, shelter, and/or foraging for the following three special-status mammals:

- Silver-haired bat (*Lasionycteris noctivagans*, WBWG medium priority) is known to occur in the northern and southern portions of the Alternative 4 RSA. This species could be impacted by construction noise and activity, and removal of roosting habitat from vegetation removal activities during construction of Alternative 4 features such as structural support beams for the guideway track, stations, the tunnel portal, staging areas, roadway configuration changes, and the MSF.
- Hoary bat (*Lasiurus cinereus,* WBWG-Medium Priority) is known to occur in the RSA in Sherman Oaks and has potential to occur in the Santa Monica Mountains and in portions of the Alternative 4 RSA with large mature trees. This species is unlikely to be impacted in the Santa Monica Mountains since the RSA is an underground alignment from the southern terminus to the tunnel portal at Del Gado Drive. However, this species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities in locations with large mature trees during construction of Alternative 4 features such as structural support beams for the guideway track, stations, the tunnel portal, staging areas, roadway configuration changes, and the MSF.
- Mountain lion (*Puma concolor*, state candidate for listing) is known to occur in the Alternative 4 RSA in the Santa Monica Mountains. This species is unlikely to be significantly impacted by the construction of Alternative 4 features since the RSA is an underground alignment through the Santa Monica Mountains from the southern terminus to the tunnel portal at Del Gado Drive. The loss of suitable habitat is unlikely to result in significant impacts due to the small size and linear nature of the clearing and grading activities in comparison to the species' large home range size. Additionally, the construction and operation of Alternative 4, is unlikely to significantly impact mountain lion movement and usage of wildlife corridors based on the underground configuration without associated ground-disturbance activities through the Santa Monica Mountains from UCLA Gateway Plaza Station in the south until the tunnel portal at Del Gado Drive. Movements of other vertebrate species could be significantly impacted (evaluated in Section 7.3.4).

The loss of individuals and suitable habitat for silver-haired bats and hoary bats would constitute a significant impact.

Special-Status Plants

Six special-status plant species were identified with medium or high potential to occur within the Alternative 4 RSA; none were identified as present. Based on habitat requirements, these six species are most likely to occur in chaparral and/or coastal sage scrub which occurs on the Project in the Sepulveda Pass and could occur in or proximate to work areas along I-405 in the Santa Monica Mountains. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway. Clearing and grading of vegetation would also be required for construction of the structural support beams for the guideway track, staging yards, TPSSs, and aerial MRT stations. Although vegetation to be impacted is largely non-native and/or ornamental landscaping, native vegetation is also present. If individuals are present during clearing and grading activities, they could be subject to trampling, crushing, and removal. Individuals present in adjacent areas may be exposed to fugitive dust, which can settle on vegetation

and interrupt photosynthesis. Following vegetation clearing, adjacent areas also may be subject to edge effects including higher exposure to sun, dust, and wind, and incursion by nonnative, weedy species, which can increase competition for space and resources and decrease habitat value for special-status plants.

The clearing of vegetation in the Sepulveda Pass could result in loss of suitable habitat for the following special-status plant species:

- Braunton's milk-vetch (*Astragalus brauntonii*, federally endangered, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 4 features including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations.
- Slender mariposa-lily (*Calochortus clavatus* var. *gracilis*, CRPR 1B.2) has moderate potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 4 features including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations.
- Davidson's bushmallow (*Malacothamnus davidsonii*, CRPR 1B.2) has high potential to occur in the Santa Monica Mountains, the Sepulveda Basin, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for Alternative 4 features such as structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations.
- Chaparral nolina (*Nolina cismontana*, CRPR 1B.2) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 4 features including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations.
- Nuttall's scrub oak (*Quercus dumosa*, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 4 features including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations.
- Sanford's arrowhead (*Sagittaria sanfordii*, CRPR 1B.1) has high potential to occur where shallow freshwater with an earthen bottom is present, such as the Los Angeles River adjacent to the off-site staging yards N1 and N2. This species could be impacted by dust associated with removal of vegetation within N1 and N2 and inadvertent impacts from construction within the staging areas (e.g., unnecessary erosion, runoff and sedimentation to an aquatic resource).

The loss of individuals or suitable habitat for these special-status plants would constitute a significant impact.

Mitigation Measures

As described in Section 8.4, mitigation measures would be implemented to reduce construction-related impacts to special-status plant and wildlife species and their habitats to a less than significant level through establishment of survey and monitoring requirements (MM BIO-4, MM BIO-5, MM BIO-6,

MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-17, and MM BIO-29); monitoring of bird nests and determination if no-disturbance buffers require adjustments (such as due to noise from construction activities) (MM BIO-4); education and training of personnel about Project 's biological concerns and requirements (MM BIO-18); and creation of a habitat restoration plan (MM BIO-9).

General construction measures to protect special-status species include protection from wildfire (MM BIO-19), domestic pets (MM BIO-20), night lighting (MM BIO-22), invasive plants (MM BIO-23), entrapment (MM BIO-26), vehicular collisions (MM BIO-25), dust (MM BIO-24), and construction-related trash (MM BIO-27).

8.3.1.3 Maintenance and Storage Facility

Maintenance of the Alternative 4 HRT vehicles and equipment would occur at the MSF and may occasionally require maintenance trimming of ornamental trees and shrubs located within the MSF. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected nesting birds from operations-related activities through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, included in Section 8.4, are included to reduce operations-related impacts to nesting birds and special-status bats from vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The MSF for Alternative 4 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east; no habitat modifications or removal would be required for the construction of the MSF. No impacts to special-status plant species would result from the construction of the MSF since suitable habitat is not present. Roosting bats and MBTA-protected nesting birds have potential to be impacted during construction of the MSF if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed; impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 through MM BIO-5, included in Section 8.4, are included to reduce construction-related impacts to nesting birds and special-status bats from vegetation trimming or removal to a less than significant level.

8.3.2 Impact BIO-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, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

There is no riparian habitat within the Alternative 4 Ground Disturbance Area; 8.3 acres of undifferentiated riparian habitat is located in the RSA in the 500-foot buffer. Known sensitive natural vegetation communities are not present within the Ground Disturbance Area or 500-foot buffer for Alternative 4. One vegetation community, coyote brush shrubland, is present within the Ground Disturbance Area that has potential to be sensitive with further refinement. This potentially sensitive community is assumed to be as such for discussion of impact analysis.

8.3.2.1 Operational Impacts

No riparian habitat occur within the Ground Disturbance Area; therefore, no operations impacts are anticipated to riparian habitat from maintenance vegetation trimming. Since the one potentially sensitive vegetation community is only present within potential off-site staging yard N2 (located in the western end of the Sepulveda Basin), and no operations work is associated with this location, there are no anticipated impacts to sensitive vegetation communities from operation of Alternative 4.

8.3.2.2 Construction Impacts

No riparian habitat occurs within the Ground Disturbance Area, although 8.3 acres of undifferentiated riparian habitat is located in the RSA, specifically the Los Angeles River at the western end of the Sepulveda Basin, in the 500-foot buffer for off-site staging yards N1 and N2 (Figure 9-19). Clearing of vegetation for staging locations N1 and N2 would occur approximately 100 feet from the riparian habitat; no riparian habitat is likely to be present within the staging yard footprints as the areas are previously disturbed (as indicated through vegetation mapping of agricultural and California annual grasslands). Therefore, direct impacts such as removal of riparian vegetation are unlikely.

No sensitive natural vegetation communities are known to occur within the Ground Disturbance Area or 500-foot buffer for Alternative 4. One potentially sensitive community, coyote brush shrubland, occurs within off-site staging yard N2 located adjacent to the Los Angeles River at the western end of Sepulveda Basin; 3.6 acres are present within the Alternative 4 Ground Disturbance Area. Clearing of vegetation in this area for construction activities would likely result in loss of sensitive natural communities within the Ground Disturbance Area of the Alternative 4 RSA. Tires of vehicles and equipment used for construction of Alternative 4 have potential to transport invasive plant seeds into native habitat at this location during clearing and grading. An additional risk to sensitive natural community would exist from elevated levels of particulate matter from tires and dust deposition on vegetation from active construction within the staging yard and particulate matter from tires that can disrupt photosynthesis and other processes critical for plant survival.

The Project may cause minor indirect impacts to riparian habitat as a result of excessive dust from construction activities within the yards following vegetation clearing; this would be a less than significant impact. However, the Project also has potential to cause significant impacts to sensitive vegetation communities due to clearing for N2 staging yard. Mitigation measures MM BIO-10, MM-BIO 16 through MM BIO-18, and MM BIO-23 through MM BIO-25, described in Section 6.4, are included to reduce construction-related impacts to sensitive natural communities to a less than significant level. These measures include the establishment of Environmentally Sensitive Areas, biological monitoring during work within these communities, environmental training for Project workers, protection from invasive weeds, and dust control measures from speeding vehicles or other sources.

8.3.2.3 Maintenance and Storage Facility

The MSF for Alternative 4 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. No riparian habitat or sensitive natural communities are present within the Ground Disturbance Area or the 500-foot buffer of the MSF. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF.

8.3.3 Impact BIO-3: Would the project 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?

8.3.3.1 Operational Impacts

There are no state or federally protected wetlands within the Ground Disturbance Area for Alternative 4; therefore, there would be no impacts to protected wetlands related to the operation of Alternative 4.

However, non-wetland waters do occur in the Alternative 4 Ground Disturbance Area. Alternative 4 would traverse the Los Angeles River north of US-101 and includes an aerial alignment that would cross over the river adjacent to Sepulveda Boulevard north of US-101. The Los Angeles River is a WOTUS under the jurisdiction of the USACE, RWQCB, and CDFW. The operations of Alternative 4 would not result in significant impacts to the course, location, or conditions of the Los Angeles River. No other non-wetland jurisdictional features occur in the Alternative 4 Ground Disturbance Area. Thus, there would be no operations-related impacts to non-wetland waters.

8.3.3.2 Construction Impacts

The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 4 traverses and crosses the river; no wetlands are associated with the river at this location. There are no state or federally protected wetlands that occur within the Ground Disturbance Area for Alternative 4; consequently, no impacts to protected wetlands are anticipated from construction of Alternative 4.

The Los Angeles River is considered WOTUS under the jurisdiction of the USACE, RWQCB, and CDFW. A total of 0.13 acres of non-wetland waters associated with the Los Angeles River is located within the Alternative 4 Ground Disturbance Area. Construction activities would occur outside of jurisdictional areas associated with the Los Angeles River; therefore, no direct impacts to the Los Angeles River are anticipated during construction. However, as construction would occur over the river channel, temporary indirect construction-related impacts are possible. These impacts could include sedimentation into the waterway. This would be a potentially significant impact to aquatic resources that would be managed through mitigation measures and best management practices (BMPs).

No other non-wetland waters occur in the Alternative 4 Ground Disturbance Area.

Impacts to the Los Angeles River would be avoided, minimized, and mitigated for through implementation of MM BIO-15, MM BIO-18, and MM BIO-21, which require aquatics monitoring during work near jurisdictional waters, work area delineation, BMP implementation to protect against sedimentation, worker education on sensitive aquatic resources, and avoidance of work near jurisdictional waters during and following rain events.

8.3.3.3 Maintenance and Storage Facility

The MSF for Alternative 4 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Since there are no wetlands or non-wetland waters present within the Ground Disturbance Area of the MSF, no impacts to wetlands or jurisdictional waters are expected from the operation and construction of the MSF.

8.3.4 Impact BIO-4: Would the project 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?

The SMMNRA and the Santa Monica Mountains overall represent a regional connectivity corridor with respect to habitat patches. The SMMC's habitat linkage planning map (SMMC, 2021) has identified several potential wildlife corridors within the Santa Monica Mountains in the Alternative 4 RSA. Since Alternative 4 would be an underground configuration with no associated ground disturbance in the mountains between the UCLA Gateway Plaza Station and Ventura Boulevard/Sepulveda Boulevard Station, impacts to these wildlife corridors are not anticipated. Habitat for nesting birds and roosting bats is also present in the aerial portion of Alternative 4 and at areas associated with ground disturbance for the underground tunnel in the form of vegetation, such as ornamental trees, and infrastructure, such as buildings and bridges.

8.3.4.1 Operational Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 4 RSA. Thus, no operations-related impacts to the movement of resident or migratory fish are anticipated for Alternative 4.

Native Resident or Migratory Wildlife

Wildlife movement of large mammals, specifically mountain lions, is unlikely to be impacted by operation of Alternative 4, since Alternative 4 traverses the Santa Monica Mountains underground. The tunnel operates at approximately 470 feet below ground level as it passes under the Santa Monica Mountains to 50 feet near UCLA, depths at which noise and vibration would not be evident at surface level. Within the aerial portion of the alignment, located in the northern portion from the tunnel portal at Del Gado Drive to the MSF, elusive wildlife species such as bobcats or mountain lions are unlikely to be present regardless of guideway presence. More adaptable, urban-adapted species such as coyote and raccoons are anticipated to be resilient since the aerial guideway, since it is located in a highly developed area with a high degree of baseline disturbances and activity.

Within the aerial alignment north from Del Gado Drive, permanent changes have potential to impact local wildlife movement (Suvarna, 2020). Aerial trains could influence the behavior and movement of wildlife during operation. Specifically, the noise and vibrations associated with operation of trains could alter foraging, mating, or dispersal patterns. Lights used for operational and safety purposes have potential to confuse and disrupt nocturnal species. In addition, birds and bats are at risk of collision with the moving components of aerial trains. However, operation of aerial trains, when compared to a ground level roadway, have potential to provide some benefits to wildlife, including less consistent and sustained source traffic noise, a decreased chance of direct strikes due to reduced vehicle traffic, and a lower level of fragmentation to habitat (Lucas et. al., 2017). Synanthropic species, such as raccoon and coyote, are those that have adapted to living in close proximity to humans and are more assimilated to anthropogenic disturbances; they are frequently found in urban environments making them more likely to adapt and utilize corridors during operation. Wary species, such as mountain lion and bobcat, have potential to be more easily deterred by the aerial tram when it passes overhead during operation. However, since Alternative 4 is an aerial alignment beginning north of the Santa Monica Mountains (as interpreted by the SMMNRA vegetation mapping), the majority of the area subject to permanent change from Alternative 4 is already developed, agricultural, or ruderal communities. These land covers

represent areas where wary species are less likely to be present, so they are therefore unlikely to be impacted by Alternative 4 operation. Impacts to wildlife movement within the urbanized areas where the alignment is aerial are expected to be less than significant for Alternative 4.

The Sepulveda Basin Recreation Area is the last relatively natural area in the northern portion of the RSA and serves as a potential local movement corridor with habitat for avian species, coyotes, and herpetological species. The eastern edge of the Refuge is adjacent to the Alternative 4 RSA, just outside the 500-foot ground-disturbance buffer. Although permanent disruption to habitat within the refuge would be likely to alter local corridors by blocking or altering travel routes, the location of the guideway is more than 500 feet east of the refuge on the opposite site of I-405, reducing potential impact to less than significant. Topanga State Park, which is southwest of the Sepulveda Basin and the alignment, is the closest natural area where wildlife from the refuge would most likely migrate (USACE, 2011). Impacts to wildlife movement within the refuge are not anticipated from Alternative 4.

Special-status bats and MBTA-protected birds have the potential to occur in the Alternative 4 RSA during operation of Alternative 4. Operations-related activities associated with Alternative 4, such as vegetation removal or trimming, would be restricted to the aerial alignment from the tunnel portal at Del Gado Drive north to the MSF. Vegetation maintenance would not be required for the remainder of the alignment since the HRT vehicles and stations would be underground. Within the aerial alignment, operations activities have potential to significantly impact migratory bat and avian species by removing potential nesting, roosting, and foraging habitat. The aerial guideway associated with Alternative 4 could hinder avian movement. For regional movement corridors, this alignment would run predominantly north to south within the Alternative 4 RSA and, therefore, would be perpendicular to the primary direction of avian movement for migrating birds. Most bird species would migrate above the height of the aerial monorail (45 to 55 feet above the existing ground level), so disruptions are expected to be minimal. Lights on the vehicles or guideway are unlikely to pose a risk of disorienting birds during migration periods (early April through late May and mid-August through early November) since the aerial guideway on Alternative 4 is located within a highly developed area where light pollution is abundant. Dispersing local resident or younger, recently fledged birds have potential to collide with the guideway track or vehicles while flying along local movement corridors.

If special-status bat species have roosting or maternity habitat adjacent to the guideway, or if commuting or foraging flyways (e.g., roads through or alongside tree stands, riparian corridors) are adjacent to the guideway, impacts to bats could occur from vehicle collisions (Caltrans, 2019). One special-status migratory bat species, the hoary bat, has moderate potential to occur within the Alternative 4 RSA during migratory flyover events. In an urban environment, street trees as well as park trees have been shown to be important for bats; spacing between street trees combined with urban lighting provides space for insects to aggregate, providing ample foraging opportunities for hoary bats (Moretto et al., 2019). Hoary bats have been documented by the Natural History Museum of Los Angeles in highly urban, park-deprived settings including South L.A. (Ordeñana, 2018). Artificial lighting that may be present on guideway structures and within vehicles during operation could negatively affect adjacent bat roosting locations.

MM BIO-1 and MM BIO-2, as described in Section 8.4, are included to reduce operations-related impacts to migratory wildlife species from aerial train presence to a less than significant level through limiting of vegetation trimming to outside of nesting bird and roosting season where feasible, and installation of appropriate anti-collision devices to aerial vehicles and support structures where an aerial alignment is present.

8.3.4.2 Construction Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 4 RSA. Thus, no construction-related impacts to the movement of resident or migratory fish are anticipated for Alternative 4.

Native Resident or Migratory Wildlife

Construction of the guideway between the launch sites at the southern terminus and the tunnel portal at Del Gado Drive remains underground between the TBM launch and extraction sites. Since the stations and TPSSs are also underground, the primary surface level impacts south of Del Gado Drive are associated with the cut-and-cover construction of the four southern stations and clearing and grading for staging areas. Construction of the aerial guideway, stations, and MSF could potentially impact wildlife movement due to construction activities. Based on the size of the station footprints and that there are no surface impacts in the Santa Monica Mountains, which have best quality habitat within the Alternative 4 RSA, construction impacts to wildlife corridors are anticipated to be localized and temporary south of the tunnel portal.

North of Del Gado Drive, where the aerial tram is present, potential impacts to movement could occur. Local movement through corridors may be temporarily impacted due to construction noise, lights, anthropogenic presence, and air pollution associated with construction. Resident species within this already urbanized environment are assumed to be exposed to, and therefore acclimated to, some level of existing disturbance associated with I-405 and other nearby development; therefore, impacts to wildlife movement are anticipated to be less than significant. Impacts to migratory birds and bats from construction of Alternative 4 may occur due to equipment and lighting associated with nightwork, if required. Bat species have differing reactions to light, with some being attracted and some repelled, but the insects they prey on are influenced by artificial lighting. If artificial lighting for nightwork is adjacent to roosting habitat, it can negatively affect the quality of the habitat.

Special-status birds and one special-status migratory bat species, the hoary bat, has potential to occur in the Alternative 4 RSA during construction of Alternative 4. The Santa Monica Mountains provides habitat for the hoary bat for roosting, and foraging resources during their migration from south to north, and vice-versa. Migratory special-status birds protected under MBTA also have the potential to occur in the Alternative 4 RSA during construction of Alternative 4. Ground-disturbance activities including removal of vegetation/habitat, drilling, excavating, pile-driving, topsoil removal, and grading associated with construction of Alternative 4 could result in a potentially significant impact to migratory bat and migratory avian species. Mitigation measures MM BIO-4, MM BIO-5, MM BIO-7, and MM BIO-14, described in Section 8.4, are included to reduce construction-related impacts to migratory species to a less than significant level through protection to nesting birds and special-status bats, protection of least Bell's vireo, protection of natal dens if located, vegetation restoration, and development of a monitoring plan to document changes in wildlife movement over time.

8.3.4.3 Maintenance and Storage Facility

The MSF for Alternative 4 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Since there is no open habitat, waterways, or native vegetation present in the MSF, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of the MSF.

8.3.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

To assess for conflicts with local policies or ordinances that protect biological resources, policies and ordinances were evaluated by landowner for applicability to the Project. The Alternative 4 RSA does not include unincorporated County land so the County of Los Angeles General Plan and Sustainability Plan "OurCounty" are not applicable.

For Alternative 4, the *City of Los Angeles General Plan's* (DCP, 2001) policies to create and maintain an integrated open space system that apply to and are addressed by the Project include conserve and manage watersheds (MM BIO-15 through Jurisdictional Aquatic Resource mitigation) and onsite evaluation of sensitive habitats (MM BIO-10) and species (MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9). SEAs intersect with the RSA, this policy does not apply to Alternative 4. The City's General Plan includes a policy to protect wild areas such as the Sepulveda Basin; Alternative 4 includes potential offsite staging yards N1 and N2 at the western edge of the Basin. Per the Master Plan and Environmental Assessment (USACE, 2011), N1 is subject to an agricultural lease and N2 is slated for recreation and is an ornamental tree/maintained lawn. The Los Angeles River and riparian habitat is also present within the 500-foot ground disturbance buffer. The Project would comply with policies related to protecting wild areas through avoiding, minimizing and/or mitigating for impacts to CDFW sensitive vegetation communities (MM BIO-10), protected trees and shrubs (MM BIO-12), and jurisdictional aquatic resources (MM BIO-15), and implementing construction measures related to delineating work boundaries and environmentally sensitive areas (MM BIO-16), monitoring vegetation clearing (MM BIO-17), protecting wildlife from pets (MM BIO-20), minimizing wildlife exposure to night lighting (MM BIO-22), limiting the spread of invasive seeds (MM BIO-23), and reducing the risk of wildlife entrapment (MM BIO-26). Additionally, MM BIO-9 requires Metro to prepare a Habitat Restoration Plan which will restore temporary impacted locations like staging yards.

The City of Santa Monica's General Plan applies to potential offsite staging yard S1, by the Santa Monica Airport. The Project complies with the goal of preserving ecological balance and reducing air pollution as impacts to the 18 trees present within this area will be avoided, minimized, and/or mitigated for (MM BIO-10) through coordination with the Director of Community and Cultural Services at the City.

Four local ordinances or policies protecting biological resources are present within the Alternative 4 RSA: City of LA Ordinance, City of Santa Monica Tree Code, City of Los Angeles Street Tree Policy (City of LA Policy), and the Metro Tree Policy. No other ordinances or policies related to biological resources were identified in the operation of Alternative 4. Each tree or cluster within the Tree Survey Area was assigned to one ordinance or policy; the applicable ordinance or policy per tree is included in the detailed tree inventory (Appendix B, Attachment 1, Tree Inventory Tables). When protection requirements for City of LA Ordinance or Tree Code were not met, trees were considered protected through either the City of LA Policy or Metro Tree Policy. Mitigation amounts and maintenance periods vary between ordinances and policies (Table 8-10).

As discussed below, there is potential for significant impacts related to tree and vegetation removal within the City of Los Angeles during operation and construction of Alternative 4. Additionally, significant impacts related to tree removal within property owned by the City of Santa Monica exist related to the construction of Alternative 4.

Table 8-10. Details of Jurisdiction, Mitigation Ratios, and Maintenance Period for Landowners with Potential for Impacts to Trees

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
City of LA Protected Tree and Shrub Ordinance	City of LA including private property	4:1	3 years	Survival of continuously living replacements for maintenance period required.
City of Santa Monica Tree Code	City of Santa Monica Public right-of-way (ROW)	2:1 to 4:1[c]	3 to 5 years[c]	Mitigation ratio and maintenance period at discretion of City of Santa Monica. Replacement ratio and maintenance period presented represent a preliminary estimate.
Metro Tree Policy	Metro ROW, Properties & Capital Project Sites	2:1	3 years	Heritage trees, as defined by local ordinance, are protected at 4:1[a].
City of Los Angeles Street Tree Policy	City of LA Public ROW	2:1	5 years	Applicable to any tree or upon any street or parkway in the City, but does not apply to trees within private properties, in Caltrans ROW, or on UCLA[b] unless the tree was planted and maintained by the City.

Source: HTA, 2024

[a]Mitigation ratios are for number of replacement trees required per individual tree impacted.

[b]Teresa Estrada, phone call by C. Hargreaves to LA Dept of Urban Forestry Division, July 19, 2024.

[c]Mitigation ratio and maintenance period for trees within the City of Santa Monica estimated from the range of accepted ratios for replacement trees, between 2:1 and 4:1, for the Metro Tree Policy to the City of LA Ordinance.

8.3.5.1 Operational Impacts

During operations of Alternative 4, activities such as trimming, encroaching into the protection zone (i.e., dripline or canopy), or other actions that could damage root systems or alter the grade around a trunk may impact protected tree and shrub species. These activities would result in a potentially significant impact to protected trees.

Protected tree species on Alternative 4 that may require operational maintenance include coast live oak and Mexican elderberry at the proposed UCLA station, coast live oak immediately east of I-405 and south of Del Gado Drive, and western sycamores south of Sherman Way along the eastside of Sepulveda Boulevard. Maintenance to these protected trees would constitute a significant impact.

To address this impact, Alternative 4 would implement MM BIO-3, described in Section 8.4, which would require the installation and maintenance of replacement trees or shrubs when impacts are unavoidable. With implementation of MM BIO-3, impacts to protected trees during operations of Alternative 4 would be reduced to a less than significant level through installation and maintenance of replacement trees or shrubs following the requirements of the pertinent tree preservation ordinance.

8.3.5.2 Construction Impacts

For the purpose of this assessment, protected trees and shrubs included in the inventory (i.e., of the appropriate size and species whose TPZ (dripline or canopy of the tree/shrub) falls at least partially within the Tree Survey Area) are presumed to require removal during construction.

For Alternative 4, total of 1,575 protected trees and shrubs are mapped within the Tree Survey Area of Alternative 4 (Table 8-11, map series in Appendix B, Attachment 2). Of those, 82 are protected under the purview of the City of LA Ordinance, irrespective of land ownership, and require permits for any alterations made to protected trees and shrubs during construction, including trimming and encroaching into the tree/shrub protection zone. Seventy-six are on property owned by the City of Santa Monica that could be used during construction as a potential off-site staging yard. These trees are covered by the Tree Code and would require a City permit from the Santa Monica City Director before trees can be altered in any manner, including but not limited to removal, trimming, pruning, and planting.

The remaining 1,417 trees are under the jurisdiction of the City of LA Policy or the Metro Tree Policy. Heritage or protected trees, as determined by local ordinances or policy, may be present within the Alternative 4 Tree Survey Area; impacts to these trees are anticipated to be less than significant for Alternative 4.

Unless mitigated, the anticipated removal and alteration of protected trees and shrubs during construction of Alternative 4 would conflict with the City and County tree ordinances and with Metro and City tree policies. This is considered a significant impact. See Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, for the full list of these recorded trees.

To address this impact, Alternative 4 would implement MM BIO-12, described in Section 8.4, which would require installation and maintenance of replacement trees or shrubs following the requirements of the pertinent preservation policy or ordinance when impacts are unavoidable. With implementation of MM BIO-12, impacts associated with the removal of protected trees and shrubs during construction of Alternative 4 would be reduced to a less than significant level.

Table 8-11. Alternative 4: Protected Trees and Shrubs by Jurisdiction within Tree Survey Area

Jurisdiction	Scientific Name	Common Name	Quantity	Mitigation Amount (# replacement trees)
City of LA Protected Tree and Shrub Ordinance	*Juglans californica*	Southern CA black walnut	2	8
	Platanus racemosa	Western sycamore	11	44
	Quercus agrifolia	Coast live oak	53	212
	Quercus chrysolepis	Canyon live oak	13	52
	Quercus lobata	Valley oak	1	4
	Sambucus mexicana	Mexican elderberry	2	8
City of Santa Monica Tree Code	Numerous native and non-native tree species[a]		76	152 to 304[b]
TOTAL			**158**	**480 to 632**
Metro/City of Los Angeles Street Tree Policy	Numerous native and non-native tree species[a]		1,417	2,834 plus additional for heritage trees
GRAND TOTAL			**1,575**	**3,314 to 3,466 plus heritage trees**

Source: HTA, 2024

[a]Full list of Policy-protected trees and trees under City of Santa Monica Tree Code jurisdiction listed in Appendix B, Attachment 1, Tree Inventory Tables.

[b]Mitigation amounts would be at discretion of City of Santa Monica. City of Santa Monica Tree Code mitigation amounts presumed to be within range of ordinances and policies within the area, between 2:1 and 4:1 for the purposes of this analysis.

8.3.5.3 Maintenance and Storage Facility

The MSF for Alternative 4 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Within the Alternative 4 MSF, there are 43 ornamental trees including Mexican fan palm (*Washingtonia robusta*), Canary Island pine, Chinese elm, and eucalyptus trees among others. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF.

Tree removal at the Electric Bus MSF during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW; however, no impacts to trees within the Electric Bus MSF are anticipated during operation since trees within the MSF would have been removed during construction.

Tree removal at the Electric Bus MSF during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact.

To address this impact, the MSF for Alternatives 4 would implement MM BIO-12, described in Section 8.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-12, impacts associated with removal of protected trees and shrubs during construction of the MSF for Alternatives 4 and 5 would be reduced to less than significant.

8.3.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 4 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

8.3.6.1 Maintenance and Storage Facility

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 4 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

8.4 Mitigation Measures

8.4.1 Operational Mitigation Measures

Operational Mitigation Measures can be re-evaluated through discussion with Metro with consideration of any programmatic permits or operation and maintenance plans that pertain to potential impacts to biological resources during operation of the Project.

MM BIO-1: ***Avoid and Minimize Operations-Related Impacts to Nesting Birds.*** *Vegetation trimming for operation of the Project related to operational maintenance shall be under the purview and conducted in compliance with the existing Metro Tree Policy on facilities owned by Metro. The Metro Tree Policy's measures to protect native nesting birds (generally February 15 through September 15), including implementation of bird surveys if tree maintenance must occur within the breeding*

season, shall be implemented. Metro shall be responsible for ensuring compliance with the Metro Tree Policy throughout operations where such activities occur on its own properties.

- *Project features and/or mitigation recommendations to avoid direct impacts to bird movement shall be implemented where possible, such as Implementation of appropriate deterrents (e.g., visual and/or auditory) on aerial vehicles and/or support structures of the aerial alignment (where present) to prevent bird collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*

MM BIO-2: ***Avoid and Minimize Operations-Related Impacts to Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from operations-related activities, the following shall be implemented:*

- *Specific mitigation measures related to operational work for the Project shall be detailed in a Bat Habitat Mitigation and Monitoring Plan (BHMMP) created by a Qualified Biologist and approved by the California Department of Fish and Wildlife prior to initiation of construction. The BHMMP shall include site-specific measures for operational work to avoid and minimize Project-related impacts to roosting, overwintering, and breeding special-status bat species. The BHMMP also shall include reporting requirements to document activities and the results of these measures. Bat protection measures may include, but not be limited to, the following:*
  - *Limiting vegetation removal wherever possible.*
  - *Implementation of appropriate deterrents (e.g., visual, sonar, and/or auditory) on aerial vehicles and/or support structures of the aerial alignment where present to prevent bat collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*
  - *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (vehicles, equipment, etc.) at night relative to roosting locations.*
  - *If swallow nests need to be removed during operations, they shall be removed only during the fall (September 1 to October 31) or a time recommended by a Qualified Biologist to ensure removal occurs outside of bat maternity and hibernation seasons. Removal shall occur at night whenever feasible to minimize disturbances. Before removal, a Qualified Bat Biologist shall inspect each swallow nest for occupancy. If the nest is unoccupied, it may be removed immediately. If bats are present, a small portion of the nest shall be carefully removed to make it less suitable for roosting. This process shall be repeated nightly until the nest is vacated. If the next is not vacated after successive attempts, consultation with the*

California Department of Fish and Wildlife shall occur to determine appropriate actions.

- *Trees, bridges, or other structures that may need to have maintenance work conducted during operations shall be evaluated for potential to support bat roosts. Before work is conducted, a Qualified Biologist shall conduct a one-night emergence survey during acceptable weather conditions. The following measures shall apply to trees, bridges, or other structures should bat roosts be detected.*
  - *If roosting bats are determined to be present during the maternity season (April 15 through August 31), work on the tree/structure shall be avoided to the extent feasible until after the maternity season when young are self-sufficient. If work on a tree/structure must occur during the maternity season (for repairs or other activities that cannot wait until the end of the maternity season), bat surveys shall be conducted by a Qualified Biologist to determine the use of the roost by bats, if a maternity roost is present, etc. This shall help inform additional avoidance and minimization measures that may need to be implemented in conjunction with the California Department of Fish and Wildlife to permit work during the maternity season.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state, which occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of operations activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, impacts to the roost shall be avoided, to the extent feasible, until after the winter season when bats are once again active. If avoidance of roosting bats is not possible due to the need for repairs, discussion with the California Department of Fish and Wildlife may be necessary to reduce potential impacts while permitting repair activities.*
- *Trees, bridges, or structures with potential colonial bat habitat that require trimming or repairs during operations outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) can be conducted using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities that would potentially be used by bats shall be removed by hand (e.g., using handsaws) or smaller components of the structure should begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree will likely cause bats roosting in the tree to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree, bridge, or structure can occur the following day under the supervision of a Qualified Biologist.*

- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-3: ***Avoid and Minimize Operations-Related Impacts to Protected Trees and Shrubs.*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *Compliance with the applicable tree policies requirements for permitting and mitigation.*
- *Impacts to protected trees and shrubs during operation of the Project shall be minimized to the maximum extent feasible. When impacts to protected trees and shrubs are unavoidable — including alterations made such as trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy of the tree/shrub) — the following measures shall be required.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities with jurisdiction as follows:*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of LA Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*
  - *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
  - *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority).*
- *If operations and maintenance requires removal of protected trees or shrubs, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***Special-status trees afforded protection under the California Endangered Species Act or federal Endangered Species Act:*** *Impacts to all trees*

protected by the California Endangered Species Act or federal Endangered Species Act (e.g., Quercus dumosa) shall require coordination with the California Department of Fish and Wildlife or U.S. Fish & Wildlife Service, as applicable, in addition to the appropriate tree protection ordinance or policy.

- ***Los Angeles County Oak Tree Ordinance:*** *All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree.*
- ***City of Los Angeles Protected Tree and Shrub Ordinance:*** *Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
- ***Policy-Protected Trees****: All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1, or an in-lieu fee shall be made. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*
- ***Santa Monica Mountains National Recreation Area****: Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*

- *All trees occurring on private property, including within the Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*

MM BIO-28: ***Avoid and Minimize Operations-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors during operations shall be avoided, minimized, and/or mitigated as follows:*

- *Metro shall develop, in coordination with the California Department of Fish and Wildlife and relevant species experts, and implement a five-year monitoring plan to track wildlife movement across corridors during operations of the Project. This shall include a survey of the Project area prior to construction to establish baseline conditions, as well as monitoring the Project area during operations. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is adversely impacted by the presence of the Project (e.g., injury or mortality due to collisions and other effects, reduced habitat patch connectivity, disruptions in corridor usage or avoidance of pre-existing travel corridors), additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife*

movement, and the results of the monitoring program shall be submitted to the California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.

8.4.2 Construction Mitigation Measures

8.4.2.1 Resource-Specific Mitigation Measures

MM BIO-4: ***Avoid and Minimize Construction-Related Impacts to Nesting Birds.*** *Vegetation clearance for construction of Alternative 4 related to construction activities shall occur outside of the nesting bird season (generally February 15 through September 15) to the extent feasible. If vegetation removal outside this time period is not feasible, the following additional measures shall be employed to avoid and minimize impacts to special-status bird species and nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code:*

- *A preconstruction nesting bird survey of the work area (as defined by the Ground Disturbance Area, including staging and laydown yards) plus a 300-foot buffer shall be conducted by a Qualified Biologist within three days prior to the start of ground disturbing activities (including vegetation removal activities) to determine whether active nests (defined as nests with eggs or young) are present within or adjacent to (i.e., within 100 feet for non-special status songbirds, 300 feet for raptors and special-status species) the work zone. Any active nests found shall be recorded and a nest avoidance zone shall be established where no work shall occur. If project activities are delayed beyond 72 hours, a new nesting bird survey shall be completed within 72 hours prior to the resumption of ground disturbing activities.*
- *Active bird nests for species protected by the Migratory Bird Treaty Act shall have a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer established as follows: 300-foot radius buffer for raptors and special-status birds (refer to MM BIO-7 for additional least Bell's vireo measures) and 100-foot-radius buffer for non-raptor and non-special status avian nests. The Qualified Biologist can adjust buffer distances to increase or decrease the radius contingent on topography, existing noise levels, planned operational activities, species specific tolerances to disturbances such as noise and vibration from construction activities, and observations specific nesting pair tolerance to disturbances. Nest monitoring by the Qualified Biologist shall be required following buffer modifications to ensure new buffer is appropriate; adjustments can be made only following monitoring of nesting pair to determine if buffer is adequate to protect nest from construction impacts including from noise and vibrations. Installation of temporary noise barriers between the work area and nest can also be evaluated, if installation can occur in a manner to not disturb the nesting pair based on the Qualified Biologist's recommendation. If a Qualified Biologist determines work activities may result in nest failure, project work shall cease within the recommended no-disturbance buffer until a Qualified Biologist determines nest status. Additional follow-up surveys shall be conducted as*

necessary to determine nest status. Once the nest is determined to be fledged or no longer active, the buffer shall be removed.

- *A Qualified Biologist shall inform maintenance personnel of any active nests, facilitate avoidance measures, and verify operational activities do not cause disturbance. Maintenance personnel shall be updated on nest status and when avoidance buffers are no longer necessary.*
- *A Qualified Biologist shall monitor each nest on a biweekly basis and project activities shall not occur within the buffer until a Qualified Biologist determines the nest is no longer active (either by fledging or failing naturally). If a nest is adjacent to an access road where no project activities are being conducted, vehicles can drive past the nest without stopping or parking. Signage stating no stopping or idling vehicles shall be posted (facing outwards from the buffer) at the start and end of the nest buffer where it crosses the road.*
- *A Qualified Biologist can determine a nest to be inactive (defined as eggs and young no longer present or reliant on the nest site, including fledged young that still depend upon the nest), following no observations of activity at the nest location for 1 hour for non-raptor avian nests and 4 hours for raptors.*
- *A summary of nesting bird surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented by the biologist at the conclusion of each nesting season and submitted to Metro. In the event that an active bird nest identified is associated with a special-status species afforded protection under the California Endangered Species Act or the federal Endangered Species Act, then the appropriate agency shall be immediately informed, and additional coordination shall occur, as needed.*

MM BIO-5: ***Avoid and Minimize Construction-Related Impacts to Roosting Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from construction activities, the following shall be implemented:*

- *A bat habitat assessment shall be conducted during the bat maternity season (generally April 15 through August 31 for southern California, yearly timing dependent on weather conditions) at least one year prior to construction. A Qualified Biologist shall conduct surveys to determine the presence of bat roosting or maternity habitat within suitable areas where vegetation trimming, tree removal, bridge repair activities, structure demolition, or other construction-related activities may occur and bats may be present. A visual inspection and/or one-night emergence survey of potential bat habitat that may be impacted by activities shall be completed utilizing acoustic recognition technology to determine if any maternity roosts are present. Results from this survey shall be used to create a Bat Habitat Mitigation and Monitoring Plan (BHMMP), produced by a Qualified Biologist, and which shall include site-specific minimization and avoidance measures for operations and construction of the Project. These measures shall include but not be limited to establishment of no-disturbance buffers, monitoring of roosting bats to ensure tolerance to disturbances such as noise and vibration from Project activities, mitigation for habitat impacts, and humane eviction or exclusion. If monitoring indicates established no-disturbance*

buffer is not adequate to prevent disturbances to roosting bats, a Qualified Biologist can adjust the buffer as needed.

- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed, including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (e.g., vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during construction, removal shall occur in the fall (September 1 to October 31 or based on local expert bat biologist input as long as it is outside of bat maternity or hibernation season), preferably at night. Nests shall be inspected for occupancy by a Qualified Biologist and if empty, removed. If a bat is present, if feasible a small portion of the nest can be carefully removed to make the nest a less suitable for roosting. The following night, if the nest is empty, it can be removed entirely. If not, another small portion can be removed if feasible. If removal is not feasible or bats are still present, consultation with the California Department of Fish and Wildlife may be appropriate.*
- *Trees or structures to be removed as part of the Project shall be evaluated for their potential to support bat roosts. An experienced bat biologist shall conduct a one-night emergence survey during acceptable weather conditions, before the start of removal. The following measures shall apply to trees or structures to be removed that provide potential bat roost habitat; these shall be implemented by a Qualified Biologist.*
  - *If roosting bats are determined present in a tree or on a structure during the maternity season (April 15 through August 31), the tree/structure shall be avoided until after the maternity season when young are self-sufficient. If other trees/structures in the immediate vicinity are slated for removal, or other work shall occur in the immediate vicinity that might disturb roosting bat, a no-work buffer may be needed.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state that occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of project activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, the tree or structure shall be avoided until after the winter season when bats are once again active.*
- *Trees or structures with potential to serve as colonial bat habitat can be removed outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) using a two-step process that occurs over two consecutive days.*

  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities shall be removed by hand (e.g., using handsaws) or smaller components of the structure shall begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree/structure will likely cause bats roosting to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree or structure can occur the following day under the supervision of a Qualified Biologist.*

- *Trees that are only to be trimmed and not removed shall also require a two-step process with these deviations from the removal process explained above: if a branch with a potential roost must be removed, all surrounding branches shall be trimmed on Day 1 under supervision of a Qualified Biologist and then the limb with the potential roost shall be removed on Day 2.*
- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-6: ***Avoid and Minimize Construction-Related Impacts to Crotch's Bumble Bee.*** *To reduce impacts on Crotch's bumble bee from construction activities, the following shall be implemented:*

- *A pre-construction habitat assessment for Crotch's bumble bee shall be conducted by a Qualified Biologist within the Ground Disturbance Area and a surrounding 100-foot buffer to demarcate potentially suitable nesting and foraging habitat.*
- *Nesting surveys and foraging surveys shall be conducted during the most active flight period and peak blooming period of nectar and pollen sources (generally April 1 through July 31). The survey shall be conducted between at least 1 hour after sunrise and at least 2 hours before sunset, with ambient air temperature between 60- and 90-degrees Fahrenheit. Surveys shall not be conducted during windy periods with speeds of over 10 mph, during fog or low visibility, or precipitation heavier than drizzling rain.*
- *Foraging surveys shall focus on areas of high abundance of nectar and pollen sources with meandering transects within these areas at a rate of no more than 2.5 acres per hour.*
- *Nesting surveys shall focus on areas with existing, abandoned, rodent burrows; the biologist shall focus on detecting potential Crotch's bumble bee nest within suitable habitat.*
- *If a nest is documented, a 50-foot "no-disturbance" buffer shall be established and clearly identified in the field for avoidance. Construction activities shall avoid the nest location and surrounding buffer until the nest has senesced.*

- *Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed and/or a nest is located, California Department of Fish and Wildlife shall be informed, and additional coordination shall occur as needed.*

MM BIO-7: ***Avoid and Minimize Project-Related Impacts to Least Bell's Vireo.*** *To reduce impacts on least Bell's vireo from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, the Project shall perform one full season of protocol surveys for least Bell's vireo in suitable habitat within 500 feet of construction activities following the accepted U.S. Fish & Wildlife Service protocol. Focused surveys shall be completed prior to construction initiation and results shall be used to inform a consultation process with the U.S. Fish & Wildlife Service for project permitting. Eight surveys shall be conducted between April 10 and July 31, with each survey spaced at least 10 days apart. Reduction in the prescribed number of individual surveys may be evaluated in accordance with the U.S. Fish & Wildlife Service protocol. Surveys shall be conducted between dawn and 11:00 a.m. and outside of periods of inclement weather (excessive heat or cold, high winds, rain, etc.). Surveys shall not be conducted concurrently with other surveys. Per the U.S. Fish & Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.*
- *Following completion of protocol surveys, pre-construction presence/absence clearance surveys shall be required if construction is planned to begin within the nesting season. Clearance surveys shall be required within 500 feet of suitable habitat and must occur 3 or fewer days prior to start of activities. Presence/absence surveys shall be conducted by a Qualified Biologist who is familiar with species visually and aurally, and who is able to differentiate similar species. The Qualified Biologist shall not be required to have an Endangered Species Act Section 10(a) recovery permit covering this species since recorded vocalizations shall not be used to illicit responses and nest monitoring (i.e., locate and monitor the nest, including removal of brown-headed cowbird (Molothrus ater) eggs and chicks from parasitized nests) and handling of individual are not proposed.*
- *If protocol and pre-construction survey results are negative, construction activities can commence, and a Qualified Biologist shall conduct presence/absence surveys weekly during the breeding season while construction is occurring within 500 feet of suitable habitat. If least Bell's vireo are detected during a survey, a Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat until the end of the breeding season. If construction within 500 feet of suitable habitat is paused for more than 3 days, a new survey must be conducted to verify if least Bell's vireo are present.*
- *If an active nest is documented, a no-disturbance 300-foot radius buffer shall be established and clearly identified in the field. Construction activities shall avoid the nest location and buffer until a Qualified Biologist declares the nest inactive. A Qualified Biologist shall be required to monitor construction activities within*

500 feet of suitable habitat every day work is occurring while the nest is active. Noise monitoring shall be required weekly on varying days to account for changes in construction-related noise levels from before the nest is active to after. Monitoring shall be to ensure noise levels remain at or below 60 A-weighted decibels (dBA) or to the ambient noise level if it already exceeds 60 dBA before construction at specified monitoring locations within 100 feet of the nest. The Qualified Biologist shall either conduct the noise monitoring or escort the noise monitor if they are not a Qualified Biologist.

- *The results of the surveys shall be used to design project features and temporary work areas to avoid direct impacts to occupied habitat for listed riparian bird species. Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*

MM BIO-8: ***Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles.*** *To reduce impacts on special-status reptiles from construction activities, the following shall be implemented:*

- *Prior to the start of vegetation removal, the Ground Disturbance Area shall be clearly fenced (usually with silt fencing) to delineate the extent of the construction area.*
- *Once fencing is in place, a Qualified Biologist shall conduct a pre-vegetation clearance sweep to look for and remove any special-status reptile species (e.g., coast horned lizard, two-striped garter snake, southwestern pond turtle, coastal whiptail, and southern California legless lizard) that may occur within the Ground Disturbance Area. If any special-status reptile species are detected within the Ground Disturbance Area, personnel shall allow the species to escape unimpeded if possible. Alternatively, the Qualified Biologist shall move the species outside of the fencing to the closest suitable habitat pending authorization from the U.S. Fish & Wildlife Service or California Department of Fish and Wildlife if required.*
- *Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*
- *Any observations of special-status reptiles shall be summarized in writing and submitted to Metro. In the event that an observed special-status species is afforded protection under the California Endangered Species Act or federal Endangered Species Act, then the appropriate agency shall be immediately informed and additional coordination shall occur, as needed.*

MM BIO-9: ***Avoid and Minimize Construction-Related Impacts to Special-Status Plants.*** *Impacts to special-status plants shall be avoided, minimized and/or mitigated through incorporation of the following:*

- *Prior to any Project activities that may modify vegetation, focused rare plant surveys shall be conducted following California Department of Fish and Wildlife*

protocols. Focused surveys shall occur during optimal blooming periods for special-status species likely to occur, which typically results in multiple visits within one growing season (e.g., early, mid- and late-season surveys). In the event a federally listed species is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.

- *If focused rare plant data is more than 1 year old at commencement of construction, pre-construction surveys during the optimal blooming periods shall occur to demarcate special-status plant populations for avoidance (where feasible). The results of the focused surveys shall be used to design project features and temporary work areas to avoid direct impacts to federally and state-listed plant species.*
- *All observations of special-status plants prior to and during Project construction activities shall be documented in writing, including detailed descriptions of the location, species, and condition of the plant. If a special-status species protected under the California Endangered Species Act or the federal Endangered Species Act is observed, Metro shall immediately notify the appropriate agency (e.g., California Department of Fish and Wildlife or U.S. Fish & Wildlife Service) and coordinate further actions as required by law. This may include consultation to determine the need for additional avoidance, minimization, or mitigation measures. If impacts to special-status plants cannot be avoided, the Project shall prepare and implement a Habitat Restoration Plan. The Habitat Restoration Plan shall include mitigation ratios for impacted special-status plants and native habitats, installation methods, a detailed monitoring plan that includes quantifiable data collection, maintenance strategies, reporting requirements, and quantifiable performance criteria for restoration success.*
- *Special-status plant mitigation strategies shall include restoration of impacted areas through seeding and/or plantings. Weed abatement shall be implemented if Project activities result in non-native species within the Ground Disturbance Area that were not present before activities began. Specific strategies shall be implemented as described below:*
  - *If special-status plant species observed during surveys can feasibly be transplanted, such as slender mariposa lily (Calochortus clavatus var. gracilis), individuals shall be salvaged prior to ground disturbance for translocation. Salvage may include collection by hand of individual plants, storage in an appropriate manner depending on species, and replanting within suitable habitat close to its original location following completion of construction activities. For the purposes of this measure, "feasible" shall mean the ability to transplant plants without jeopardizing plant viability, project design, or safety requirements.*
  - *If on-site repair or restoration efforts are not feasible or adequate to mitigate for impacted plants, alternative measures, such as off-site compensation, shall be implemented. Off-site compensation shall achieve equivalent or greater ecological value and shall utilize a minimum 3:1*

replacement ratio (three replacement plants for every one impacted plant). The replacement ratio shall be based on the number of individuals impacted or the acreage of habitat affected, depending on the specific circumstances, and the species affected. The compensation area shall be protected in perpetuity through mechanisms such as conservation easements, deed restrictions, or long-term management agreements.

- *To protect special-status plant populations from human disturbance after construction is completed, fencing or signage shall be installed around restored areas where public access is anticipated.*

MM BIO-10: ***Avoid and Minimize Construction-Related Impacts to Sensitive Vegetation Communities.*** *Impacts to sensitive vegetation communities shall be avoided, minimized, and/or mitigated as follows:*

- *The Project shall prioritize avoiding impacts to sensitive vegetation communities, including but not limited to California walnut woodland and sugar bush shrubland, and any other communities ranked S1 to S3 by the California Department of Fish and Wildlife. When avoidance is not possible, impacts shall be minimized by planning construction activities in previously disturbed areas to the extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid impacts without compromising essential project design, safety, regulatory compliance, or causing environmental impacts that would be greater than those being minimized.*
- *Impacts to any natural vegetation communities designated sensitive, such as California walnut woodland and sugar bush shrubland, shall be reduced by trimming vegetation instead of removing entire trees or shrubs where feasible. For the purposes of this measure, "feasible" is defined as the ability to trim vegetation without compromising plant health, public or worker safety, or essential project design requirements. Where trimming alone is infeasible, removal shall be conducted in a manner that avoids further damage to surrounding vegetation.*
- *When feasible, temporary impact areas shall have vegetation trimmed and rootballs left intact to enable regrowth once construction is complete.*
- *In conjunction with appropriate entities with jurisdiction (i.e., Caltrans for their right-of-way, Santa Monica Mountains Conservancy for Santa Monica Mountains National Recreation Area), Metro shall design, develop and implement a 5-year restoration plan to restore native vegetation communities disturbed by construction activities. A preconstruction assessment of sensitive vegetation communities shall be conducted to collect a comprehensive plant species list, community structure data, native and nonnative plant cover assessments, and preconstruction photos for permanent photo points; this information shall be incorporated into the restoration plan. The plan shall include a monitoring program that includes both qualitative and quantitative data collection, quantified performance criteria that consider pre-construction conditions, irrigation and maintenance actions, and the use of native plantings and/or seedlings to restore native communities. Performance criteria shall be defined*

with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and shall include the following habitat characteristics: native plant species cover and diversity, container plant survivorship (if applicable), non-native annual species cover, absence of non-native, woody perennial species cover, and self-sufficiency of restoration plants (i.e., ability to persist without supplemental irrigation).

- *Native species such as succulents, bulb species, and cactus shall be salvaged from the Ground Disturbance Area before work begins, to the maximum extent feasible, and stored in an appropriate manner depending on species requirements. These species shall be replanted within the Ground Disturbance Area at project conclusion as part of the restoration efforts.*
- *Progress toward these performance criteria shall be evaluated on a regular basis as defined in the restoration plan, but a minimum of once annually for the 5-year maintenance period. If the success standards are not met by the end of Year Five, additional measures such as replanting, remedial seeding, and/or supplemental watering shall be implemented. Monitoring shall continue thereafter until performance criteria are attained.*
- *Restoration monitoring results and future recommendations shall be submitted in annual reports submitted to Caltrans, the Santa Monica Mountains Conservancy, and other relevant agencies until success criteria are achieved.*

MM-BIO-12: ***Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Applicable to Alternatives 4 and 5).*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *A Tree Expert, as defined under the City of Los Angeles Protected Tree and Shrub Ordinance, shall complete a detailed tree survey report prior to construction and once access is obtained to properties within the alignment. The report shall build upon the Initial Protected Tree and Shrub Inventory Memorandum (Appendix B) and include detailed field methods and data for each protected tree or shrub, such as species, height, diameter, canopy spread, physical condition, and precise location. The Tree Expert's follow-up report shall expand upon the initial assessment to provide a comprehensive dataset with verification of tree/shrub species, height, canopy width, and tree/shrub health for the Ground Disturbance Area. This follow-up report shall be used to procure the required permit prior to commencement of tree impacts within the City of Los Angeles.*
- *Impacts to protected trees and shrubs shall be minimized to the maximum extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid or minimize impacts while meeting project design, safety, and operational requirements, as determined by the Tree Expert and project engineers. When trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy) is needed, the following measures shall be required:*
  - *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of*

Arboriculture and conducted in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs.

- *Trimming shall require coordination and permitting with the appropriate entities as follows:*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of Los Angeles Street Tree Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of Santa Monica Tree Code shall require coordination with the Director of Community and Cultural Services for pruning, maintenance, removal, and care for all affected trees.*
  - *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*

- *For impacts to protected trees and shrubs beyond trimming, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:** Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***City of Santa Monica Tree Code**: Trees protected under the City of Santa Monica Tree Code shall require coordination with the Director of Community and Cultural Services for pruning, maintenance, removal, and care for all affected trees.*
  - ***Policy-Protected Trees:** All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1. The Los Angeles Street Tree Policy allows for an in-lieu fee to be made with approval of the Board of Public Works following verification that replacement trees cannot be feasibly planted onsite. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*

- *All trees occurring on private property, or Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*

- *For protected trees and shrubs that are not anticipated to be impacted, a Tree Protection Zone shall be established around each tree/shrub or cluster of trees/shrubs prior to the commencement of work. The Tree Protection Zone shall be erected using temporary fencing in an environmentally sensitive manner and remain in place until all site work has been completed. Specific installation timeframe may vary but the Tree Protection Zone must be inspected and approved by a Qualified Arborist prior to construction work occurring including staging of equipment. Work can commence directly following arborist inspection and approval. No construction-related materials shall be stored or staged within the Tree Protection Zone (fenced areas).*
- *The LA Street Tree Policy would require coordination with the City of Los Angeles Department of Public Works for removal or maintenance of protected trees; this policy does not apply to trees within private property, UCLA, or within the Caltrans right-of-way. Metro Tree Policy would not require permitting but would require coordination with the landowners (e.g., private landowners, UCLA, Caltrans) when a tree must be removed. Additionally, Metro Tree Policy states a mitigation plan would be required to be developed in consultation with a Certified Arborist if construction impacts damaged or removed a tree; decisions would be made in accordance with local ordinances identifying protected trees.*

MM BIO-14: ***Avoid and Minimize Construction-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors shall be avoided, minimized, and/or mitigated as follows:*

- *Prior to any ground-disturbing activity, a Qualified Biologist shall conduct a detailed analysis of wildlife movement and corridors within the Santa Monica Mountains as they relate to ground disturbance activities for the Project. Analysis shall include desktop review of publicly available documentation — including research publications, project reports, environmental analyses, and high-quality aerial imagery — to anticipate wildlife movement patterns within the project vicinity. Field surveys shall also be conducted to identify and document wildlife crossings.*
- *Prior to construction, Metro shall coordinate with the California Department of Fish and Wildlife, Caltrans, the Santa Monica Mountains Conservancy/Santa Monica Mountains National Recreation Area, and species experts (as appropriate) to identify and implement appropriate minimization and avoidance measures to facilitate mountain lion and other vertebrate movement and connectivity across the Santa Monica Mountains. Performance standards for wildlife connectivity shall require that post-construction conditions maintain or improve wildlife movement. Specifically, the Project shall achieve a 0 percent increase in road mortality for mountain lions and other sensitive species in the Project Study Area, as measured through tracking and monitoring for at least five years post-construction.*

- *Prior to any ground-disturbing activities, field surveys shall be conducted by a Qualified Biologist to survey for (1) confirm mountain lion presence or absence (2) identify known or potential mountain lion natal dens within suitable habitat with 600 feet of ground-disturbing activities during the breeding season (April through September), and (3) identify and document wildlife crossings in the Project vicinity. Surveys shall be conducted at dawn and dusk to increase probability of detection.*
- *If a mountain lion natal den is identified during the survey, the Qualified Biologist shall establish a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer where work shall cease until the den is no longer occupied or the cubs have successfully reared. The size of the buffer shall be determined based on characteristics of the den (e.g., distance, direction facing, observed behavior) and through consultation with species experts and the California Department of Fish and Wildlife to ensure the buffer is of appropriate size to not adversely affect rearing of cubs.*
- *Vegetation removal shall be limited wherever possible, particularly within the Santa Monica Mountains.*
- *Vegetation restoration within temporarily disturbed areas adjacent to wildlife crossings shall be designed to facilitate wildlife movement. Installed vegetation patches shall be designed to act as "stepping stones" to provide cover for wildlife approaching crossings. All vegetation provided shall be consistent with any Habitat Restoration Plan required pursuant to MM BIO-9.*
- *A summary of survey results from presence/absence and den surveys shall include maps of the survey area and possible denning locations and shall be submitted to Metro and the California Department of Fish and Wildlife. If a natal den or presence is confirmed, California Department of Fish and Wildlife shall be immediately informed, and additional coordination shall occur, as needed.*
- *Metro shall also develop a five-year monitoring plan, in coordination with the California Department of Fish and Wildlife and species experts, to track wildlife movement across corridors during and after construction. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is negatively impacted, additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to the California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

MM BIO-15: ***Avoid and Minimize Construction-Related Impacts to Jurisdictional Aquatic Resources.*** *Potential impacts to drainages shall be avoided and/or minimized when working in or adjacent to aquatic resources as defined in the Aquatic Resources Delineation Report (Appendix A from the Sepulveda Transit Corridor Project*

Ecosystem and Biological Resources Technical Report) through incorporation of the following:

- *A Qualified Biologist/Aquatic Specialist shall monitor construction activities adjacent to jurisdictional aquatic resources during vegetation clearing and/or initial ground-disturbance activities. Additionally, they shall support impact avoidance and minimization measures detailed in permits and approvals obtained for the Project.*
- *Limits of the Ground Disturbance Areas shall be designated with lathe staking or a similar method. All equipment and workers shall remain within approved work limits.*
- *Wherever possible, construction personnel shall utilize existing access roads or previously disturbed areas to reach the project area or stage their vehicles and equipment.*
- *Maintenance personnel shall also not leave any waste or debris behind which would impact natural habitats.*
- *To protect water quality:*
  - *Appropriate best management practices shall be installed to prevent erosion and guide runoff during rain events.*
  - *Equipment and materials shall be staged within the alignment and away from water drainages. Parked equipment shall have secondary containment to prevent any fluid leaks from coming into contact with the ground surface.*
  - *Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter into an aquatic resource.*
  - *Disposal or temporary placement of excess fill, brush, or other debris shall not be allowed in Waters of the United States, Waters of the State, and California Department of Fish and Wildlife streambeds or their banks.*

MM BIO-29: ***Avoid and Minimize Construction-Related Impacts to Overwintering Burrowing Owls.*** *To avoid and reduce impacts on overwintering burrowing owls from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, a Qualified Biologist familiar with the ecology of burrowing owls shall conduct the following field investigations:*
  - *A habitat assessment to map Project areas with potential to support overwintering burrowing owls. The habitat assessment shall follow the methodology outlined in Appendix C of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012) and shall include the Project footprint and a 150 meter buffer of these areas.*
  - *One season of non-breeding season surveys, including at least four (4) visits spread evenly throughout the non-breeding season (defined as September 1 to January 31).*

  - *Results of these investigations shall be summarized in writing and submitted to the California Department of Fish and Wildlife, and used to inform the need for pre-construction take avoidance surveys or additional permitted as needed.*

- *A Qualified Biologist shall conduct a pre-construction take avoidance survey in all areas of known or potentially suitable overwintering habitat, following the methodology outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012). The take avoidance survey shall be conducted no less than 14 days prior to initiating ground disturbance and may be repeated if work activities are paused for a period of 7 days or more during the non-breeding season (September 1 to January 31)*

  - *At the discretion of the Qualified Biologist, an additional pre-construction clearance survey shall be conducted no more than 24 hours prior to ground disturbance, to ensure that no burrowing owls have colonized the work areas or adjacent habitats.*

  - *If an occupied wintering burrow is located, an appropriate no-disturbance buffer shall be implemented. The width of the buffer shall be determined by the Qualified Biologist with consideration of the level of disturbance that is anticipated for the burrowing, following the recommended buffer distances outlined below.*

    - *Low level of disturbance: 50 meters*
    - *Medium level of disturbance: 100 meters*
    - *High level of disturbance: 500 meters*

  - *Results of the survey shall be summarized in writing and submitted to the California Department of Fish and Wildlife for review.*

  - *If an occupied burrow cannot be avoided, work in the vicinity of the burrow shall stop, the California Department of Fish and Wildlife shall be contacted, and additional coordination shall occur as needed in compliance with the California Endangered Species Act.*

8.4.2.2 General Construction Measures

The following general construction measures are proposed for implementation during construction activities:

MM BIO-16: *Prior to vegetation clearing, grading, and/or construction activities that may impact habitats of special-status species, a Qualified Biologist(s) shall oversee installation of appropriate temporary Environmentally Sensitive Area fencing and/or flagging to delineate the limits of construction and the approved construction staging areas for protection of identified sensitive resources outside the approved construction/staging zones. All construction access and circulation shall be limited to designated construction/staging zones. Fencing shall be of a type that shall not entangle or otherwise detrimentally effect wildlife or the environment. Fencing shall be checked weekly to ensure it is intact and functioning as intended, to look for signs of degradation that might cause harm to wildlife or the environment, and to ensure*

fenced construction limits are not exceeded. This fencing shall be removed upon completion of construction activities.

MM BIO-17: *A Qualified Biologist(s) shall monitor project activities during vegetation clearing, grading, and/or construction within or adjacent to areas identified as sensitive habitat and/or jurisdictional aquatic resources. If special-status species and/or sensitive habitats adjacent to the project sites are inadvertently impacted by activities, then the Qualified Biologist(s) shall immediately inform the on-site construction supervisor who shall temporarily halt or redirect work away from the area of impact. If unanticipated impacts occur to occupied habitat for special-status species, the Project shall consult with the appropriate regulatory agencies.*

MM BIO-18: *A Worker Environmental Awareness Plan (WEAP) shall be developed and implemented prior to the start of construction. Environmental training shall be led by the Qualified Biologist(s) and shall cover the sensitive resources found on-site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. New workers added to construction after the initial training at work start shall be required to receive WEAP training before they may begin work on the Project. Documentation of personnel who have attended WEAP training shall be maintained and submitted to Metro. All information included in WEAP training shall be kept on Project sites to be readily accessible to any personnel in a form deemed appropriate for the Project (e.g., wallet cards, printed flyers, etc.).*

MM BIO-19: *Wildfires shall be prevented by exercising care when driving to prevent sparks and by not parking construction vehicles where catalytic converters could ignite dry vegetation. All construction vehicles shall carry water and shovels or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. Smoking shall take place within designated areas and away from vegetated areas.*

MM BIO-20: *Construction workers shall be prohibited from bringing pets and firearms to the site.*

MM BIO-21: *To prevent unnecessary erosion, runoff, and sedimentation, all construction activities within 100 feet of drainages or wetlands shall cease during Stormwater Pollution Prevention Plan-defined rain events and shall not resume until conditions are suitable for the movement of equipment and materials. Vehicle access along unpaved access routes shall not occur during saturated soil condition to avoid rutting or other soil disturbance.*

MM BIO-22: *If night work shall occur, all lighting used during night construction shall be temporary and shall be implemented to reduce lighting effects onto adjacent open space areas (i.e., downcast, away from habitat) and/or shall also be directed away from nests/roosting sites on man-made structures. Light shields shall be used to minimize light pollution adjacent to the Project.*

MM BIO-23: *Prior to entering the construction areas, equipment and personnel shall be free of mud, debris, or vegetation to prevent the introduction and spread of weeds or invasive species to the Project. If required, vehicle washing shall occur within*

designated areas within project construction areas where appropriate containment has been established, or at a suitable off-site facility.

MM BIO-24: *Dust suppression measures shall be implemented during construction to minimize the creation of dust clouds and possible degradation of sensitive vegetation communities and special-status species suitable habitat. These measures shall include applying water at least once per day or as determined necessary by the Qualified Biologist(s) to prevent visible dust emissions from exceeding 100 feet in length in any direction. In addition, watering frequency shall be increased to four times per day if winds exceed 25 miles per hour. Nontoxic soil stabilizers may be used on access roads to control fugitive dust, as needed.*

MM BIO-25: *Vehicle speeds shall be restricted to posted speed limits on existing paved roads and to 15 miles per hour on dirt or gravel access roads during all phases of the Project. Speed limit signs shall be posted on dirt or gravel access roads throughout the site to remind workers of travel speed restrictions.*

MM BIO-26: *Trenches and excavations located within open areas shall be backfilled with earth at the end of each workday or have one edge sloped into an escape ramp with a less than 1:1 (45 degree) slope to prevent wildlife entrapment. A non-slip material may be used (e.g., wooden ramp with traction) when an earthen escape ramp cannot be created. For instances when these methods are not feasible (e.g., deep, long-term excavations for underground segments), temporary exclusion fencing can be installed around the perimeter of the work area to prevent animal entrapment. The Qualified Biologist shall ensure the temporary exclusion fencing is sufficiently supported to maintain integrity under all conditions and shall be checked daily to ensure integrity is maintained and inspect it daily while work is occurring. Fencing shall be repaired each day, as needed to ensure integrity is maintained. A Qualified Biologist shall inspect all trenches and excavations for trapped animals at the beginning and end of each day, as well as before excavations are backfilled. Should wildlife become trapped in any trenches or excavations, a Qualified Biologist(s) shall remove and relocate them outside the construction zone. When entrapped wildlife is a listed species with handling restrictions, relocation must be conducted by a biologist permitted to handle the species. Where trenches or excavations cannot be immediately backfilled or sloped, open excavations shall be covered and the end of each day with boards or plates. The edges of the boards shall be sealed with native spoils to prevent wildlife from entering the excavation in gaps at the board edges.*

MM BIO-27 *Spoils, trash, and any construction-generated debris shall be removed to an approved off-site disposal facility. Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*

8.4.3 Impacts After Mitigation

Implementation of the mitigation measures previously listed would mitigate impacts to biological resources related to project operations and construction to a level that is considered less than significant.

9 ALTERNATIVE 5

9.1 Alternative Description

Alternative 5 consists of a heavy rail transit (HRT) system with a primarily underground guideway track configuration, including seven underground stations and one aerial station. This alternative would include five transfers to high-frequency fixed guideway transit and commuter rail lines, including the Los Angeles County Metropolitan Transportation Authority's (Metro) E, Metro D, and Metro G Lines, East San Fernando Valley Light Rail Transit Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 13.8 miles, with 0.7 mile of aerial guideway and 13.1 miles of underground configuration.

The seven underground and one aerial HRT stations would be as follows:

1. Metro E Line Expo/Sepulveda Station (underground)
2. Santa Monica Boulevard Station (underground)
3. Wilshire Boulevard/Metro D Line Station (underground)
4. UCLA Gateway Plaza Station (underground)
5. Ventura Boulevard/Sepulveda Boulevard Station (underground)
6. Metro G Line Sepulveda Station (underground)
7. Sherman Way Station (underground)
8. Van Nuys Metrolink Station (aerial)

9.1.1 Operating Characteristics

9.1.1.1 Alignment

As shown on Figure 9-1, from its southern terminus station at the Metro E Line Expo/Sepulveda Station, the alignment of Alternative 5 would run underground north through the Westside of Los Angeles (Westside), the Santa Monica Mountains, and the San Fernando Valley (Valley) to a tunnel portal east of Sepulveda Boulevard and south of Raymer Street. As it approaches the tunnel portal, the alignment would curve eastward and begin to transition to an aerial guideway along the south side of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor that would continue to the northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station.

The proposed southern terminus station would be located underground east of Sepulveda Boulevard between the existing elevated Metro E Line tracks and Pico Boulevard. Tail tracks for vehicle storage would extend underground south of National Boulevard east of Sepulveda Boulevard. The alignment would continue north beneath Bentley Avenue before curving northwest to an underground station at the southeast corner of Santa Monica Boulevard and Sepulveda Boulevard. From the Santa Monica Boulevard Station, the alignment would continue and curve eastward to the Wilshire Boulevard/Metro D Line Station beneath the Metro D Line Westwood/UCLA Station, which is currently under construction as part of the Metro D Line Extension Project. From there, the underground alignment would curve slightly to the northeast and continue beneath Westwood Boulevard before reaching the UCLA Gateway Plaza Station.

Figure 9-1. Alternative 5: Alignment

Source: STCP, 2024; HTA, 2024

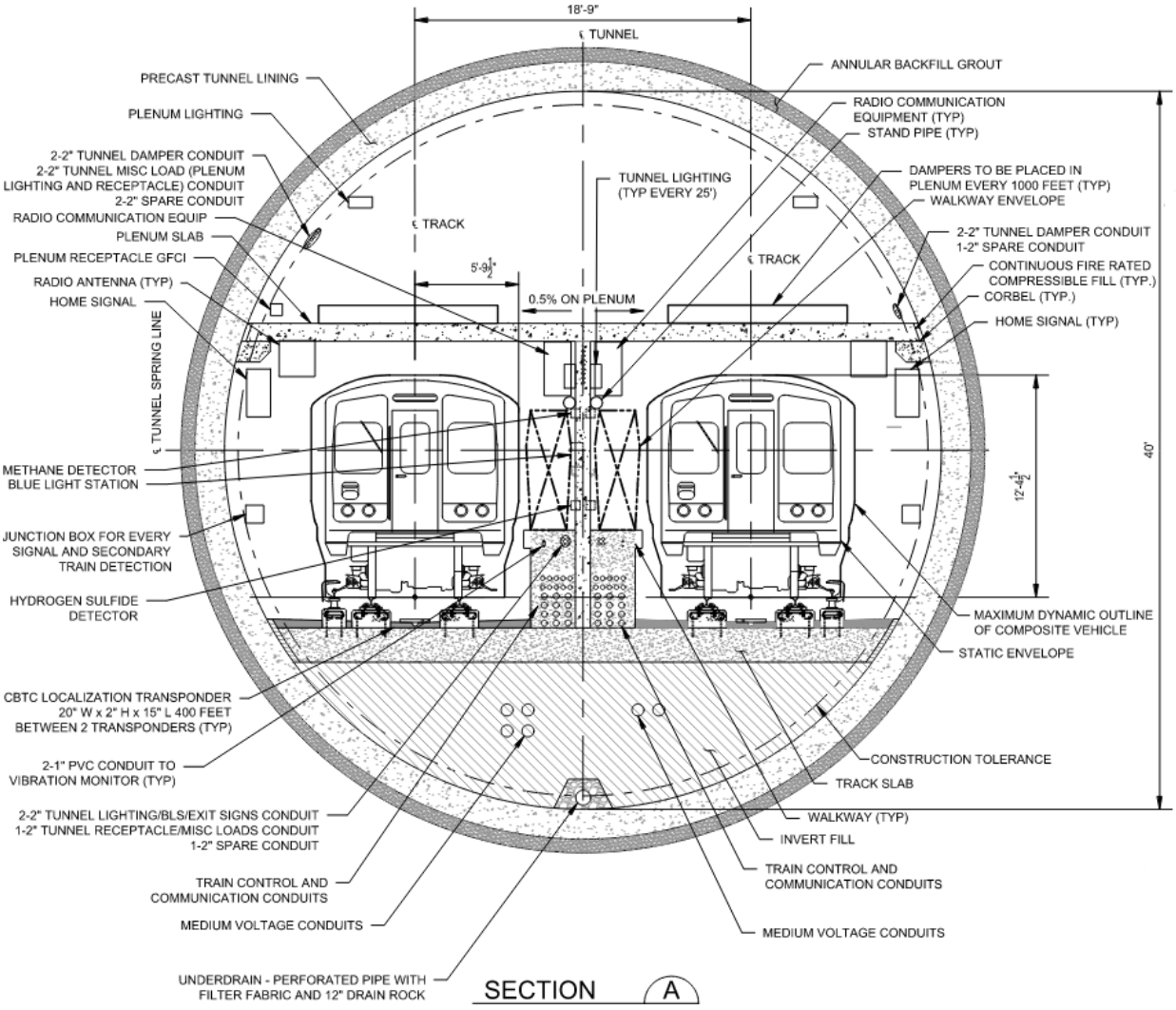
From the UCLA Gateway Plaza Station, the alignment would turn to the northwest beneath the Santa Monica Mountains to the east of Interstate 405 (I-405). South of Mulholland Drive, the alignment would curve to the north, aligning with Saugus Avenue south of Valley Vista Boulevard. The Ventura Boulevard Station would be located under Saugus Avenue between Greenleaf Street and Dickens Street. The alignment would then continue north beneath Sepulveda Boulevard to the Metro G Line Sepulveda Station immediately south of the Metro G Line Busway. After leaving the Metro G Line Sepulveda Station, the alignment would continue beneath Sepulveda Boulevard to reach the Sherman Way Station,

the final underground station along the alignment, immediately south of Sherman Way. From the Sherman Way Station, the alignment would continue north before curving slightly to the northeast to the tunnel portal south of Raymer Street. The alignment would then transition from an underground configuration to an aerial guideway structure after exiting the tunnel portal. East of the tunnel portal, the alignment would transition to a cut-and-cover U-structure segment followed by a trench segment before transitioning to an aerial guideway that would run east along the south side of the LOSSAN rail corridor. Parallel to the LOSSAN rail corridor, the guideway would conflict with the existing Willis Avenue Pedestrian Bridge which would be demolished. The alignment would follow the LOSSAN rail corridor before reaching the proposed northern terminus Van Nuys Metrolink Station located adjacent to the existing Metrolink/Amtrak Station. The tail tracks and yard lead tracks would descend to the proposed at-grade maintenance and storage facility (MSF) east of the proposed northern terminus station. Modifications to the existing pedestrian underpass to the Metrolink platforms to accommodate these tracks would result in reconfiguration of an existing rail spur serving City of Los Angeles Department of Water and Power (LADWP) property.

9.1.1.2 Guideway Characteristics

For underground sections, Alternative 5 would utilize a single-bore tunnel configuration with an outside diameter of approximately 43.5 feet. The tunnel would include two parallel tracks at 18.75-foot spacing in tangent sections separated by a continuous central dividing wall throughout the tunnel. Inner walkways would be constructed adjacent to the two tracks. Inner and outer walkways would be constructed within tunnel sections near the track crossovers. At the crown of tunnel, a dedicated air plenum would be provided by constructing a concrete slab above the railway corridor. The air plenum would allow for ventilation throughout the underground portion of the alignment. Figure 9-2 illustrates these components at a typical cross-section of the underground guideway.

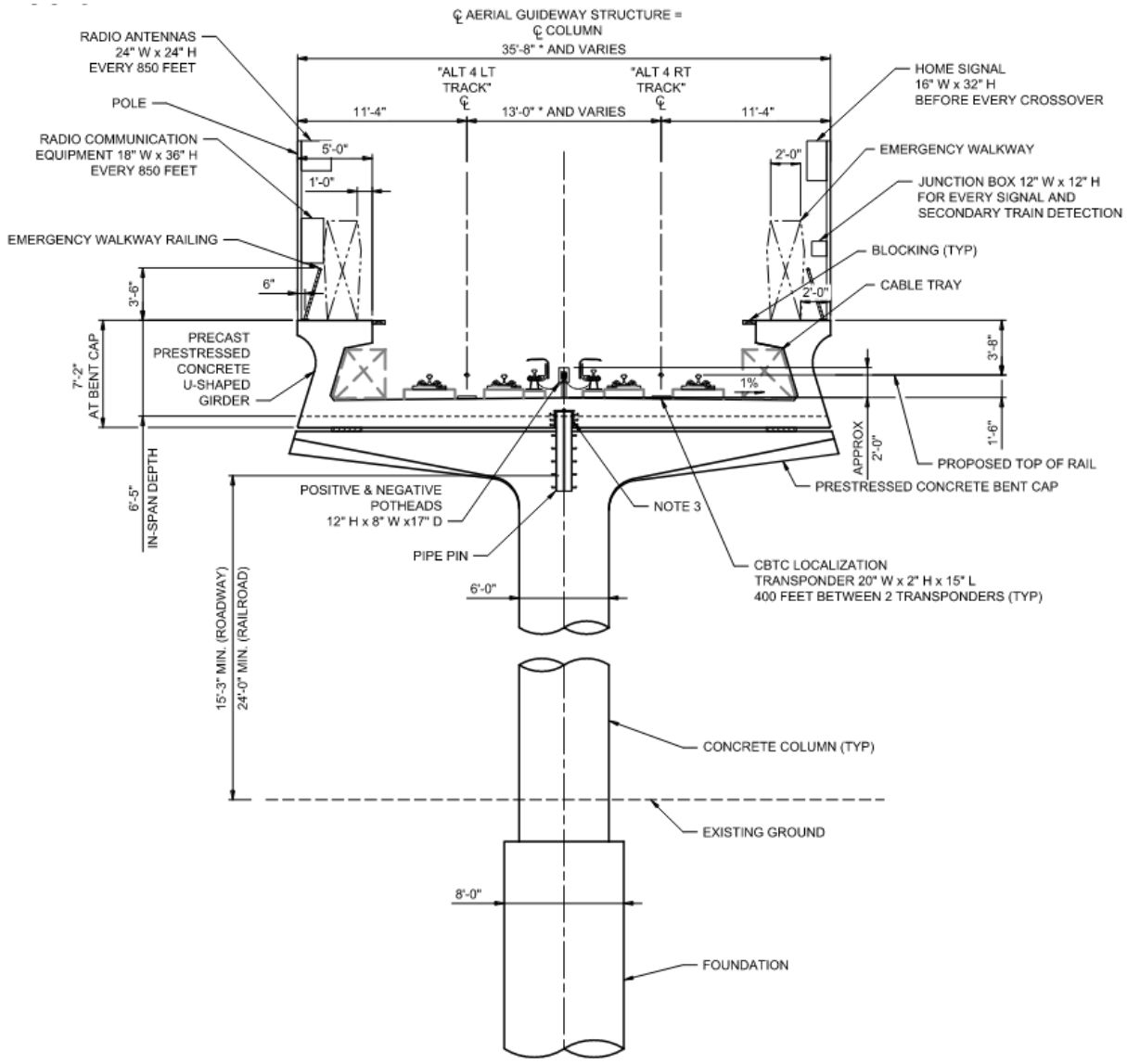
Figure 9-2. Typical Underground Guideway Cross-Section



Source: STCP, 2024

In aerial sections adjacent to Raymer Street and the LOSSAN rail corridor, the guideway would consist of single-column spans. The single-column spans would include a U-shaped concrete girder structure that supports the railway track atop a series of individual columns. The single-column aerial guideway would be approximately 36 feet wide. The track would be constructed on the concrete girders with direct fixation and would maintain a minimum of 13 feet between the two-track centerlines. On the outer side of the tracks, emergency walkways would be constructed with a minimum width of 2 feet. The single-column aerial guideway would be the primary aerial structure throughout the aerial portion of the alignment. Figure 9-3 shows a typical cross-section of the single-column aerial guideway.

Figure 9-3. Typical Aerial Guideway Cross-Section



Source: STCP, 2024

9.1.1.3 Vehicle Technology

Alternative 5 would utilize steel-wheel HRT trains, with automated train operations and planned peak-period headways of 2.5 minutes and off-peak-period headways ranging from 4 to 6 minutes. Each train could consist of three or four cars with open gangways between cars. The HRT vehicle would have a maximum operating speed of 70 miles per hour; actual operating speeds would depend on the design of the guideway and distance between stations. Train cars would be approximately 10 feet wide with three double doors on each side. Each car would be approximately 72 feet long with capacity for 170 passengers. Trains would be powered by a third rail.

9.1.1.4 Stations

Alternative 5 would include seven underground stations and one aerial station with station platforms measuring 280 feet long for both station configurations. The aerial station would be constructed a minimum of 15.25 feet above ground level, supported by rows of dual columns with 8-foot diameters. The southern terminus station would be adjacent to the Metro E Line Expo/Sepulveda Station, and the northern terminus station would be adjacent to the Van Nuys Metrolink/Amtrak Station.

All stations would be side-platform stations where passengers would select and travel up to station platforms depending on their direction of travel. All stations would include 20-foot-wide side platforms separated by 30 feet for side-by-side trains. Each underground station would include an upper and lower concourse level prior to reaching the train platforms. The Van Nuys Metrolink Station would include a mezzanine level prior to reaching the station platforms. Each station would have a minimum of two elevators, two escalators, and one stairway from ground level to the concourse or mezzanine.

Stations would include automatic, bi-parting fixed doors along the edges of station platforms. These platform screen doors would be integrated into the automatic train control system and would not open unless a train is stopped at the platform.

The following information describes each station, with relevant entrance, walkway, and transfer information. Bicycle parking would be provided at each station.

Metro E Line Expo/Sepulveda Station

- This underground station would be located just north of the existing Metro E Line Expo/Sepulveda Station, on the east side of Sepulveda Boulevard.
- A station entrance would be located on the east side of Sepulveda Boulevard north of the Metro E Line.
- A direct internal transfer to the Metro E Line would be provided at street level within the fare paid zone.
- A 126-space parking lot would be located immediately north of the station entrance, east of Sepulveda Boulevard. Passengers would also be able to park at the existing Metro E Line Expo/Sepulveda Station parking facility, which provides 260 parking spaces.

Santa Monica Boulevard Station

- This underground station would be located under the southeast corner of Santa Monica Boulevard and Sepulveda Boulevard.
- The station entrance would be located on the south side of Santa Monica Boulevard between Sepulveda Boulevard and Bentley Avenue.
- No dedicated station parking would be provided at this station.

Wilshire Boulevard/Metro D Line Station

- This underground station would be located beneath the Metro D Line tracks and platform under Gayley Avenue between Wilshire Boulevard and Lindbrook Drive.
- Station entrances would be provided on the northeast corner of Wilshire Boulevard and Gayley Avenue and on the northeast corner of Lindbrook Drive and Gayley Avenue. Passengers would also be able to use the Metro D Line Westwood/UCLA Station entrances to access the station platform.

- A direct internal station transfer to the Metro D Line would be provided at the south end of the station.
- No dedicated station parking would be provided at this station.

UCLA Gateway Plaza Station

- This underground station would be located underneath Gateway Plaza on the University of California, Los Angeles (UCLA) campus.
- Station entrances would be provided on the north side of Gateway Plaza and on the east side of Westwood Boulevard across from Strathmore Place.
- No dedicated station parking would be provided at this station.

Ventura Boulevard/Sepulveda Boulevard Station

- This underground station would be located under Saugus Avenue between Greenleaf Street and Dickens Street.
- A station entrance would be located on the southeast corner of Saugus Avenue and Dickens Street.
- Approximately 92 parking spaces would be supplied at this station west of Sepulveda Boulevard between Dickens Street and the US-101 On-Ramp.

Metro G Line Sepulveda Station

- This underground station would be located under Sepulveda Boulevard immediately south of the Metro G Line Busway.
- A station entrance would be provided on the west side of Sepulveda Boulevard south of the Metro G Line Busway.
- Passengers would be able to park at the existing Metro G Line Sepulveda Station parking facility, which has a capacity of 1,205 parking spaces. Currently, only 260 parking spaces are currently used for transit parking. No new parking would be constructed.

Sherman Way Station

- This underground station would be located below Sepulveda Boulevard between Sherman Way and Gault Street.
- The station entrance would be located near the southwest corner of Sepulveda Boulevard and Sherman Way.
- Approximately 122 parking spaces would be supplied at this station on the west side of Sepulveda Boulevard with vehicle access from Sherman Way.

Van Nuys Metrolink Station

- This aerial station would span Van Nuys Boulevard, just south of the LOSSAN rail corridor.
- The primary station entrance would be located on the east side of Van Nuys Boulevard just south of the LOSSAN rail corridor. A secondary station entrance would be located between Raymer Street and Van Nuys Boulevard.
- An underground pedestrian walkway would connect the station plaza to the existing pedestrian underpass to the Metrolink/Amtrak platform outside the fare paid zone.

- Existing Metrolink Station parking would be reconfigured, maintaining approximately the same number of spaces, but 66 parking spaces would be relocated west of Van Nuys Boulevard. Metrolink parking would not be available to Metro transit riders.

9.1.1.5 Station-to-Station Travel Times

Table 9-1 presents the station-to-station distance and travel times at peak period for Alternative 5. The travel times include both run time and dwell time. Dwell time is 30 seconds for transfer stations and 20 seconds for other stations. Northbound and southbound travel times vary slightly because of grade differentials and operational considerations at end-of-line stations.

Table 9-1. Alternative 5: Station-to-Station Travel Times and Station Dwell Times

From Station	To Station	Distance (miles)	Northbound Station-to-Station Travel Time (seconds)	Southbound Station-to-Station Travel Time (seconds)	Dwell Time (seconds)
Metro E Line Station					*30*
Metro E Line	Santa Monica Boulevard	0.9	89	86	—
Santa Monica Boulevard Station					*20*
Santa Monica Boulevard	Wilshire/Metro D Line	0.9	91	92	—
Wilshire/Metro D Line Station					*30*
Wilshire/Metro D Line	UCLA Gateway Plaza	0.7	75	69	—
UCLA Gateway Plaza Station					*20*
UCLA Gateway Plaza	Ventura Boulevard	6.0	368	359	—
Ventura Boulevard Station					*20*
Ventura Boulevard	Metro G Line	2.0	137	138	—
Metro G Line Station					*30*
Metro G Line	Sherman Way	1.4	113	109	—
Sherman Way Station					*20*
Sherman Way	Van Nuys Metrolink	1.9	166	162	—
Van Nuys Metrolink Station					*30*

Source: STCP, 2024

— = no data

9.1.1.6 Special Trackwork

Alternative 5 would include 10 double crossovers throughout the alignment enabling trains to cross over to the parallel track. Each terminus station would include a double crossover immediately north and south of the station. Except for the Santa Monica Boulevard Station, each station would have a double crossover immediately south of the station. The remaining crossover would be located along the alignment midway between the UCLA Gateway Plaza Station and the Ventura Boulevard Station.

9.1.1.7 Maintenance and Storage Facility

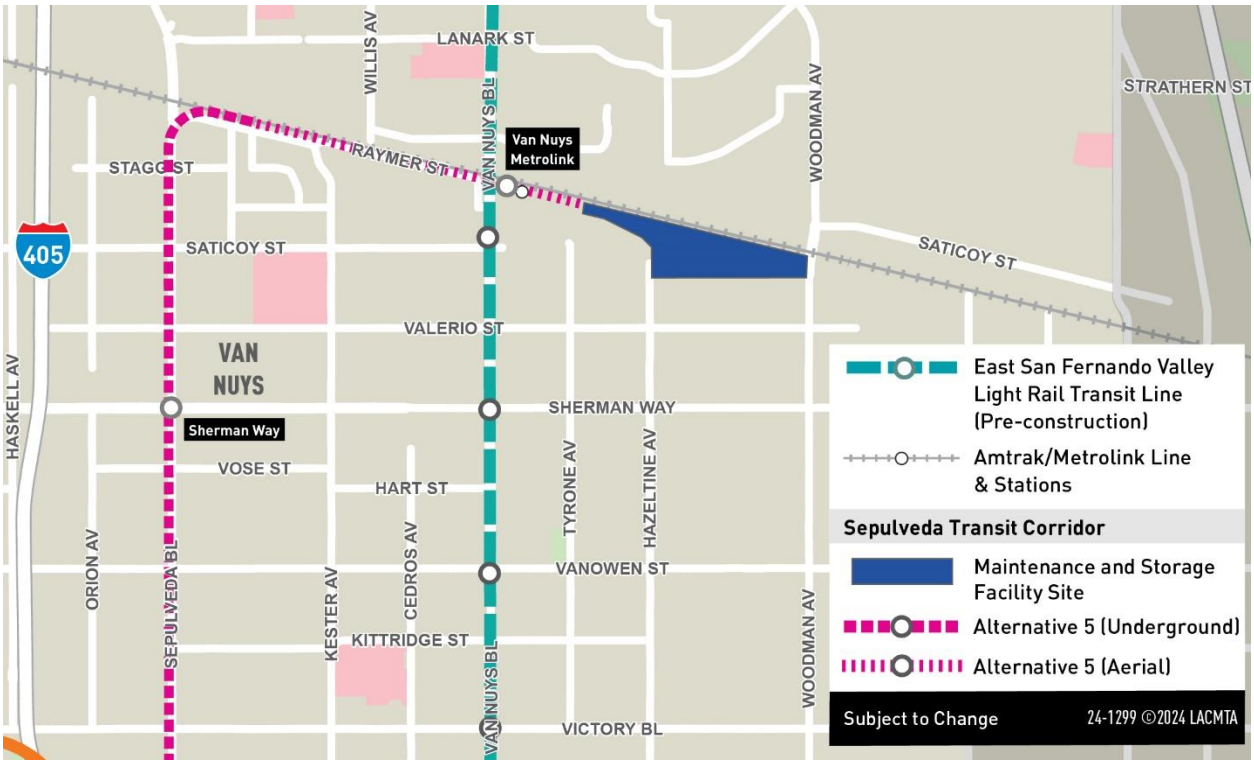
The MSF for Alternative 5 would be located east of the Van Nuys Metrolink Station and would encompass approximately 46 acres. The MSF would be designed to accommodate 184 rail cars and would be bounded by single-family residences to the south, the LOSSAN rail corridor to the north, Woodman Avenue on the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west. Trains would access the site from the fixed guideway's tail tracks at the northwest corner of the site. Trains would then travel southeast to maintenance facilities and storage tracks.

The site would include the following facilities:

- Two entrance gates with guard shacks
- Main shop building
- Maintenance-of-way building
- Storage tracks
- Carwash building
- Cleaning and inspections platforms
- Material storage building
- Hazmat storage locker
- Traction power substation (TPSS) located on the west end of the MSF to serve the mainline
- TPSS located on the east end of the MSF to serve the yard and shops
- Parking area for employees
- Grade separated access roadway (over the HRT tracks at the east end of the facility) and necessary drainage

Figure 9-4 shows the location of the MSF site for Alternative 5.

Figure 9-4. Alternative 5: Maintenance and Storage Facility Site



Source: STCP, 2024; HTA, 2024

9.1.1.8 Traction Power Substations

TPSSs transform and convert high voltage alternating current supplied from power utility feeders into direct current suitable for transit operation. Twelve TPSS facilities would be located along the alignment and would be spaced approximately 0.5 to 2.5 miles apart. All TPSS facilities would be located within the

stations, adjacent to the tunnel through the Santa Monica Mountains, or within the MSF. Table 9-2 lists the TPSS locations for Alternative 5.

Figure 9-5 shows the TPSS locations along the Alternative 5 alignment.

Table 9-2. Alternative 5: Traction Power Substation Locations

TPSS No.	TPSS Location Description	Configuration
1	TPSS 1 would be located east of Sepulveda Boulevard and north of the Metro E Line.	Underground (within station)
2	TPSS 2 would be located south of Santa Monica Boulevard between Sepulveda Boulevard and Bentley Avenue.	Underground (within station)
3	TPSS 3 would be located at the southeast corner of UCLA Gateway Plaza.	Underground (within station)
4	TPSS 4 would be located south of Bellagio Road and west of Stone Canyon Road.	Underground (adjacent to tunnel)
5	TPSS 5 would be located west of Roscomare Road between Donella Circle and Linda Flora Drive.	Underground (adjacent to tunnel)
6	TPSS 6 would be located east of Loom Place between Longbow Drive and Vista Haven Road.	Underground (adjacent to tunnel)
7	TPSS 7 would be located west of Sepulveda Boulevard between the I-405 Northbound On-Ramp and Dickens Street.	Underground (within station)
8	TPSS 8 would be located west of Sepulveda Boulevard between the Metro G Line Busway and Oxnard Street.	Underground (within station)
9	TPSS 9 would be located at the southwest corner of Sepulveda Boulevard and Sherman Way.	Underground (within station)
10	TPSS 10 would be located south of the LOSSAN rail corridor and north of Raymer Street and Kester Avenue.	At-grade
11	TPSS 11 would be located south of the LOSSAN rail corridor and east of the Van Nuys Metrolink Station.	At-grade (within MSF)
12	TPSS 12 would be located south of the LOSSAN rail corridor and east of Hazeltine Avenue.	At-grade (within MSF)

Source: STCP, 2024; HTA, 2024

Note: Sepulveda Transit Corridor Partners (STCP) has stated that Alternative 5 TPSS locations are derived from and assumed to be similar to the Alternative 4 TPSS locations.

Figure 9-5. Alternative 5: Traction Power Substation Locations

Source: STCP, 2024; HTA, 2024

9.1.1.9 Roadway Configuration Changes

Table 9-3 lists the roadway changes necessary to accommodate the guideway of Alternative 5. Figure 9-6 shows the location of the roadway changes within the Sepulveda Transit Corridor Project (Project) Study Area. In addition to the changes made to accommodate the guideway, as listed in Table 9-3, roadways and sidewalks near stations would be reconstructed, resulting in modifications to curb ramps and driveways.

Table 9-3. Alternative 5: Roadway Changes

Location	From	To	Description of Change
Raymer Street	Kester Avenue	Keswick Street	Reconstruction resulting in narrowing of width and removal of parking on the westbound side of the street to accommodate aerial guideway columns.
Cabrito Road	Raymer Street	Marson Street	Closure of Cabrito Road at the LOSSAN rail corridor at-grade crossing. A new segment of Cabrito Road would be constructed from Noble Avenue and Marson Street to provide access to extra space storage from the north.

Source: STCP, 2024; HTA, 2024

Figure 9-6. Alternative 5: Roadway Changes

Source: STCP, 2024; HTA, 2024

9.1.1.10 Ventilation Facilities

For ventilation, a plenum within the crown of the tunnel would provide a separate compartment for air circulation and allow multiple trains to operate between stations. Each underground station would include a fan room with additional ventilation facilities. Alternative 5 would also include a stand-alone ventilation facility at the tunnel portal on the northern end of the tunnel segment, located east of Sepulveda Boulevard and south of Raymer Street. Within this facility, ventilation fan rooms would provide both emergency ventilation, in case of a tunnel fire, and regular ventilation, during non-revenue hours. The facility would also house sump pump rooms to collect water from various sources, including storm water; wash-water (from tunnel cleaning); and water from a fire-fighting incident, system testing, or pipe leaks.

9.1.1.11 Fire/Life Safety – Emergency Egress

Within the tunnel segment, emergency walkways would be provided between the center dividing wall and each track. Sliding doors would be located in the central dividing wall at required intervals to connect the two sides of the railway with a continuous walkway to allow for safe egress to a point of safety (typically at a station) during an emergency. Similarly, the aerial guideway near the LOSSAN rail corridor would include two emergency walkways with safety railing located on the outer side of the tracks. Access to tunnel segments for first responders would be through stations and the portal.

9.1.2 Construction Activities

Temporary construction activities for Alternative 5 would include project work zones at permanent facility locations, construction staging and laydown areas, and construction office areas. Construction of the transit facilities through substantial completion is expected to have a duration of 8¼ years. Early works, such as site preparation, demolition, and utility relocation, could start in advance of construction of the transit facilities.

For the guideway, Alternative 5 would consist of a single-bore tunnel through the Westside, Valley, and Santa Monica Mountains. The tunnel would comprise three separate segments, one running north from the southern terminus to the UCLA Gateway Plaza Station (Westside segment), one running south from the Ventura Boulevard Station to the UCLA Gateway Plaza Station (Santa Monica Mountains segment), and one running north from the Ventura Boulevard Station to the portal near Raymer Street (Valley segment). Tunnel boring machines (TBMs) with approximately 45-foot-diameter cutting faces would be used to construct the tunnel segments underground. For the Westside segment, the TBM would be launched from Staging Area No. 1 in Table 9-4 at Sepulveda Boulevard and National Boulevard. For the Santa Monica Mountains segment, the TBMs would be launched from the Ventura Boulevard Station. Both TBMs would be extracted from the UCLA Gateway Plaza Station Staging Area No. 3 in Table 9-4. For the Valley segment, the TBM would be launched from Staging Area No. 8 as shown in Table 9-4 and extracted from the Ventura Boulevard Station. Figure 9-7 shows the location of construction staging locations along the Alternative 5 alignment.

Table 9-4. Alternative 5: On-Site Construction Staging Locations

No.	Location Description
1	Commercial properties on southeast corner of Sepulveda Boulevard and National Boulevard
2	North side of Wilshire Boulevard between Veteran Avenue and Gayley Avenue
3	UCLA Gateway Plaza
4	Commercial property on southwest corner of Sepulveda Boulevard and Dickens Street
5	West of Sepulveda Boulevard between US-101 and Sherman Oaks Castle Park
6	Lot behind Los Angeles Fire Department Station 88
7	Property on the west side of Sepulveda Boulevard between Sherman Way and Gault Street
8	Industrial property on both sides of Raymer Street, west of Burnet Avenue
9	South of the LOSSAN rail corridor east of Van Nuys Metrolink Station, west of Woodman Avenue

Source: STCP, 2024; HTA, 2024

Figure 9-7. Alternative 5: On-Site Construction Staging Locations

Source: STCP, 2024; HTA, 2024

The distance from the surface to the top of the tunnel for the Westside tunnel would vary from approximately 40 feet to 90 feet depending on the depth needed to construct the underground stations. The depth of the Santa Monica Mountains tunnel segment varies greatly from approximately 470 feet as it passes under the Santa Monica Mountains to 50 feet near UCLA. The depth for the Valley segment would vary from approximately 40 feet near the Ventura Boulevard/Sepulveda Station and north of the Metro G Line Sepulveda Station to 150 feet near Weddington Street. The tunnel segments through the Westside and Valley would be excavated in soft ground while the tunnel through the Santa Monica

Mountains would be excavated primarily in hard ground or rock as geotechnical conditions transition from soft to hard ground near the UCLA Gateway Plaza Station.

Construction work zones would also be co-located with future MSF and station locations. All work zones would comprise the permanent facility footprint with additional temporary construction easements from adjoining properties.

All underground stations would be constructed using a "cut-and-cover" method whereby the underground station structure would be constructed within a trench excavated from the surface with a portion or all being covered by a temporary deck and backfilled during the later stages of station construction. Traffic and pedestrian detours would be necessary during underground station excavation until decking is in place and the appropriate safety measures are taken to resume cross traffic.

In addition to work zones, Alternative 5 would include construction staging and laydown areas at multiple locations along the alignment as well as off-site staging areas. Construction staging areas would provide the necessary space for the following activities:

- Contractors' equipment
- Receiving deliveries
- Testing of soils for minerals or hazards
- Storing materials
- Site offices
- Work zone for excavation
- Other construction activities (including parking and change facilities for workers, location of construction office trailers, storage, staging and delivery of construction materials and permanent plant equipment, and maintenance of construction equipment)

A larger, off-site staging area would be used for temporary storage of excavated material from both tunneling and station cut-and-cover excavation activities. Table 9-4 and Figure 9-7 present the potential construction staging areas along the alignment for Alternative 5. Table 9-5 and Figure 9-8 present candidate sites for off-site staging and laydown areas.

Table 9-5. Alternative 5: Potential Off-Site Construction Staging Locations

No.	Location Description
S1	East of Santa Monica Airport Runway
S2	Ralph's Parking Lot in Westwood Village
N1	West of Sepulveda Basin Sports Complex, south of the Los Angeles River
N2	West of Sepulveda Basin Sports Complex, north of the Los Angeles River
N3	Metro G Line Sepulveda Station Park & Ride Lot
N4	North of Roscoe Boulevard and Hayvenhurst Avenue
N5	LADWP property south of the LOSSAN rail corridor, east of Van Nuys Metrolink Station

Source: STCP, 2024; HTA, 2024

Figure 9-8. Alternative 5: Potential Off-Site Construction Staging Locations

Source: STCP, 2024; HTA, 2024

Construction of the HRT guideway between the Van Nuys Metrolink Station and the MSF would require reconfiguration of an existing rail spur serving LADWP property. The new location of the rail spur would require modification to the existing pedestrian undercrossing at the Van Nuys Metrolink Station.

Alternative 5 would require construction of a concrete casting facility for tunnel lining segments because no existing commercial fabricator capable of producing tunnel lining segments for a large-diameter tunnel exists within a practical distance of the Project Study Area. The site of the MSF would initially be

used for this casting facility. The casting facility would include casting beds and associated casting equipment, storage areas for cement and aggregate, and a field quality control facility, which would need to be constructed on-site. When a more detailed design of the facility is completed, the contractor would obtain all permits and approvals necessary from the City of Los Angeles, the South Coast Air Quality Management District, and other regulatory entities.

As areas of the MSF site begin to become available following completion of pre-casting operations, construction of permanent facilities for the MSF would begin, including construction of surface buildings such as maintenance shops, administrative offices, train control, traction power, and systems facilities. Some of the yard storage track would also be constructed at this time to allow delivery and inspection of passenger vehicles that would be fabricated elsewhere. Additional activities occurring at the MSF during the final phase of construction would include staging of trackwork and welding of guideway rail.

9.2 Existing Conditions

9.2.1 General Characterization of the Resource Study Area

The northern and southern portions of the Resource Study Area (RSA), overview depicted on Figure 10-9, are comprised of highly developed and urbanized neighborhoods with the alignment running along Sepulveda Boulevard in the north and including the UCLA campus in the south. These urbanized areas contain limited biological resources generally restricted to parks and other undeveloped areas that have predominantly non-native landscape vegetation; occasional patches of native vegetation are present, typically as plantings rather than naturally occurring vegetation. Habitat provided under these conditions is primarily suitable for species that can tolerate at least some level of urbanization and are acclimated to human influence including numerous bird species protected under the Migratory Bird Treaty Act (MBTA) and wildlife (e.g., raccoon, striped skunk, Virginia opossum, and coyote).

The Los Angeles River flows west to east through the Alternative 5 RSA in two sections: in the west within the Sepulveda Basin Recreation Area between White Oak Avenue and Balboa Boulevard (Figure 9-16 and Appendix A) and in the east between the Sepulveda Dam spillway and Columbus Avenue (Figure 9-17 and Appendix A). The western and eastern extents of the Los Angeles River within the Alternative 5 RSA are a concrete-lined channel; however, approximately 0.35 mile of the river in the western end of the Basin Recreation Area has natural earth bottom and riparian vegetation that provides suitable habitat for plants and wildlife to grow, thrive and reproduce. The Alternative 5 RSA would traverse the Los Angeles River within the box channel portion as an underground tunnel.

I-405 is a major arterial freeway located west of the Alternative 5 RSA that runs north-south through the Santa Monica Mountains, connecting communities in the San Fernando Valley with the City of Santa Monica and Westside communities in the City of Los Angeles. The RSA intersects with I-405 near Ventura Boulevard as an underground tunnel; the surrounding habitat is urbanized neighborhoods. The freeway serves as a barrier for wildlife movement within the Santa Monica Mountains, as roads in urban areas threaten wildlife by acting as barriers to movement through increased mortality, reduced habitat quality and connectivity, changes in behavior, and restrictions to genetic flow (Riley et al., 2014; Coffin, 2007; Riley et. al, 2006).

The middle portion of the Alternative 5 RSA includes the Santa Monica Mountains which run east-west through the Alternative 5 RSA. This area is less developed with steep slopes covered by remnant native chaparral habitats and non-native grasslands. Native habitat is interspersed with upscale single-family residences along north-south–oriented roadways atop ridge lines and through canyons and valleys. I-405 is a major arterial freeway located west of the Alternative 5 RSA that runs north-south through the

Santa Monica Mountains, connecting communities in the San Fernando Valley with the City of Santa Monica and Westside communities in the City of Los Angeles. The RSA intersects with I-405 near Ventura Boulevard, where the surrounding habitat is urbanized neighborhoods. Portions of the SMMNRA are within the Santa Monica Mountains in the Alternative 5 RSA; the SMMNRA consists of approximately 150,000 acres and provides habitats to more than 1,000 different plant and 500 wildlife species (National Park Conservation Association, 2023). Approximately 34 acres of the Alternative 5 RSA are within the SMMNRA, 2 acres are around Longbow Drive, and 32 acres surround Mulholland Drive; Alternative 5 would be an underground tunnel within the SMMNRA (Figure 9-24).

Figure 10-9. Alternative 5: Resource Study Area Location Map

Source: HTA, 2024

9.2.2 Elevations and Topography

Elevations range within the Alternative 5 RSA from approximately 800 feet above mean sea level (amsl) at the northern end to 1,500 feet amsl in the middle, and approximately 180 feet amsl at the southern end of the Alternative 5 RSA. The general topography of the Alternative 5 RSA includes several, parallel, north-to-south–oriented inland valleys that run through the Santa Monica Mountains. The Santa Monica Mountains are composed of rugged steep mountain terrain with narrow canyons located between two flat urbanized valleys.

9.2.3 Climate

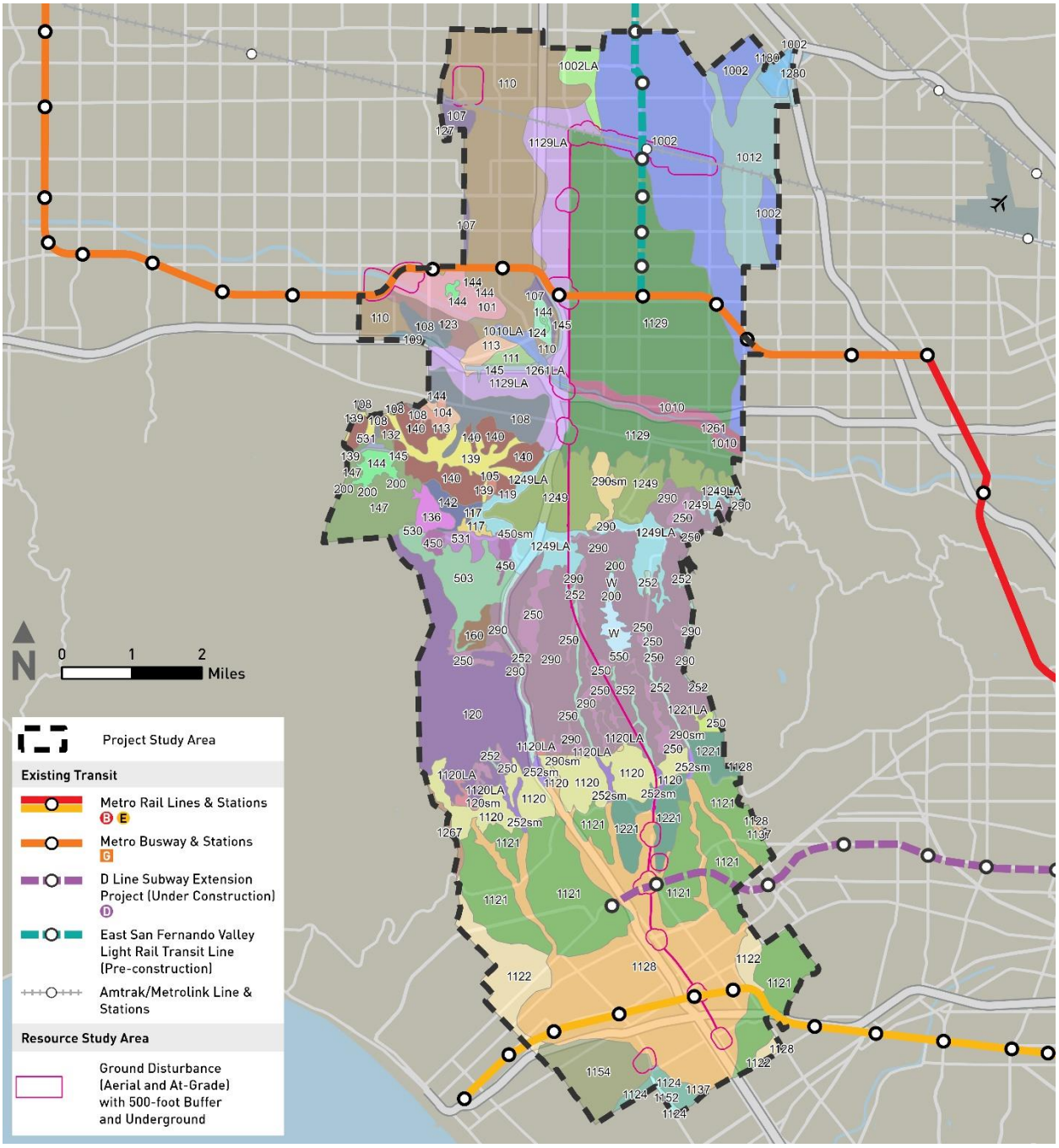
Precipitation in Los Angeles County is derived from frontal low-pressure systems that originate over the Pacific Ocean and generally travel southeast into southern California. Precipitation normally occurs during the cooler months of the year from November through March and is infrequent during the summer months. As throughout southern California, rainfall in the Los Angeles River Watershed and the Ballona Creek Watershed alternates between wet and dry periods. The average annual precipitation in the Alternative 5 RSA is approximately 13 to 18 inches. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the region. The Project Study Area is located within a Mediterranean climate zone, characterized by dry, warm summers and mild, wet winters. The mean temperature range for the months of November through April is 41 degrees Fahrenheit (°F) to 73°F. The mean temperature range for the months of May through October is 58°F to 79°F.

During the 2023 water year (October 2022 through September 2023), approximately 26.46 inches of precipitation was recorded at LAX approximately 5.5 miles south of the Alternative 5 RSA; 88 percent of the precipitation occurred between November and March. Compared to the 30-year average for this location, the 2023 water year was 206 percent above normal (NOAA, 2023), indicating the 2023 biological and wetlands and waters surveys were conducted during an above-average rainfall season.

9.2.4 Soils

The RSA comprises several soil types that serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. Soil analysis was included in the Aquatic Resources Delineation (Appendix A) to evaluate for presence or absence of hydric soils that would form under anerobic conditions, such as those that occur in wetlands. An in-depth detailed analysis of subsurface components including soils is presented in the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* (Metro, 2025a). According to the U.S. Department of Agriculture, Natural Resources Conservation Service Soils Report for Los Angeles County, California, part of the Alternative 5 RSA falls in the Los Angeles County, California, Southeastern soil survey area, as well as the West San Fernando Valley soil survey area and SMMNRA soil survey area (USDA-NRCS, 2023a, 2023b). Soil in the northern portion of the alignment are coarse-loamy-mixed alluvial fans and river valleys; soils in the middle portion of the alignment are fine-loamy-mixed hillslope and backslope; soils in the southern portion of the alignment are mixed spolic dunes and fan remnants, Soil types in these soil survey areas are shown on Figure 9-9 with the figure legend on Figure 9-10.

Figure 9-9. Alternative 5: Soils Map



Source: USDA-NRCS, 2023a

Figure 9-10. Alternative 5: Soils Map Legend

Source: USDA-NRCS, 2023a

9.2.5 Biological Resources within the Resource Study Area

This section describes biological resources known or with potential to occur within the Alternative 5 RSA associated with the Alternative 5. The search area for biological resources with potential to occur was defined as all U.S. Geological Survey (USGS) 7.5-minute quadrangles that co-occur with the Alternative 5 RSA, and adjacent quadrangles when the Alternative 5 RSA was within 2 miles of the boundary. For Alternative 5, database searches were conducted within seven quads: Beverly Hills, Van Nuys, and Canoga Park where the Alternative 5 RSA is located and Topanga, Oat Mountain, San Fernando, and Venice based on the Alternative 5 RSA's proximity to quadrangle boundary.

Wildlife, vegetation communities, plant species, and jurisdictional aquatic features within this area are described below.

9.2.5.1 Wildlife

Wildlife expected in the urbanized areas of the Alternative 5 RSA such as the San Fernando Valley to the north and the City of Los Angeles to the south, are mostly regionally common species adapted to human disturbances. These common species include birds (most of which are protected by the MBTA), reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, and bats), and larger mammals such as coyotes.

One of the primary indicators of wildlife distribution within the Alternative 5 RSA is the location of permanent and ephemeral water sources. Overall, there are few water sources within the Alternative 5 RSA, thereby limiting the diversity of species that occur within the Alternative 5 RSA. Water is present in the Los Angeles River as earthen, vegetated segment within the Sepulveda Basin Recreation Area and as a concrete-lined drainage elsewhere. Adjacent to the Alternative 5 RSA, additional water sources in the Sepulveda Basin are Haskell, Woodley, and Bull Creeks and human-made lakes including Lake Balboa, Wildlife Lake, and several smaller ponds. Water is also less than 1 mile east of the Alternative 5 RSA in an upper and lower reservoir at the LADWP Stone Canyon Reservoir. These water bodies provide foraging, breeding, migrating, and wintering habitat for a variety of wildlife species such as amphibians, birds, bats, and others.

The middle portion of the Alternative 5 RSA coincides with the Santa Monica Mountains, which has greater wildlife diversity than the developed urban areas of the Alternative 5 RSA. Native habitat present in larger tracts of undeveloped land that can provide suitable conditions for additional local, native species compared to urban environments, as well as potential for less common local, native species to exist. Approximately 450 wildlife species occur across the Santa Monica Mountains (NPS, 2019a), although not all species are expected to occur within the Alternative 5 RSA. The Santa Monica Mountains provide important core habitat for wildlife species to reproduce and connect to other open space areas essential for wildlife dispersal. Additionally, avian species migrate into the Santa Monica Mountains during the summer for breeding, and during the fall to overwinter. A list of wildlife species detected during the spring 2023 field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general wildlife observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Special-Status Wildlife Species

Of the 66 special-status wildlife species identified with potential to occur in the Project Study Area, 25 were identified as having potential to occur within the Alternative 5 RSA based on database searches of California Natural Diversity Database (CNDDB), Information for Planning and Consultation (IPaC),

iNaturalist and eBird (CDFW, 2023a; USFWS, 2024a; iNaturalist, 2024; eBird,2024). These species are listed in Table 9-6 with an assessment of their potential to occur within the Alternative 5 RSA.

Twenty-four of the wildlife species were concluded to be known or have potential to occur within the Alternative 5 RSA (Table 9-6); the remaining one was determined to have no potential to occur and is not discussed further for Alternative 5. The six species with low potential to occur are considered unlikely to be detected within the Alternative 5 RSA or impacted by Alternative 5 due to the lack of known recent occurrences and suitable habitat within the Alternative 5 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 9-6. Within Table 9-6, rows discussing species that were determined to be present or to have a high potential to occur within the RSA are highlighted blue.

Table 9-6. Alternative 5: Special-Status Wildlife Species Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC	Occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Is a dietary generalist but often prefers to forage in grasslands and shrublands with abundant milkweeds, wild buckwheat, dusty maidens, lupines, medics and sages.	**Present**. Suitable habitat and one recent 2023 observation occur within the southern portion of the Alternative 5 RSA. Additionally, observations from 2023 are present within 0.5 mile of the Alternative 5 RSA in the northern portions (iNaturalist, 2024a) and several historical observations occur within 1 mile of the Alternative 5 RSA from the mid-1900s (CDFW, 2023a).
Danaus plexippus	Monarch	FC	Two subpopulations within the United States; within California, monarchs are considered *Danaus plexippus* pop 1, California overwintering population (CDFW, 2023a). Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress; occasionally western sycamore and coast live oak) with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico; small aggregations also observed inland in Inyo and Kern Counties. Typically within 1.5 miles of the Pacific Ocean.	**Low**. Suitable habitat such as eucalyptus tree groves occur within the Alternative 5 RSA; however, the species normally overwinters in dense groves along the coastal plain near the Pacific Ocean. There are no known overwintering locations within the Alternative 5 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Fish				
Catostomus santaanae	Santa Ana sucker	FT	Endemic to Southern California and only found within the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. This species was once historically present throughout the Los Angeles and Santa Ana basins in southern California but is now restricted to three geographically separate populations. Specifically, within the Los Angeles River Watershed, known populations occur at Big Tujunga Creek in the Hansen Reach, two tributaries in the Hansen Reach, and one tributary in either the Big Tujunga Reach or Los Angeles Reach (potentially including but not limited to Fall Creek, Mill Creek, Arroyo Seco Creek, and Bell Creek) (USFWS, 2017).	**Low.** The Alternative 5 RSA falls within the geographic range for Santa Ana sucker and suitable habitat in the form of the Los Angeles River is present. However, the portion of this body of water that occurs within the Alternative 5 RSA demonstrates common habitat degradation symptoms characteristic of urban areas, including degraded water quality and hydrological modifications. The majority of the river within the Alternative 5 RSA is a concrete-lined channelized river and therefore does not provide the habitat characteristics preferred by this species (i.e., substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of algae) (USFWS, 2010). The combination of limited known population extent, poor habitat quality, and presence of movement barriers within the Alternative 5 RSA, greatly limit potential for this species to occur.
Gila orcuttii	Arroyo chub	SSC	Prefers slow-moving sections of permanent, small to moderate-sized streams with sand or mud substrate with more than half of the habitat as runs and pools ~10 cm deep and reaches of permanent water more than 2 km long.	**Low**. Suitable habitat is present in the Alternative 5 RSA in the soft bottom portion of the Los Angeles River within the Sepulveda Basin. In 1993, arroyo chub at this location were reported as present but scarce (Swift et al., 1993). However, several rounds of recent sampling within the Basin in the Los Angeles River and Bull Creek (2012-2014, 2016, 2019) found no arroyo chub (Drill et al., 2023, O'Brien and Barabe, 2022). The current distribution appears to be upstream, at headwater sections of streams; this species may be extirpated from the area.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Reptiles				
Actinemys pallida	Southwestern pond turtle	FP/SSC	Found in marshes, rivers, streams, ponds, and similar water sources, usually with aquatic vegetation.	**Present.** Suitable habitat within the Alternative 5 RSA is small and limited in size. Recent observations from 2018 are present within the Alternative 5 RSA on UCLA's campus and 0.72 mile east of the Alternative 5 RSA in the human-made stream in the Mildred E. Mathias Botanical Garden on UCLA's campus (iNaturalist, 2024b).
Anniella stebbinsi	Southern California legless lizard	SSC	Habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. May occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Lives mostly underground, burrowing in loose sandy soil.	**High.** Suitable habitat within the Alternative 5 RSA is of marginal quality. Recent observations include a 2024 detection located 0.75 mile south of the southern terminus and a 2016 observation approximately 4 miles south of the Alternative 5 RSA in Kenneth Hahn State Recreation Area (iNaturalist, 2024c).
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC	A variety of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	**Present**. Suitable habitat is present and recent observations within the Alternative 5 RSA include a 2016 observation in the south (located approximately 400 feet south of Wilshire Boulevard) and a 2018 centrally located observation in Sherman Oaks (located approximately 0.25 mile east of I-405) (iNaturalist, 2024d).
Phrynosoma blainvillii	Coast horned lizard	SSC	Occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation throughout the central and Southern California coast. Ants are the main food source but also spiders, beetles, and termites. Forages on the ground in open areas, usually between shrubs and often near ant nests.	**Present**. Suitable habitat is present and recent observations within the Alternative 5 RSA include a 2018 observation from UCLA's campus and a 2022 observation west of Lower Stone Canyon Reservoir (iNaturalist, 2024e).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Thamnophis hammondii	Two-striped garter snake	SSC	Ranges from near Salinas in Monterey County south along the coast, mostly west of the Southern Coast Ranges, to southern California where it ranges east through the Transverse Ranges and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather.	**Moderate.** Suitable habitat is present within the Alternative 5 RSA. There are recent sightings from 2017 and 2020 with obscured locations within 2 miles of the Alternative 5 RSA (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence with an obscured location approximately 3 miles west of the Alternative 5 RSA (CDFW, 2023a).
Birds				
Agelaius tricolor	Tricolored blackbird	ST/SSC	Historically breeds in freshwater marshes with cattails and other emergent vegetation; increasingly breeds in agricultural fields when traditional wetlands are not present. Forages in wetlands, cultivated fields, grasslands, and at dairies and feedlots.	**High.** Suitable breeding habitat is not present within the Alternative 5 RSA; suitable foraging habitat is present adjacent to the Alternative 5 RSA within the Sepulveda Basin. Individuals have been recorded as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 5 RSA (iNaturalist, 2024g).
Aquila chrysaetos	Golden eagle	CFP	Nests on cliff ledges and trees on steep slopes. Hunting grounds include nearby grasslands, sage scrub, or broken chaparral. Require very large territories.	**Low**. Suitable nesting habitat is not present in the Alternative 5 RSA. However, this species has potential to fly over or forage locally while in transit to preferred habitat and/or during migration in the isolated grasslands or sparsely vegetated hillsides within the Alternative 5 RSA. There are no historical records of this species within the vicinity (iNaturalist, 2024y; CDFW, 2023a).
Athene cunicularia	Burrowing owl	SC, SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows.	**High**. Isolated patches of suitable habitat are present within the Alternative 5 RSA. This species has been recently observed within 0.10 mile of the northern portion (2016) and 0.50 mile of the southern portion (2021) of the Alternative 5 RSA (iNaturalist, 2024z); observations were documented during the non-breeding season.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Buteo swainsoni	Swainson's hawk	ST	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**High**. Suitable habitat is present within the Alternative 5 RSA; suitable breeding habitat is not present. The species may transit through the Alternative 5 RSA during migration; migrating individuals have been observed within 0.5 mile of the northern and central portions of the Alternative 5 RSA (iNaturalist, 2024aa; eBird, 2024d).
Circus hudsonius	Northern harrier	SSC	Breeds predominantly in wetland habitats but will also use upland habitats. Prefers grasslands and agricultural fields during migration and in winter. The species occurs year-round in Los Angeles County.	**High**. Suitable migration habitat is present within the Alternative 5 RSA; suitable breeding habitat is not present. The species has potential to transit through the Alternative 5 RSA during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed 0.25 mile west of the Alternative 5 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).
Contopus cooperi	Olive-sided flycatcher	SSC	Breeds in coniferous forests throughout California from sea level to high mountain elevations.	**High.** Suitable migration habitat is present within the Alternative 5 RSA; breeding habitat is not present. This species can briefly use areas in the Alternative 5 RSA as stopover habitat during migration. Multiple individuals have been observed within 0.50 mile of the Alternative 5 RSA between 2012 and 2021 (iNaturalist, 2024i; eBird, 2024f).
Haliaeetus leucocephalus	Bald eagle	SE/CFP	Nests in old growth trees near the coast or other bodies of water where fish or other prey sources are available.	**High**. No suitable breeding habitat is present, although potential to fly over the Alternative 5 RSA exists. This species is known to occur adjacent to the Alternative 5 RSA, with individuals observed within 0.30 mile of the Alternative 5 RSA in 2021 and 2023 (eBird, 2024g). The closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).
Lanius ludovicianus	Loggerhead shrike	SSC	Uncommon year-round resident of southern California. Found in grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for concealing and protecting nests.	**High.** Suitable habitat is present within the Alternative 5 RSA. This species is known to occur nearby, with 2022 observations in Sepulveda Basin Recreation Area located 0.25 mile of the Alternative 5 RSA (eBird, 2024h).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Polioptila californica	Coastal California gnatcatcher	FT/SSC	Prefers Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). Generally avoids steep slopes above 25% and dense, tall vegetation.	**Low**. While the Alternative 5 RSA is located within the species range, suitable breeding habitat is generally absent. Low quality chaparral habitat is present in small patches in the Alternative 5 RSA and may be used for dispersal. There are species records primarily south of the Alternative 5 RSA (Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve [iNaturalist, 2024j]), but the species is a short distance disperser and, given the lack of suitable habitat north of the Alternative 5 RSA, individuals are unlikely to occur within the Alternative 5 RSA. Furthermore, the species appears to be rare within the Santa Monica Mountains with few recent records, all located over 5 miles away (CDFW, 2023a; iNaturalist, 2024j; eBird, 2024i).
Pyrocephalus obscurus	Vermilion flycatcher	SSC	Inhabits a variety of habitats associated with open country and stream systems including, deserts, farmlands, scrublands, parks, and cemeteries.	**Present.** Suitable habitat is present within the Alternative 5 RSA and a 2019 observation along the Los Angeles River is within the RSA in the northwestern part of the Sepulveda Basin. Individuals have also been observed within 0.10 mile as recently as 2023 in the north at Woodley Park in the Sepulveda Basin Recreation Area and 2024 in the south at Los Angeles National Cemetery (eBird, 2024j).
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Migrate into California in late March/early April and depart for their winter grounds in September. Nest in low, dense riparian thickets along water or along intermittent streams. Forages in riparian and adjacent shrubland in the nesting season.	**High**. Occupied nesting and foraging habitat are present adjacent to the Alternative 5 RSA in riparian habitat along the Los Angeles River and the connecting Bull Creek within the Sepulveda Basin Wildlife Reserve (eBird, 2024k). Several recent observations (2004, 2015, 2018 and 2020) are within 0.5 mile of RSA (CDFW, 2023a; eBird, 2024k).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Mammals				
Euderma maculatum	Spotted bat	SSC/WBWG – High Priority	Occurs in foothills, mountains, grasslands, and deserts in Southern California. Requires large, isolated cliffs for roosting (Luce and Keinath 2007). Distribution is patchy, likely due to roosting habitat requirements.	**No Potential**. No suitable habitat is present in the Alternative 5 RSA.
Eumops perotis californicus	Western mastiff bat	SSC/WBWG – High Priority	Open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**Low**. Suitable habitat is present in the Alternative 5 RSA. One recent observation from 2021 is located approximately 4 miles east of the Alternative 5 RSA (iNaturalist, 2024l) and two historical records (1921 and 1925) without precise locations exist within approximately 2 miles of the Alternative 5 RSA (CDFW, 2023a).
Lasionycteris noctivagans	Silver-haired bat	WBWG – Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Present**. Suitable foraging and roosting habitat are present in the Alternative 5 RSA. Two observations from 1985 are within or adjacent to the Alternative 5 RSA (CDFW, 2023a).
Lasiurus frantzii	Western red bat	SSC/WBWG – High Priority	Generally associated with stands of riparian habitat consisting of mature sycamores and cottonwoods. Forages over grasslands, shrublands, open woodlands, forests, croplands, and occasionally urban settings. Roosts primarily in trees.	**Low**. Suitable habitat is present in the Alternative 5 RSA. One recent observation from 2019 was made 7 miles east of the Alternative 5 RSA (iNaturalist, 2024m) and a second from 2007 was made approximately 10 miles west of the Alternative 5 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Lasiurus cinereus	Hoary bat	WBWG – Medium Priority	Most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. Prefers open habitats or habitat mosaics; requires water. Spends winter months in warmer habitats such as Southern California, Mexico, and Central America while summer is typically spent in the northern portions of California and north into Canada (Bolster, 1998). Roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat with large mature trees.	**Present.** Portions of the Alternative 5 RSA provide suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. One recent (2022) observation in the Santa Monica Mountains near Sherman Oaks (iNaturalist, 2024n) is located within the Alternative 5 RSA.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Sparsely vegetated areas with alluvial deposits of sandy soils.	**Low**. Suitable habitat is present in the Alternative 5 RSA; however, the species has only been found historically in the San Fernando Valley which is now highly urbanized. One historical observation from 1903 of a collected male specimen was located approximately 2.5 miles east of the Alternative 5 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 5 RSA
Puma concolor	Mountain lion	SC	Generally found throughout California in temperate coniferous/deciduous forest, coastal chaparral, foothills and mountains occurs. Often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Within the Santa Monica Mountains, mule deer make up the bulk of mountain lions' diet (87% of 700 kills analyzed by NPS), although smaller prey can supplement when opportunity arises, preferentially coyotes then raccoons (NPS, 2023).	**Present.** High-quality habitat is present within the Alternative 5 RSA, specifically in the Santa Monica Mountains. West of I-405 and outside of the RSA, an estimated population of 10 to 15 adult individuals has been well documented by the National Park Service (NPS, 2023). Several GPS-collared mountain lions have been tracked in the Sepulveda Pass, which is less than 0.50 mile west of the Alternative 5 RSA. Lion movement is hindered by I-405 and mortality has been documented on the freeway (NPS, 2024b) including as recently as July 2024 on northbound I-405 near The Getty Museum (Darling, 2024). Two lions are known to have recently crossed west to east across I-405 successfully and were present within the Alternative 5 RSA: P-22 who was residing in Griffith Park until his death, and P-61, who successfully crossed I-405 in the Sepulveda Pass area in July 2019 and roamed as far east as Benedict Canyon (NPS, 2019b) but was struck and killed while attempting to cross back two months later (NPS, 2022). An additional uncollared male lion has been photographed east of I-405 (NPS, 2019b).

Source: HTA, 2024

[a]Special-status wildlife species identified during reviews of the California Natural Diversity Database (CNDDB) (CDFW, 2023a), IPaC (USFWS, 2024a), eBird, and iNaturalist for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Oat Mountain, San Fernando, and Venice quadrangles.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened

State Status Designations:
CFP = CDFW Fully Protected
SC = State Candidate Species for Listing
SE = State Endangered
SSC = Species of Special Concern designated by CDFW ST – State Threatened

Western Bat Working Group (WBWG) Priority Levels:

WBWG-High = Designated by the WBWG as High Priority — species that are imperiled or are at high risk of imperilment.

WBWG-Medium = Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, eBird, iNaturalist, or another database as occurring within the Alternative 5 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 5 RSA; however, no records occur directly within the Alternative 5 RSA. Species has been detected within 1 mile of the Alternative 5 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 5 RSA is of marginal quality. No records occur within RSA, but the species has been documented over 1 mile from the Alternative 5 RSA.

Low = Suitable habitat within the Alternative 5 RSA is of low quality. There are no known recent within or near the Alternative 5 RSA.

No Potential = Suitable habitat is not present for the species.

Most special-status wildlife species listed in Table 9-6 have no potential to occur within the Alternative 5 RSA due to a lack of suitable habitat. This is mainly related to species that occur in very specific habitat types (such as coastal marshes, sand dunes, vernal pools, etc.) which are not present in the Alternative 5 RSA. Species with no potential to occur due to a lack of suitable habitat within the Alternative 5 RSA are not discussed further. Species with low potential to occur were considered, but ultimately dismissed due to the lack of suitable habitat within the Alternative 5 RSA and lack of known recent occurrences, indicating they are unlikely to be detected within the Alternative 5 RSA or impacted by Alternative 5. Species with a moderate or high potential to occur, or species that are considered present are discussed in further detail below.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate species that is known to occur within Alternative 5 RSA. This species of bumble bee occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Crotch's bumble bee is found in a wide variety of natural and disturbed habitat types; they are dietary generalists and are often found foraging in grasslands and shrublands on a wide variety of plant species with strong preferences for native sage species (*Salvia* spp.), milkweed (*Asclepias* spp.), and species within the pea family (*Fababcea*) including lupines, vetches, and deerweed. On June 12, 2019, the California Fish and Game Commission voted to add Crotch's bumble bee as a Candidate Endangered species under the California Endangered Species Act (CESA) (Hatfield and Jepsen, 2021). Suitable habitat and one recent 2023 observation occur within the southern portion of the Alternative 5 RSA. Additionally, observations from 2023 are present within 0.5 mile of the Alternative 5 RSA in the northern portions (iNaturalist, 2024a) and several historical observations occur within 1 mile of the Alternative 5 RSA from the mid-1900s (CDFW, 2023a).

Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys pallida*) is listed as a CDFW SSC and is known to occur within the Alternative 5 RSA. In October 2023, this species was also proposed for listing as Federally Threatened by the USFWS. While proposed species are not protected from take prohibitions under ESA until the rule to list is finalized, consultation with USFWS is required under Section 7 if actions will risk the continued existence of a proposed species. As of 2014, western pond turtle (*Actinemys marmorata*) was recognized as two distinct species: northwestern (which remained *A. marmorata*) and southwestern pond turtle (*A. pallida*) based on geographic range. The range of the southwestern pond turtle extends from central and southern California south into Baja California, Mexico. This includes areas of the central Coast Range from near northern Monterey County, California, portions of the Transverse Range into the Mojave River watershed, and areas south into Baja California, Mexico (50 CFR Part 17; Federal Register / Vol. 88, No. 190 / Tuesday, October 3, 2023 / Proposed Rules). This species occurs in ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation, basking sites and suitable upland habitat for egg-laying. The southwestern pond turtle's population is in decline due to disease, habitat destruction and alteration, and the introduction of predators such as the American bullfrog (*Lithobates catesbeianus*) and striped bass (*Morone saxatilis*) (USFWS, 2024c). Suitable habitat for the species occurs within and adjacent to the Alternative 5 RSA. Records for either *A. marmorata* or *A. pallida* were included in database searches as records of the former would be misidentifications of the latter based on geographic range for each species. The species has been observed in 2018 in ponds or other aquatic habitat found within UCLA's campus within and adjacent to the Alternative 5 RSA at the UCLA Mildred E. Mathias Botanical Garden (0.72 mile east of the RSA) (iNaturalist, 2024b).

Southern California Legless Lizard

The southern California legless lizard (*Anniella stebbinsi*) is a CDFW SSC and has a moderate potential to occur within the Alternative 5 RSA. It is a fossorial lizard potentially present in suitable habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. The Southern California legless lizard may occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Marginally suitable habitat for the species occurs along the Sepulveda Pass within the Alternative 5 RSA, where a mixture of chaparral and coastal scrub habitat types were observed during the field survey. Recent observations include a 2024 detection located 0.75 mile south of the southern terminus and a 2016 observation approximately 4 miles south of the Alternative 5 RSA in Kenneth Hahn State Recreation Area (iNaturalist, 2024c).

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFW SSC and is known to occur within the Alternative 5 RSA. This subspecies occurs in Southern California and as far south as Baja California and is observed in a variety of habitats including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats. Suitable habitat including chaparral and coastal sage scrub is present within the Alternative 5 RSA and recent observations from within the Alternative 5 RSA include a 2016 observation located approximately 400 feet south of Wilshire Boulevard (iNaturalist, 2024d) and a 2018 observation from Sherman Oaks (located approximately 0.25 mile east of I-405) (iNaturalist, 2024d).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvilli*) is a CDFW SSC and is known to occur within the Alternative 5 RSA. This species occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation. It occurs throughout the central and southern California coast. The coast horned lizard's main food source consists of ants but also includes spiders, beetles, and termites. It forages on the ground in open areas, usually between shrubs and often near ant nests. Suitable habitat for the species occurs in the Santa Monica Mountains specifically in the Sepulveda Pass in the form of chaparral and coastal sage scrub. The CNDDB occurrences are historical 1916 and 1947 (CDFW, 2023a); however, there have been several recent observations of the species within (2018 and 2022) and adjacent to the Alternative 5 RSA in the Sepulveda Pass (observed in the years 2014 through 2023) (iNaturalist, 2024e); therefore, the species is assumed extant in the Alternative 5 RSA.

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW SSC and has moderate potential to occur within the Alternative 5 RSA. The two-striped garter snake ranges from near Salinas in Monterey County south along the coast mostly west of the south Coast Ranges, to southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather. The loss of wetland habitats has contributed to a reduction in the range of this snake (California Herps, 2023) and declines in population of the species have been attributed to human impacts, including urban development and flood control in the southern part of its range, as well as habitat modification by livestock, drought, loss of native prey, and predation by invasive species in its northern range (Jennings and Hayes, 1994). Suitable habitat for the species occurs within the Alternative 5 RSA and recent sightings of the species to the west of the Alternative 5 RSA near Will Rogers State Historic Park and to the east in Beverly Glen near Stone Canyon Reservoir have been recorded (iNaturalist, 2024f). Also, there is a 2010 CNDDB occurrence of two-striped garter snake within 1 mile of I-405, west of the Alternative 5 RSA, in a flood control debris basin (CDFW, 2023a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as state threatened and CDFW SSC that has high potential to occur during flyovers within the Alternative 5 RSA. A resident songbird of California that shares its limited range with Washington, Oregon, and a short distance into Baja California, Mexico. Populations are in decline mainly due to the loss of preferred breeding habitats consisting of native wetlands and marshes where it can form nesting colonies that include thousands of breeding individuals. It feeds on available insects, snails, grains, and a variety of other locally abundant resources. Suitable foraging habitat is present within the Alternative 5 RSA; however, breeding habitat is not. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve within 0.50 mile of the Alternative 5 RSA (iNaturalist, 2024g; eBird, 2024b). This species also has potential to forage in the grassland parcels to the northwest of the Alternative 5 RSA.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is CDFW SSC that has high potential to occur within the Alternative 5 RSA. In addition, this species was petitioned for protection as threatened or endangered under CESA in March 2024 (CBD et al., 2024); in August 2024, CDFW's evaluation report determined that there was sufficient evidence to indicate listing of burrowing owl may be warranted (CDFW, 2024e). On October 10, 2024, the Fish and Game Commission approved the petition and the western burrowing owl became a candidate for listing as threatened under CESA (CDFW, 2024f). As a candidate species, burrowing owl will receive protections under CESA while a full status review occurs over a 12- to 18-month-long review period. It is a semi-colonial owl found in open grasslands, prairies, farmlands, deserts, scrubland, and other disturbed areas with low-growing vegetation. In coastal southern California, burrowing owl is found mainly in grassland and open scrub from the coast to the foothills and is strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows. It has been nearly extirpated as a breeding species from coastal San Luis Obispo, Santa Barbara, Ventura, Los Angeles, and Orange counties (Shuford and Gardali, 2008). Isolated areas of suitable habitat are present within the Alternative 5 RSA. Burrowing owl has been recorded within 0.10 mile west of the Alternative 5 RSA in the northern portion (2016) and 0.50 mile of the southern portion (2021) of the Alternative 5 RSA (iNaturalist, 2024z); however, observations were from the late fall and winter season, outside of the breeding season.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state threatened and has high potential to occur as a migrant within the Alternative 5 RSA. Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Swainson's hawks breed in stands with few trees within grasslands, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands in the Central Valley. This species requires suitable foraging areas adjacent to breeding habitat which includes grasslands, grain or alfalfa fields, or livestock pastures that support rodent populations. Along with rodents, they feed on amphibians, reptiles, and large arthropods. Suitable breeding habitat for this species is not present within the Alternative 5 RSA as it falls outside of the breeding range typical for Swainson's hawk. However, this species may transit through the Alternative 5 RSA during migration and migrating individuals have been recently observed within 0.5 mile of the northern and central portions of the Alternative 5 (iNaturalist, 2024aa; eBird, 2024d).

Northern Harrier

Northern harrier (*Circus hudsonius*) is a CDFW SSC (when nesting) that has high potential to occur as a migrant within Alternative 5 RSA. Los Angeles lies at the southwestern vicinity of the species breeding

range in the United States. This species is low-flying and typically prefers grasslands, weedy agricultural fields, marshes, and other flat areas with large tracts of dense, low-growing vegetation, preferably undisturbed. As a ground-nesting species, northern harriers prefer to nest in tall, dense vegetation along the coastal slope and in inland valleys. In Los Angeles County, this species is found year-round but is more common as a winter visitor than as a resident breeder per records research in CNDDB (CDFW, 2023a), eBird (eBird, 2024e), and iNaturalist (iNaturalist, 2024h). There is no suitable breeding habitat within the Alternative 5 RSA, but the species has potential to transit through during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed within 0.25 mile west of the Alternative 5 RSA in the Sepulveda Basin in 2022 and 2023 (iNaturalist, 2024h).

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is a CDFW SSC with high potential to occur as a migrant within the Alternative 5 RSA. Olive-sided flycatcher is found in coniferous forests throughout California from sea level to high mountain elevations. This species breeds in coniferous forests and uses meadows and open areas adjacent to forests to forage. Olive-sided flycatchers feed on a variety of insects, most of which are caught in flight. Suitable breeding habitat for this species is not present within the Alternative 5 RSA; however, this species may briefly use areas in the Alternative 5 RSA as stopover habitat during migration. Multiple individuals have been observed within 0.5 mile of the Alternative 5 RSA in 2012 and 2021 (iNaturalist, 2024i; eBird, 2024f).

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is state endangered and CDFW Fully Protected (CFP) that has high potential to occur within the Alternative 5 RSA. It ranges throughout North America and inhabits forests and open grasslands nearby to a water source to forage. The eagle's main source of prey is fish, although they will forage on a variety of prey that may include reptiles, mammals, amphibians and carrion. The population was once in serious decline due to hunting and pesticides; however, with protections put in place, this species has successfully rebounded with a continually increasing population evidenced in databases searches. This species is known to occur recently within 0.30 mile of the Alternative 5 RSA at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024g). However bald eagles do not breed within the vicinity of the Alternative 5 RSA; the closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC (when nesting) that has moderate potential to occur within the Alternative 5 RSA. This songbird ranges throughout North America, inhabiting open country with short vegetation and lower sized shrubs and trees sparsely spaced throughout the landscape. Loggerhead shrikes are found throughout deserts, agriculture lands, grasslands, cemeteries and golf courses. While they eat a variety of prey items similar to a raptor including insects, amphibians, reptiles, small mammals, and other songbirds, they lack the talons of a raptor. Instead, shrikes impale and/or wedge prey items on shrubs, trees, cacti, barbed wire fencing, and other similar features for caching and consumption. Suitable habitat is present within the Alternative 5 RSA. This species is known to occur nearby with observations from 2022 in Sepulveda Basin Wildlife Reserve located 0.25 mile of the Alternative 5 RSA (eBird, 2024h).

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus obscurus*) is a CDFW SSC (when nesting) that is known to occur within the Alternative 5 RSA. The species is a small songbird found within the tyrant flycatcher family, named for the adult males' bright vermilion red and contrasting black coloration. The southwestern

United States is the northern extent of its typical range, which extends up from Central and South America. Vermilion flycatchers are found within a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, golf courses, parks, and cemeteries. Suitable habitat is present within the Alternative 5 RSA and a recent observation from 2019 exists from the Los Angeles River in the northwestern part of the Sepulveda Basin. Individuals have also been observed within 0.10 mile as recently as 2023 in the north at Woodley Park in the Sepulveda Basin Wildlife Reserve and 2024 in the south at Los Angeles National Cemetery (eBird, 2024j).

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is federally and state endangered that has high potential to occur within the Alternative 5 RSA. Least Bell's vireo occur as summer breeders within southern California; they migrate into California in late March/early April and depart for their winter grounds in September. This species builds nests in low, dense riparian thickets along water or along intermittent streams and during the nesting season, they forage in riparian and adjacent shrubland habitats. Suitable nesting and foraging habitat are present approximately 1 mile west of the Alternative 5 RSA in the Sepulveda Basin where riparian habitat is found along the Los Angeles River and connecting Bull Creek and several recent observations (2004, 2015, 2018, and 2020) are within 0.5 mile of RSA (CDFW, 2023a; eBird, 2024k).

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a WBWG Medium Priority Species that is known to occur within the Alternative 5 RSA. This species occurs throughout much of North America into northern Mexico primarily in coastal and montane forests, especially within old growth forests. Roosts are located in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. While preferring to roost in old growth forest, they forage over disturbed areas, clearings, roadways, forested riparian areas along rivers and streams, and various other water sources. Suitable foraging and roosting habitat are present in the Alternative 5 RSA. Two observations from 1985 are within or adjacent to the Alternative 5 RSA (CDFW, 2023a).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a WBWG Medium Priority Species that is known to occur in the Alternative 5 RSA. This species is the most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. This species spends winter months in warmer winter habitats such as Southern California, Mexico, and Central America and summer is typically spent, in the northern portions of California and north into Canada (Bolster, 1998), concealed in the foliage of deciduous and coniferous trees, typically neat the edge of a clearing. Roosting habitat consists of dense foliage associated with medium to large trees situated in open or mosaic habitat; roosting habitat is present within the Alternative 5 RSA in areas with large mature trees. Portions of the Alternative 5 RSA provide both suitable foraging and roosting habitat in the form of trees, vegetation, and human-made structures. In 2022, an observation was made in the Santa Monica Mountains near Sherman Oaks, east of the I-405 freeway within the Alternative 5 RSA (iNaturalist, 2024n).

Mountain Lion

The mountain lion (*Puma concolor*) is a "specially protected" species in California following the passage of the California Wildlife Protection Act of 1990 (Proposition 117), which makes it illegal to possess transport, sell, and hunt the species (CDFW, 2023d). The mountain lion was also recently proposed for state listing under CESA within a proposed evolutionary significant unit (ESU) located in Southern California and the central coast (CDFW, 2023d). In April 2020, CDFW accepted this ESU as a candidate

for state listing as threatened or endangered. Under CESA, species classified as a candidate species are afforded the same protection as listed species while they undergo a review process (CDFW, 2023d). Mountain lions are generally found throughout the state where suitable habitat, such as temperate coniferous/deciduous forest, coastal chaparral, foothills, and mountains, occurs. They are often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Mountain lions are well documented in the Santa Monica Mountains by the NPS, and their population is estimated at around 10 to 15 adult individuals (NPS, 2023). Several GPS-collared mountain lions have been tracked to occur west of the I-405 freeway and the Alternative 5 RSA (NPS, 2023). Mountain lion mortalities have been documented on the freeway (NPS, 2023), as recently as July 2024 (Darling, 2024). However, successful crossings have occurred by one collared mountain lion in 2019 (NPS, 2019b) and uncollared individuals are also present east of I-405 (NPS, 2022; NPS, 2019b).

Bats

There are 24 species of bats found in Los Angeles County, 18 of which are considered rare or sensitive by a variety of entities (NHMLA, 2023). In particular, the WBWG identifies several species as medium and high priority for consideration of conservation measures. Bat species found in Los Angeles County are known to have behavioral and ecological interactions with transportation structures, especially those involving bridges. Bat species responses to anthropogenic disturbances differ, with some responding positively and some negatively. Anthropogenic disturbances that can affect bats include the following (Caltrans, 2019):

- Habitat loss, fragmentation, and degradation
- Chemical pollution to drinking water from construction waste and to air from construction vehicle emissions
- Light pollution resulting from artificial lighting
- Noise pollution from construction activities
- Increased predation
- Introduced diseases, such as white-nose syndrome
- Climate change
- Vehicular collisions

The RSA provides habitat for day and night roosting for bats such as trees, bridges, culverts, buildings, and other structures. The tree-lined streets found throughout the Alternative 5 RSA could potentially support roosting bats, such as the hoary bat and western mastiff bat. Large bridges spanning the Los Angeles River may provide suitable bat roosting habitat and foraging habitat for species such as Mexican free-tailed bat and Myotis species. However, no signs of bats, including individuals, guano (i.e., scat), staining on walls from urine, or vocalizations, were detected during the spring 2023 reconnaissance-level field surveys.

Wildlife Corridors

Within the heavily urbanized areas that comprise the north and south portions of the Alternative 5 RSA, opportunities for wildlife movement are limited. No landscape habitat linkages were identified within the Alternative 5 RSA by the SCW; the City of Los Angeles has identified a regional wildlife movement pathway through the central portion of the RSA in the Santa Monica Mountains. Within this highly urbanized area, animal movement would be facilitated by remnant riparian habitat, underpasses, culverts, and stretches of contiguous or semi-contiguous habitat. Ornamental vegetation may provide some opportunities for cover, resting, foraging, and nesting to localized bird wildlife populations; however, such areas do not provide function as major wildlife movement corridors. Evaluation of

wildlife movement for species with large home size ranges, like the mountain lion, are more appropriate for a larger scale than the Alternative 5 RSA to better inform existing patterns for these species. Discussions at both the RSA and a larger scale are included herein.

The Santa Monica Mountains intersect with the middle of the Alternative 5 RSA and serve as a wildlife movement corridor for local and regional populations. While they lack connection with other mountain ranges in the area, largely due to urbanization, the Santa Monica Mountains retain open areas and native habitats that provide east-west movement opportunities within the range and historically to adjacent ranges; to the west are large undeveloped areas of natural vegetation and to the east are the Verdugo Mountains and the San Gabriel Mountains. Wildlife movement within the Santa Monica Mountains is through a combination of natural, open spaces interspersed with development and human activity. While the majority of the Santa Monica Mountains within the Project Study Area contains scattered residential development, 44 percent of the Santa Monica Mountain range is considered non-developed (as defined by removing "urban" classified categories from the SMMNRA vegetation mapping, see Section 3.3.1 for details; Figure 9-24). Habitat fragmentation poses a threat to species due to lack of space and movement (i.e., habitat to travel between) and threatens wildlife survival from increased risk of inbreeding and loss of genetic diversity. Mammals such as mule deer (*Odocoileus hemionus*), mountain lions (*Puma concolor*), coyotes (*Canis latrans*), and bobcats (*Lynx rufous*) can have large territorial ranges that span many miles; these species are documented in the Santa Monica Mountains. In their current state, I-405 and other major roads in the Alternative 5 RSA are a functional barrier to wildlife movement for most terrestrial wildlife. Within the Alternative 5 RSA, east-west wildlife movement is aided by native habitat in the Santa Monica Mountains, although development, i.e., housing, is interspersed along the ridges and valleys. Limited opportunities exist for wildlife to move north-south due to the urban landscape surrounding the mountains in both directions.

Historically, mountain lions utilize the Santa Monica Mountains as a major linkage corridor between the surrounding mountain ranges in Southern California. Freeways, roads, buildings, and fencing have created barriers to mountain lion and wildlife movement, causing the remaining undeveloped land to become highly fragmented habitat (CLAW, 2023). The major causes of death among mountain lions are vehicle collisions, rodenticide poisoning, depredation permits, and mountain lions killing other mountain lions.

I-405 creates a major barrier to mountain lion movement. At present time, I-405 is generally considered impermeable to mountain lions inhabiting land east of I-405, preventing their movement to the western portion of the Santa Monica Mountains (NPS, 2023). While the Alternative 5 RSA is adjacent to I-405 in the northern and southern urbanized sections, it is approximately 1 mile east of I-405 through the Santa Monica Mountains. Compared to the freeway, roads in the mountains within the Alternative 5 RSA are predominantly two lanes with housing on both sides; they are not likely to limit mountain lion movement in the same manner as the freeway. The chance for a deadly collision is lower due to lower vehicle speed and less distance to travel. Mountain lions in the Santa Monica Mountains are experiencing exacerbated impacts of edge effects and limited habitat and are suffering from territorial fighting, low genetic diversity, and low prey populations. Furthermore, escape routes during wildfires may be blocked and migration into previously burned areas may be restricted due to roads and other urban development. A study conducted by University of California (UC) Davis and partners concluded the Santa Monica Mountains lion population is at risk of becoming locally extinct within the next 50 years. The study recommended increases in landscape connectivity to maintain healthy lion populations in the greater Los Angeles metropolitan area (Benson et al., 2019).

Within the Alternative 5 RSA, water is present in the Los Angeles River. Adjacent to the Alternative 5 RSA, water is present in the southern (human-made stream within the Mathias Botanical Garden on UCLA's campus), central (Stone Canyon Reservoir in the Santa Monica Mountains) and northern (several creeks, human-made lakes, and the Los Angeles River in the Sepulveda Basin) portions of the Alternative 5 RSA. Within the Sepulveda Basin, approximately 2.5 miles of the Los Angeles River has a natural, earth bottom and is vegetated with riparian habitat while outside of the Basin, it flows in a concrete-lined channel. Where present, waterbodies provide resting, foraging, and nesting opportunities for wildlife species. Collectively these waterbodies provide some habitat for wildlife species to move through the Los Angeles Basin and San Fernando Valley. Furthermore, several species of warblers, sparrows, and raptors that breed in northern latitude, spend the winter months in the Alternative 5 RSA. This includes species protected by MBTA including the yellow-rumped warbler (*Setophaga coronata*), white-crowned (*Zonotrichia leucophrys*) and golden-crowned sparrows (*Zonotrichia atricapilla*), and several raptor species.

The RSA occurs along the Pacific Flyway, a major north-south flyway for migratory birds moving between breeding grounds and overwintering sites or following food sources. Potential stopover locations for migratory birds are often correlated with vegetation cover and near water, such as the Sepulveda Basin Recreation Area and Stone Canyon Reservoir; these areas are particularly important for migrating waterfowl. Within the Sepulveda Basin Recreation Area, several water bodies occur that support wildlife movement through the Project Study Area, including Lake Balboa, Woodley Creek, Haskell Creek, Japanese Garden Lake, and Wildlife Lake. While these waterbodies are outside the Alternative 5 RSA, their proximity increases likelihood of migrating bird presence within the Alternative 5 RSA. In the northwestern portion of the Alternative 5 RSA, the narrow riparian corridor along the Los Angeles River within Sepulveda Basin includes a variety of plant and habitat layers (i.e., mature trees, shrubs, and herbaceous vegetation) that facilitate bird movement along the river.

9.2.5.2 Plants

Vegetation Communities

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Alternative 5 RSA are generally absent and consist mainly of the land cover class developed. Developed, ruderal, and agricultural land use cover classes are generally considered to provide lower quality habitat due to absent or sparse vegetation, limited plant diversity, and regular disturbance associated with human activities. Special-status wildlife species may use these areas for activities such as foraging or while in transit. Special-status plants could also be present but are more likely to be found in vegetated habitats subject to less disturbance.

Vegetation communities in the Santa Monica Mountains, which run east-west through the middle of RSA, include ceanothus chaparral, black sage shrubland, California walnut woodland, and various other native vegetation communities. Within a mapped vegetation group, patches of differing communities may be present in smaller sizes than the minimum mapping unit (0.5 hectare) (NPS, 2004-2019). Where present, these areas would be refined in the future after a preferred alternative is selected.

Vegetation communities listed below are presented in descending order of abundance within the Alternative 5 RSA; acreages per vegetation community within the Alternative 5 RSA are presented in Table 9-7; and spatial representation of their locations are shown on Figure 9-11 through Figure 9-22. A list of plant species observed during the field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general

plant observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Table 9-7. Alternative 5: Vegetation Community Acreage within Ground Disturbance Area and 500-Foot Buffer

Vegetation Community/Land Cover Type [a]	Sensitive Natural Vegetation Community (Authority)	Acres [b]	Percent of Total Vegetation
Developed	Not applicable	1,208.3	90.8
Agricultural Land	Not applicable	66.0	5.0
California Annual Grassland	Not applicable	26.2	2.0
Ruderal	Not applicable	14.8	1.1
Undifferentiated Riparian Vegetation	Potentially depending on species composition (CDFW)	8.3	0.6
Open Water	Not applicable	4.2	0.3
Coyote Brush Shrubland	Potentially depending on codominant species (CDFW)	3.6	0.3
Total		**1,331.4**	**100.0**

Source: HTA, 2024

[a] Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b] Inconsistencies in total calculation due to rounding errors.

CDFW = California Department of Fish and Wildlife

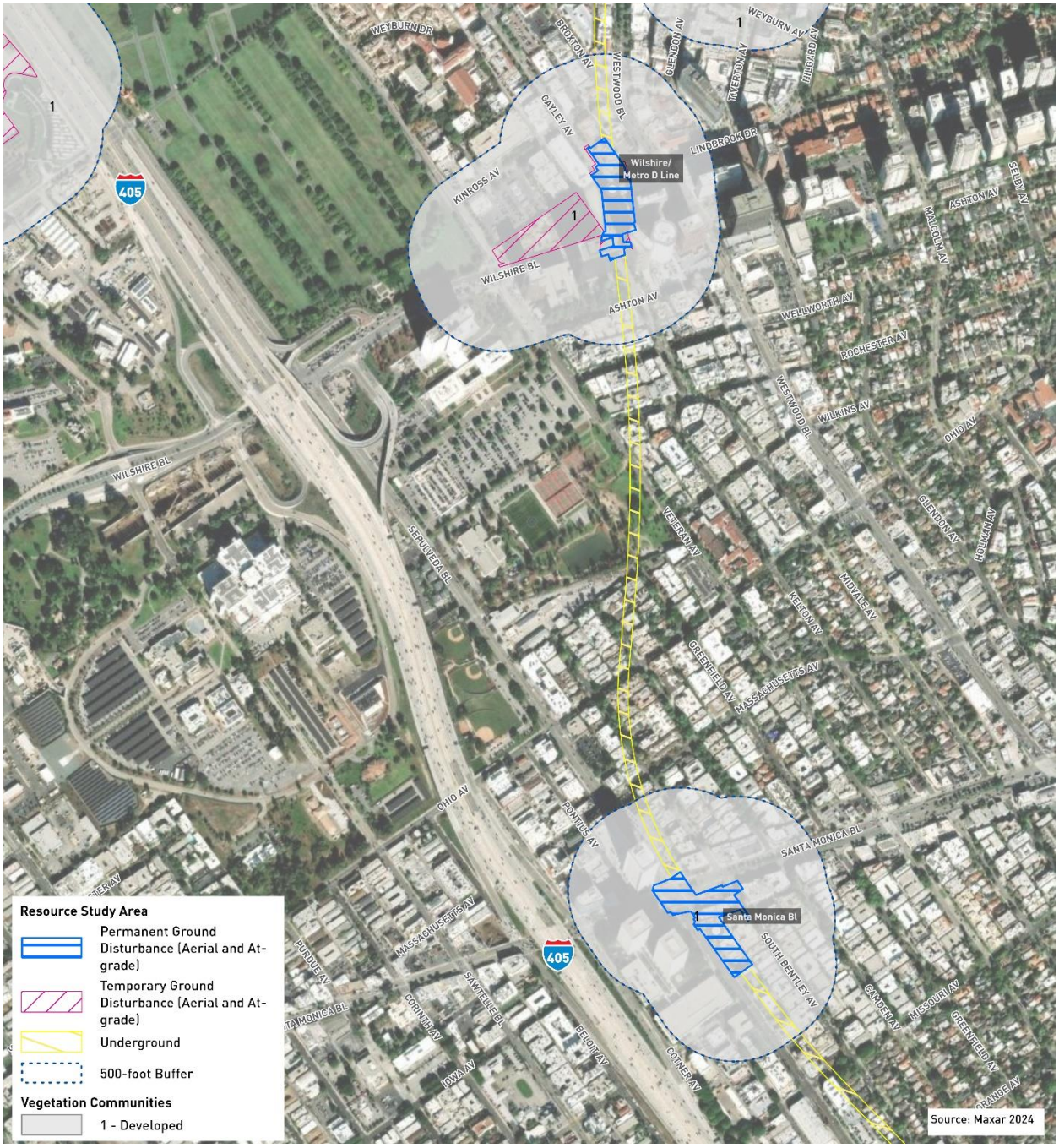
Figure 9-11. Alternative 5: Vegetation Communities, Map 1 of 12

Source: HTA, 2024

Figure 9-12. Alternative 5: Vegetation Communities, Map 2 of 12

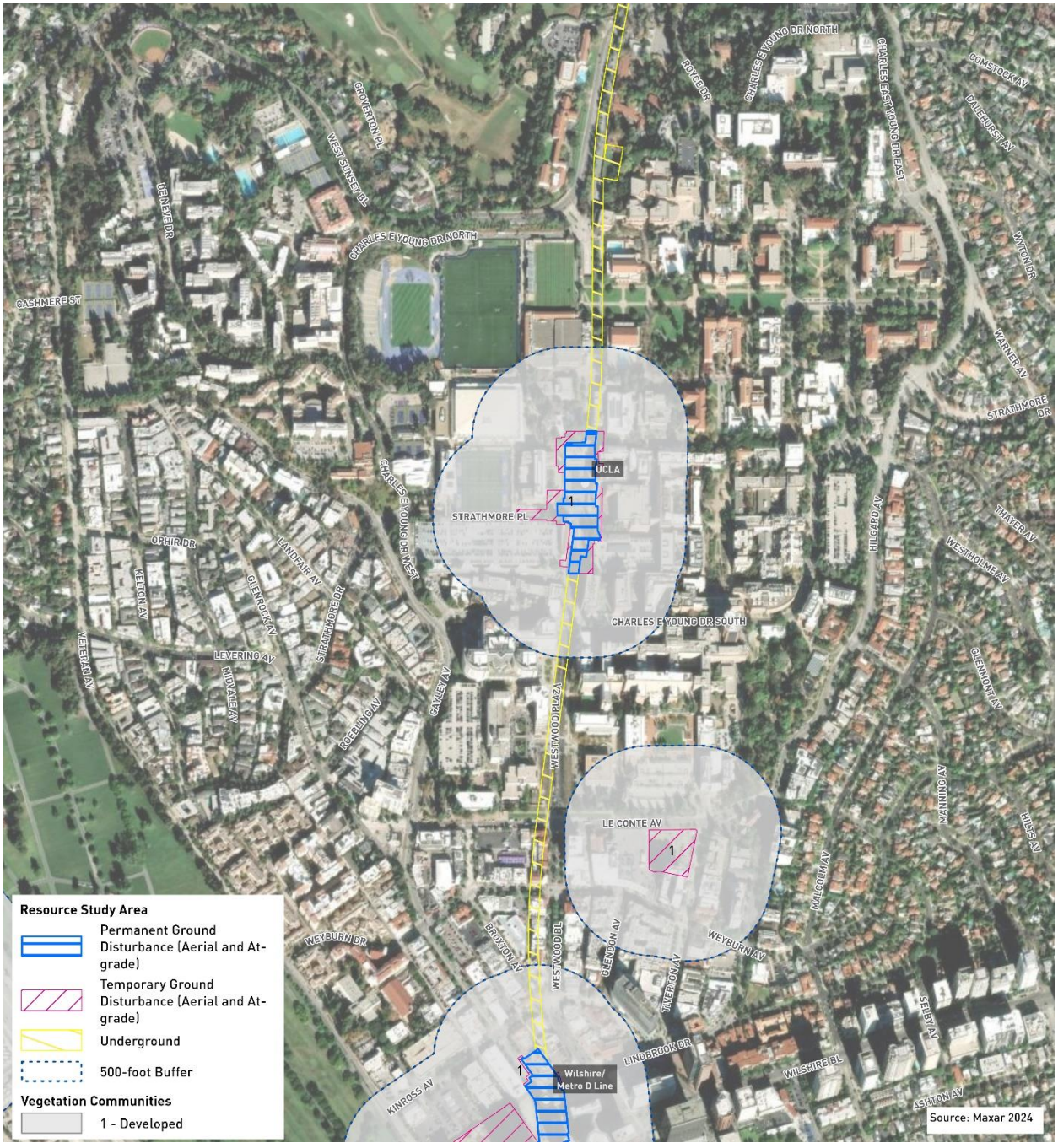
Source: HTA, 2024

Figure 9-13. Alternative 5: Vegetation Communities, Map 3 of 12



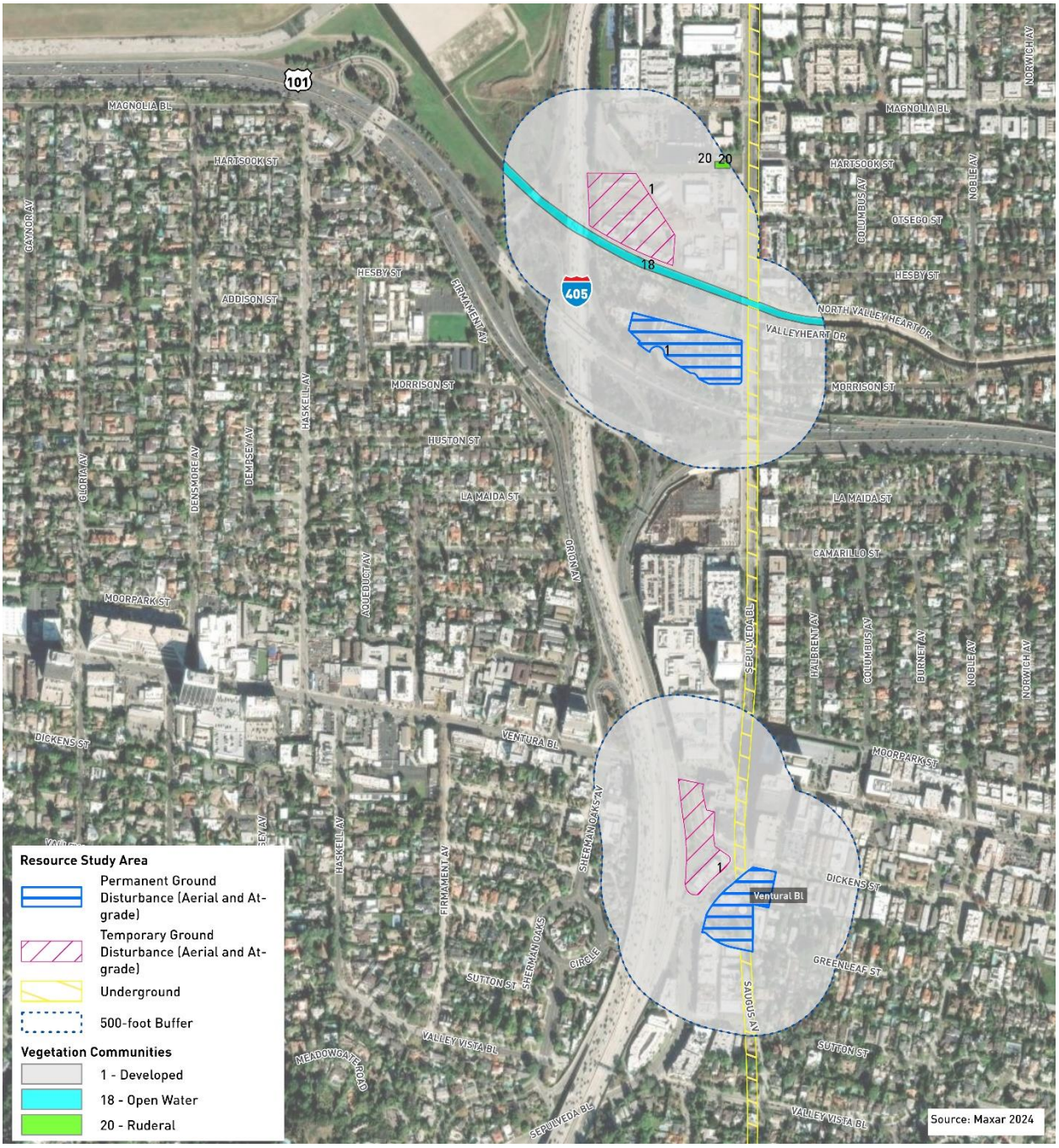
Source: HTA, 2024

Figure 9-14. Alternative 5: Vegetation Communities, Map 4 of 12



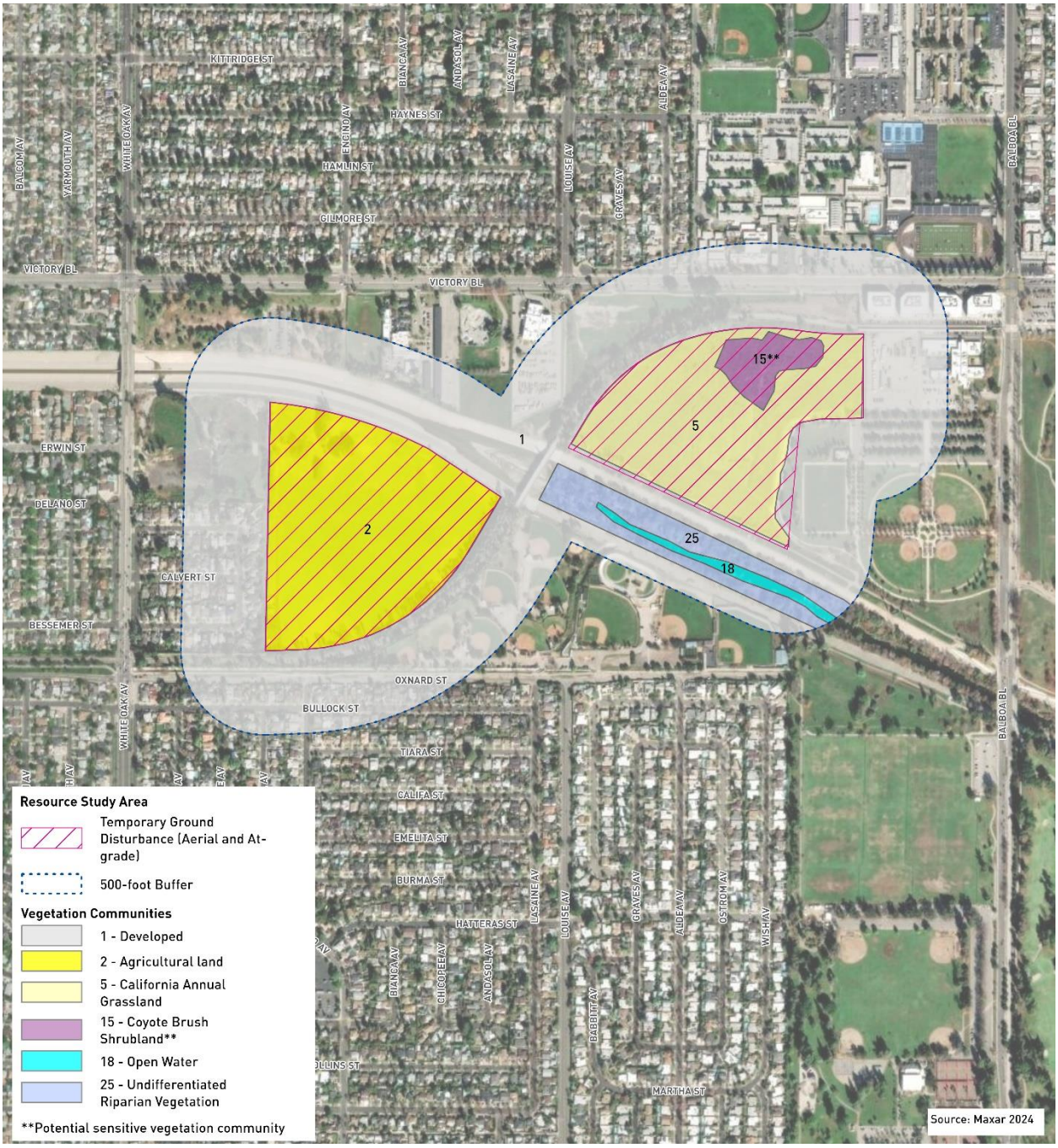
Source: HTA, 2024

Figure 9-15. Alternative 5: Vegetation Communities, Map 5 of 12



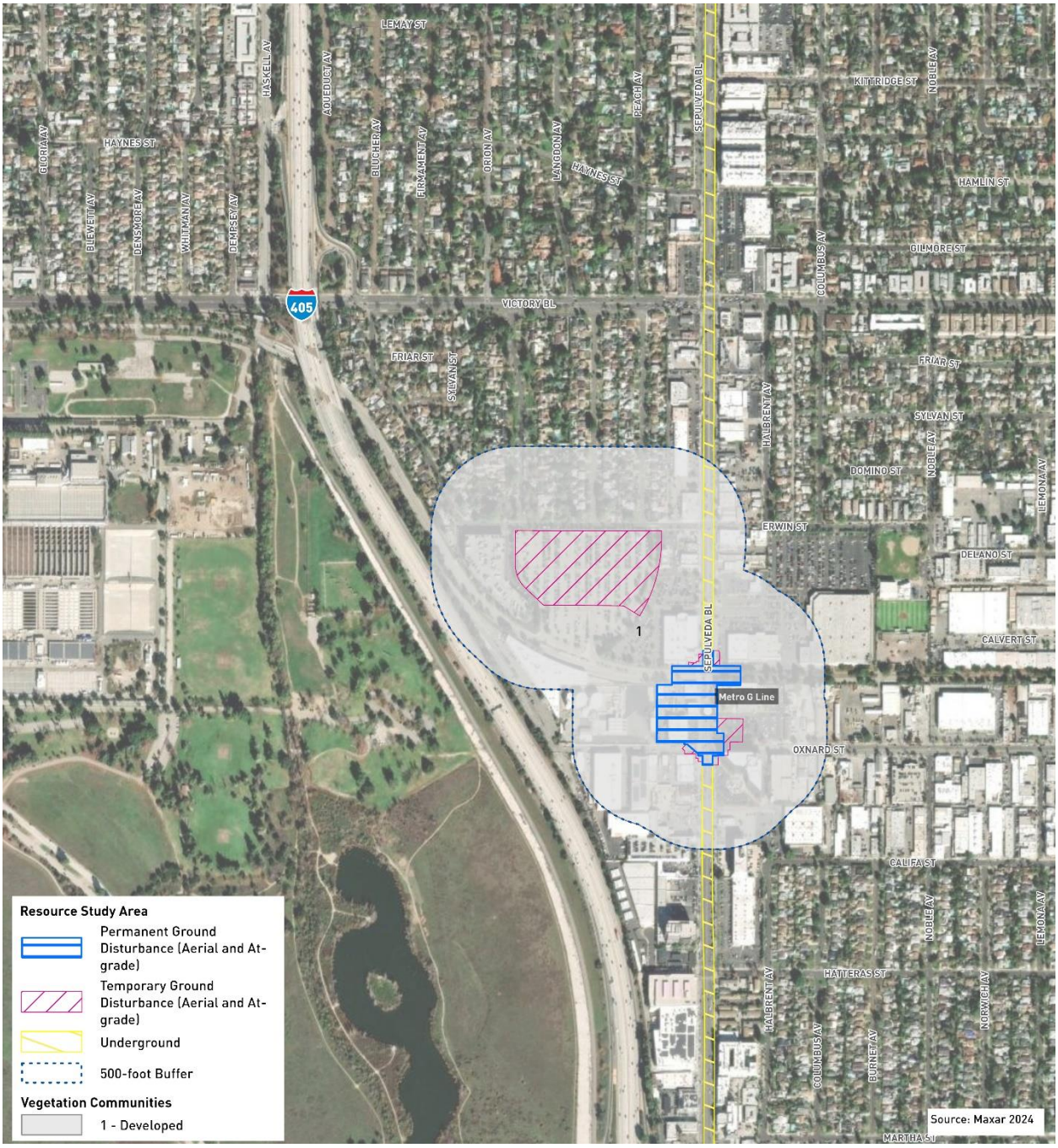
Source: HTA, 2024

Figure 9-16. Alternative 5: Vegetation Communities, Map 6 of 12



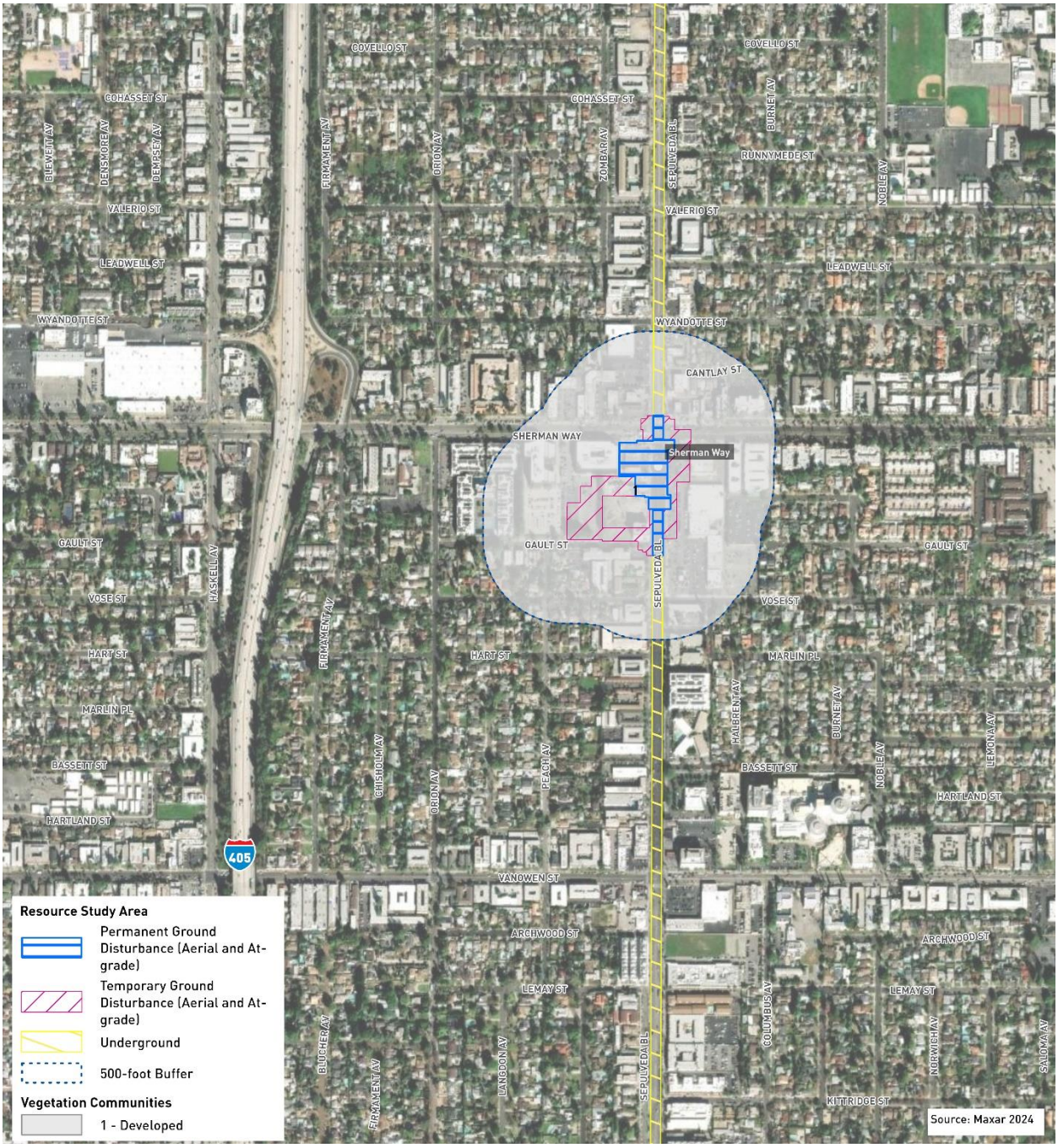
Source: HTA, 2024

Figure 9-17. Alternative 5: Vegetation Communities, Map 7 of 12



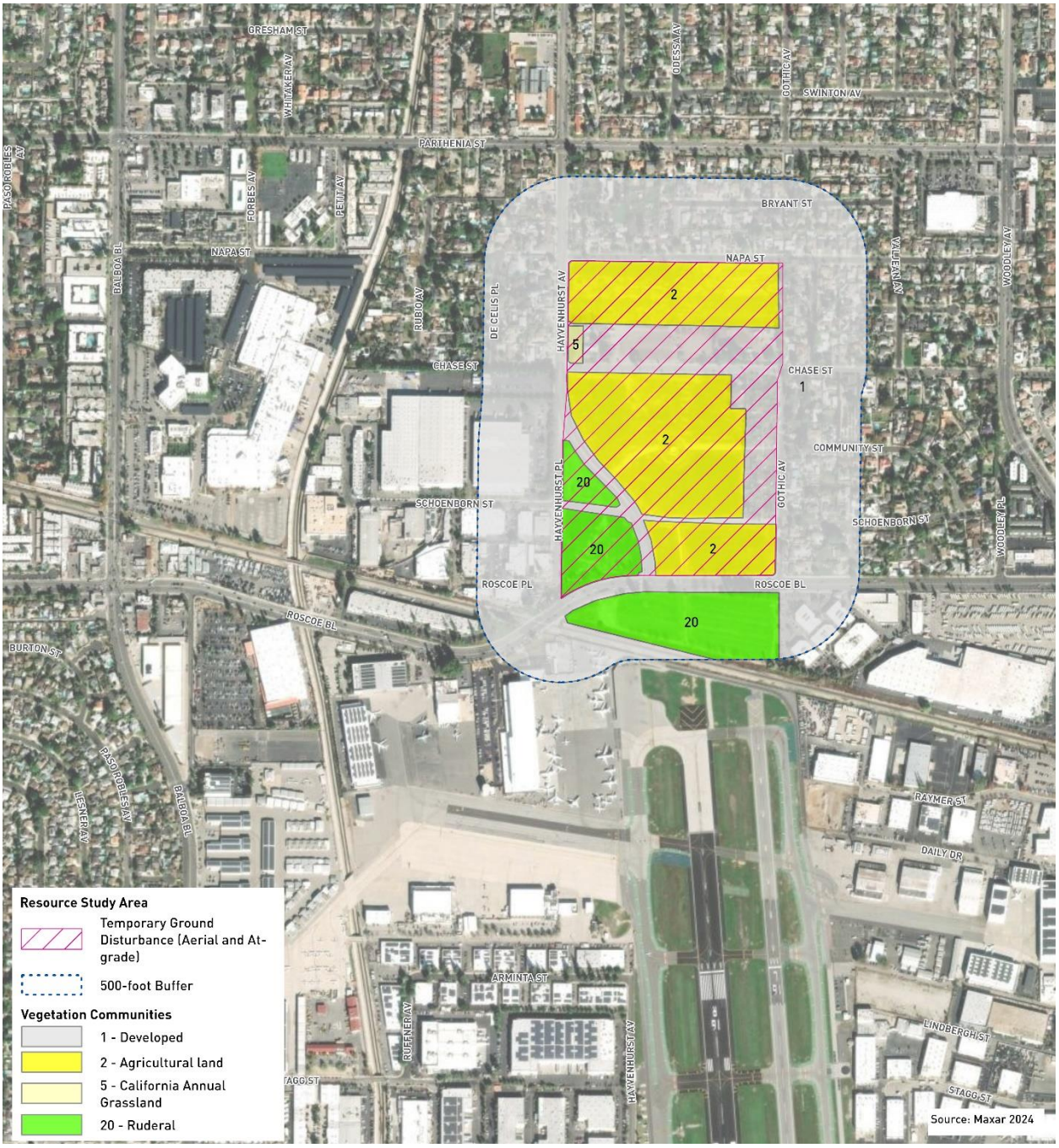
Source: HTA, 2024

Figure 9-18. Alternative 5: Vegetation Communities, Map 8 of 12



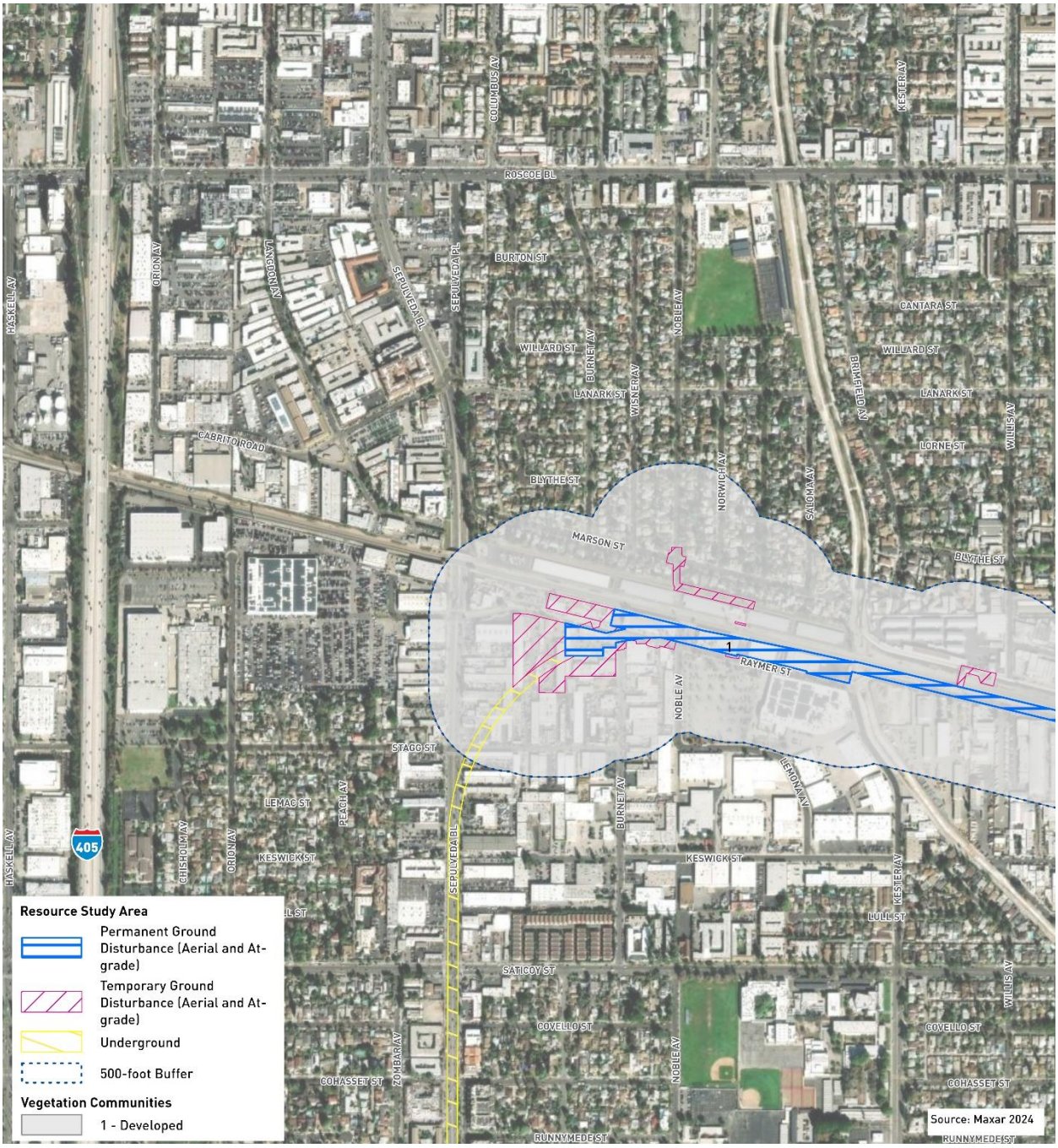
Source: HTA, 2024

Figure 9-19. Alternative 5: Vegetation Communities, Map 9 of 12



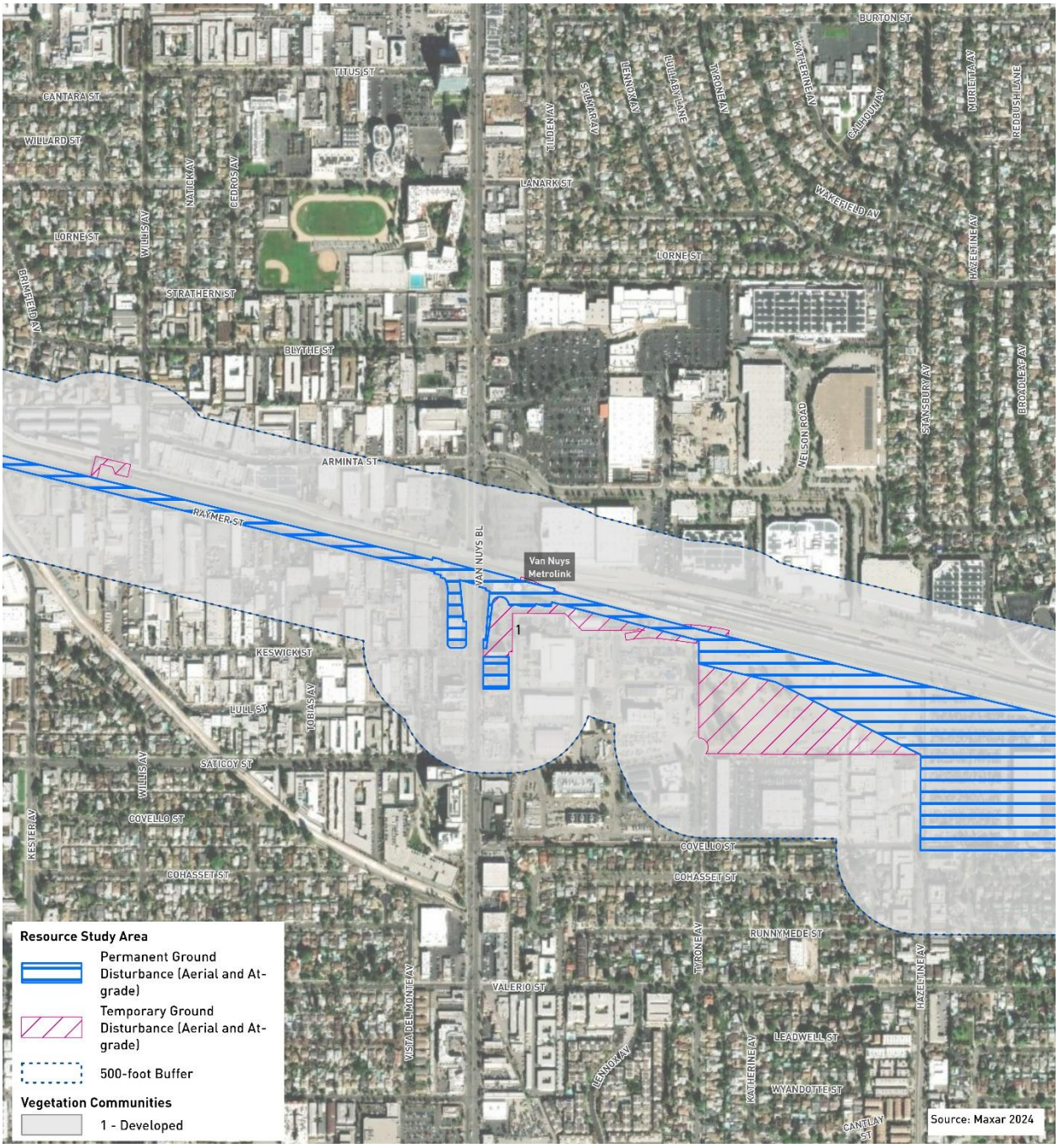
Source: HTA, 2024

Figure 9-20. Alternative 5: Vegetation Communities, Map 10 of 12



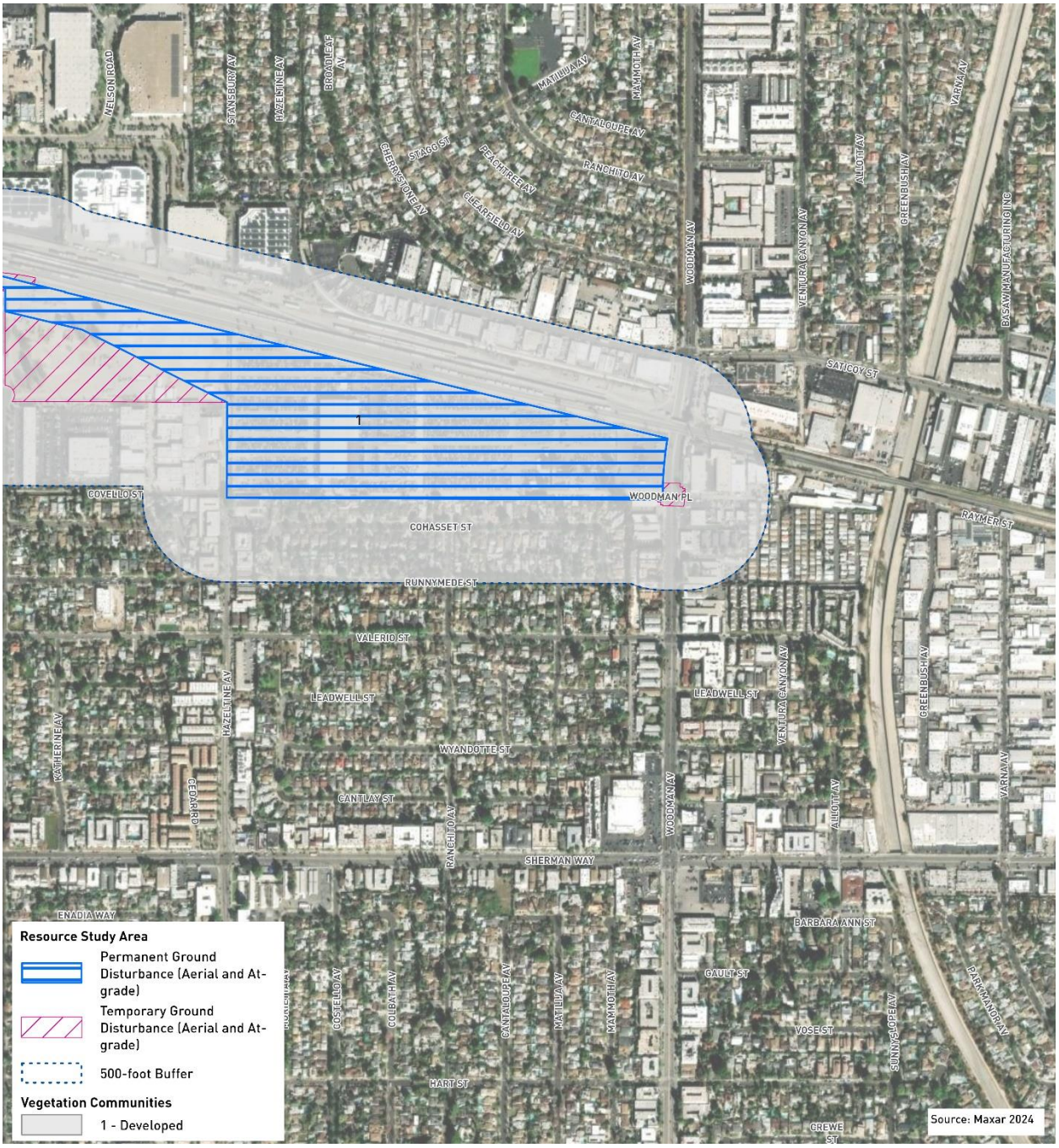
Source: HTA, 2024

Figure 9-21. Alternative 5: Vegetation Communities, Map 11 of 12



Source: HTA, 2024

Figure 9-22. Alternative 5: Vegetation Communities, Map 12 of 12



Source: HTA, 2024

Developed

The developed cover class consists of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or minimal ornamental landscaping. Ornamental landscaping was demarcated during the tree and shrub inventory as a subset of the developed cover class. The ornamental landscaping subcategory is characterized by developed areas dominated by ornamental trees, shrubs, grasses, and herbs, with some areas including native species. The dominant ornamental trees include carob tree (*Ceratonia siliqua*), Chinese banyan (*Ficus microcarpa*), shamel ash (*Fraxinus uhdei*), Chinese elm (*Ulmus parvifolia*), jacaranda (*Jacaranda mimisifolia*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Mexican fan palm (*Washingtonia robusta*), and several species of eucalyptus trees (*Eucalyptus* spp.). Dominant native trees found in this subcategory include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and southern California black walnut (*Juglans californica*). This cover class represents approximately 91 percent of the Alternative 5 RSA and occurs throughout it.

Agricultural Land

Agricultural land does not support native vegetation and can include actively cultivated land or land that supports nursery operations. Agricultural land represents 4.8 percent of the Alternative 5 RSA and occurs in two areas near the northern end. The first area is located north of the Van Nuys Airport in potential offsite staging yard N4 and the second area is located in the western end of the Sepulveda Basin in potential offsite staging yard N1. Some locations contain cover crops while others are fallow; condition of crops within each field are likely to change with season.

California Annual Grassland

California annual grassland includes wild oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut brome, prickly lettuce (*Lactuca seriola*), black mustard, and the occasional mulefat (*Baccharis salicifolia*) and/or coyote brush. California annual grassland represents 1.9 percent of the Alternative 5 RSA and occurs in two areas near the northern end. The first area is located north of the Van Nuys Airport in potential offsite staging yard N4 and the second area is in the western end of the Sepulveda Basin in potential offsite staging yard N2.

Ruderal

The ruderal cover class consists of areas that are dominated by bare ground or invasive non-native forbs (herbaceous, non-grass species) that are adapted to a regime of frequent disturbances. Non-native annual grasses will occur in low abundance and typically contribute less than 50 percent to the entire herbaceous cover. Species typically found in this cover class include non-native grasses and forbs such as wild oats, bromes, mustards, thistles, tumbleweed (*Salsola* sp.), tobacco tree and castor bean. Ruderal land often contains trash and rubble, such as fragments of concrete or asphalt, and is dominated by invasive species. This cover class represents 1.1 percent of the Alternative 5 RSA and occurs near the northern and southern ends.

Undifferentiated Riparian Vegetation

Undifferentiated designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Undifferentiated riparian vegetation has the potential to be sensitive depending on species present within the community; this will be further refined upon future analysis and field surveys prior to initiation of construction. Undifferentiated riparian vegetation represents less than 1 percent of the Alternative 5 RSA and occurs surrounding the Los Angeles River in the northwestern edge of the RSA, south of potential off-site staging yard N2. For this

analysis, Metro is conservatively considering impacts to this community to be significant pending further analysis and refinement of vegetation mapping.

Open Water

This community consists of any open body including lakes, reservoirs, bays, flowing water within a river channel, and small ponds along stream courses. Open water represents 0.3 percent of the Alternative 5 RSA and occurs in the northern end within two areas of the Los Angeles River. The first area is located in the western portion of the Sepulveda Basin, south of potential off-site staging yard N2, and the second area is located southeast of the Sepulveda Basin and east of I-405, between staging yards 6 and 7.

Coyote Brush Shrubland

This community is dominated by coyote brush with a codominant of mulefat. Coyote brush shrubland is found in native shrubland areas with a history of anthropogenic disturbance. This community represents 0.2 percent of the Alternative 5 RSA and occurs in the northwestern portion of potential off-site staging yard N2 in the Sepulveda Basin.

9.2.5.3 Trees Within Proposed Construction Areas

Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. Numerous trees occur within the Alternative 5 RSA. The north-to-south portion of the alignment would run underground through the westside communities of Los Angeles, the Santa Monica Mountains and the Valley, thereby avoiding impacts to trees and shrubs within the majority of Alternative 5 except at discrete locations associated with at-grade activities including staging or potential off-site staging. The alignment would turn east at the tunnel portal east of Sepulveda Boulevard and south of Raymer Street and transition to an aerial guideway to the northern terminus station adjacent to the Van Nuys Metrolink Station. This northern portion of the Alternative 5 RSA is highly urbanized and dominated by non-native, ornamental trees planted within residential, commercial, and roadside ornamental landscapes. Native trees, such as coast live oak, western sycamore, and canyon live oak, are interspersed in smaller numbers in various locations in the northern half of the Alternative 5 RSA. Trees within this area are subject to direct impacts associated with the aerial alignment. Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, contains information about the protected trees and shrubs that were mapped within the Alternative 5 RSA.

Of the six local ordinances, plans, or policies with potential to protect trees or shrubs within combined Tree Survey Area (detailed in Section 2.3), the Los Angeles County Oak Woodlands Conservation Management Plan does not have jurisdiction, since inventoried trees did not meet the requirements (i.e., there were no native oak tree stands on unincorporated County land with current or historical canopy cover greater than 10 percent). Therefore, the County Plan will not be discussed further in this report.

Within SMMNRA, trees within the Tree Survey Area were located on lands owned or managed by the County of Los Angeles and the MRCA within the Sepulveda Pass Open Space, Mission Canyon Open Space, and the MRCA Mountaingate Conservation Easement.

9.2.5.4 Sensitive Natural Vegetation Communities

Based on vegetation mapping, no sensitive vegetation communities are present within the Alternative 5 RSA. One identified community, coyote brush shrubland, and one undifferentiated category, riparian vegetation, has the potential to be considered sensitive depending on the associated plants present, i.e., associations (see Section 3.2.2 for additional details). For this community, classification of vegetation

associations is required to determine sensitivity, since not all associations within the community are sensitive. Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping. Additional sensitive vegetation communities may be present within the Alternative 5 RSA that were not captured in the vegetation mapping effort if their extent is smaller than the minimum mapping unit for the SMMNRA mapping (0.5 hectare).

9.2.5.5 Special-Status Plant Species

Of the 49 special-status plant species with potential to occur within the Project Study Area, 17 were identified as having potential to occur within the Alternative 5 RSA from CNDDB, California Native Plant Society (CNPS), IPaC, and iNaturalist database searches (CDFW, 2023a; CNPS, 2024; USFWS, 2023a; iNaturalist, 2024p through 2024x). These species are listed in Table 9-8 with an assessment of their potential to occur within the Alternative 5 RSA.

Fifteen of the special-status plant species were concluded to be known or have potential to occur within the Alternative 5 RSA (Table 9-8); the remaining two were determined to have no potential to occur and are not discussed further for Alternative 5. The nine species with low potential to occur are considered unlikely to be detected within the Alternative 5 RSA or impacted by Alternative 5 due to the lack of known recent occurrences and suitable habitat within the Alternative 5 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 9-8. Within Table 9-8, rows discussing species that were determined to be present or to have high potential to occur within the Project Study Area are highlighted blue.

Table 9-8. Alternative 5: Special-Status Plant Species with Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Astragalus brauntonii	Braunton's milk-vetch	FE 1B.1	Fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum*), yucca (*Yucca whipplei*), and the rare Tecate cypress (*Cupressus forbesii*).	**High**. Suitable habitat occurs within the Alternative 5 RSA and recent observations of the species have been observed 0.5 mile east of the Alternative 5 RSA in 2022 in Bel Air Crest and within Fossil Ridge Park approximately 1 mile south of US-101 in 2019 (iNaturalist, 2024o).
Atriplex coulteri	Coulter's saltbush	1B.2	Associated with areas of saline and alkaline soils, such as ocean bluffs.	**No Potential.** No suitable habitat is present in the Alternative 5 RSA.
Berberis nevinii	Nevin's barberry	FE/SE 1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian scrub. Found in gravelly or sandy micro habitats. Blooms from February (March)–June at elevations ranging from 230 to 2,750 feet.	**Low.** Suitable habitat is present within the Alternative 5 RSA; however, the closest non-ornamental observations are over 3 miles east of the Alternative 5 RSA (iNaturalist, 2024p).
Calochortus clavatus var. *gracilis*	Slender mariposa lily	1B.2	Chaparral, coastal scrub, and valley and foothill grasslands, on shaded foothill canyons within the Transverse Ranges and the San Gabriel Mountains. Occurs between 1,050 and 3,280 feet.	**Moderate.** Suitable habitat is present within the Alternative 5 RSA and the species was observed in in 2023 at the Hansen Dam Golf Course 4.5 miles northeast of the Alternative 5 MSF (iNaturalist, 2024q).
Centromadia parryi ssp. *australis*	Southern tarplant	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Blooms from May to November at elevations ranging from 0 to 1,575 feet.	**Low.** Suitable habitat is present in the Alternative 5 RSA. One recent record from 2022 is located in Kenneth Hahn State Recreation Area, 3.75 miles southeast of the southern terminus of the Alternative 5 RSA (iNaturalist, 2024r). One historical record from 1957 located on a brushy hill east of The Getty is within the Alternative 5 RSA (CDFW, 2023a).
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	SE 1B.1	Sandy portions of coastal scrub, valley, and foothill grassland, between 490 and 4,005 feet. Blooms April to July.	**Low.** Suitable habitat is present within the Alternative 5 RSA although only historical occurrences from the early 1900s are within 7 miles of the Alternative 5 RSA (CDFW, 2023a).
Dodecahema leptoceras	Slender-horned spineflower	FE/SE 1B.1	Found in sandy sites within chaparral, cismontane woodland, or alluvial fans within coastal scrub. Occurs between 655 and 2,495 feet.	**Low.** Suitable habitat is present within the Alternative 5 RSA. Two recent sightings in 2022 (iNaturalist, 2024t) and one historical observation (1906) (CDFW, 2023a) are located approximately 3 miles east of the Alternative 5 RSA.
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT 1B.1	Chaparral, coastal sage scrub, on shaded, rocky slopes.	**Low.** Suitable habitat is present in the Alternative 5 RSA, although the plant is only currently known from 10 total locations. The nearest location is over 6 miles to the west in Topanga State Park, reported in 1987 and 2012 (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Horkelia cuneata var. *puberula*	Mesa horkelia	1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Blooms from February to July at elevations ranging from 225-2,655 feet.	**Low.** Suitable habitat is present in the Alternative 5 RSA but observations within 10 miles of the Alternative 5 RSA are all historical (1895, 1929, 1956) (CDFW, 2023a).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Blooms from February to June at elevations ranging from 0 to 4,005 feet.	**Low.** Suitable habitat is present in the Alternative 5 RSA; two historical records from 1934 and 1966 are within 7 miles of the Alternative 5 RSA (CDFW, 2023a).
Malacothamnus davidsonii	Davidson's bushmallow	1B.2	On slopes of chaparral, oak woodland, and other habitats.	**High**. Suitable habitat is present in the Alternative 5 RSA. An observation from 2021 is located 0.5 mile west of the Alternative 5 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021).
Monardella hypoleuca ssp. *Hypoleuca*	White-veined monardella	1B.3	Chaparral and cismontane woodlands. Known only from the Santa Monica, Santa Ynes, and Sierra Madre Mountains.	**Low.** Suitable habitat is present in Alternative 5 RSA. The nearest observation is from 2008 and is approximately 6 miles west of the Alternative 5 RSA near the Santa Ynez Canyon Trailhead (CDFW, 2023a).
Nolina cismontana	Chaparral nolina	1B.2	Coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone substrates.	**High.** Suitable habitat is present, and the species was detected in 2020 approximately 0.50 mile east of the Alternative 5 RSA in Deervale-Stone Canyon Park (iNaturalist, 2024u).
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	2B.2	Wetlands, meadows, and seeps between 165 and 2,000 feet.	**No Potential**. No suitable habitat is present in the Alternative 5 RSA.
Quercus dumosa	Nuttall's scrub oak	1B.1	Generally found on sandy soils near the coast, often found in chaparral and coastal sage scrub communities between 50 and 1,300 feet.	**High**. Suitable habitat is present in the Alternative 5 RSA. An individual was observed in 2024 approximately 0.35 mile outside the Alternative 5 RSA, east of the UCLA Gateway Plaza (iNaturalist, 2024v) and in 2009, a multi-stemmed individual was observed 2.5 miles southeast of the Alternative 5 RSA in Kenneth Hahn State Recreation Area (CDFW, 2023a).
Sagittaria sanfordii	Sanford's arrowhead	1B.2	Freshwater wetlands. Occurs between 0 and 2,135 feet. Blooms May to October (November).	**High**. Suitable habitat is present in the Alternative 5 RSA in the buffer for staging yards N1 and N2. One recent observation (2021) from the Los Angeles River within the Sepulveda Basin Recreation Area (CDFW, 2023a) is 0.25 mile from the Alternative 5 RSA; a 2022 observation in the southern portion of the Alternative 5 RSA is 0.75 mile from the Alternative 5 RSA, near Holmby Park (iNaturalist, 2024w).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Symphyotrichum greatae	Greata's aster	1B.3	Within mesic microhabitats in chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Occurs between 985 to 6,595 feet. Blooms June to October.	**Low**. Suitable habitat is present in the Alternative 5 RSA. One historical, undated sample from Benedict Canyon in the Santa Monica Mountains is approximately 1 mile east of the Alternative 5 RSA (CDFW, 2023a). No recent observations are present.

Source: HTA, 2024

[a]Special-status plant species identified during reviews of the CNDDB (CDFW, 2023a), CNPS database (CNPS, 2024), and iNaturalist (iNaturalist, 2024p through 2024x) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; and a review of IPaC (USFWS, 2024a) for the Alternative 5 RSA.

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened

State Status Designations:
SC = State Candidate Species for Listing
SE = State Endangered
SR = State Rare
ST = State Threatened

California Native Plant Society Ranks:
1A. — Presumed Extirpated in California and either rare or extinct elsewhere.
1B. – Rare or Endangered in California and elsewhere.
1B.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) and elsewhere.
1B.2 – Fairly endangered in California (20-80 percent occurrences threatened) but more common elsewhere.
2A. – Presumed extirpated in California but common elsewhere.
2B. – Rare, Threatened, or Endangered in California but more common elsewhere.

Potential to Occur Guidelines:
Present = Species is documented by CNDDB, CDFW, iNaturalist, or another database as occurring in the Alternative 5 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 5 RSA; however, no records occur directly with the Alternative 5 RSA. Species has been detected within 1 mile of the Alternative 5 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 5 RSA is of marginal quality. No records occur in RSA, but the species has been documented over 1 mile from the Alternative 5 RSA.

Low = Suitable habitat within the Alternative 5 RSA is of low quality. There are no known recent occurrences within or near the Alternative 5 RSA.
No Potential = Suitable habitat is not present for the species.

Braunton's Milk-Vetch

Braunton's milk-vetch (Astragalus brauntonii) is a perennial herb that is native to California and has high potential to occur within the Alternative 5 RSA. The species has the California Rare Plant Rank (CRPR) of 1B.1 (rare, threatened, or endangered in California and elsewhere) and is federally listed as endangered. Braunton's milk-vetch occurs in valleys and foothill grasslands, limestone, coastal scrub, and chaparral habitats. It is often found in recent burns or disturbed areas, usually sandstone with carbonate layers. Braunton's milk-vetch typically blooms from January to August at elevations from 15 to 2,100 feet. Suitable habitat occurs within the Alternative 5 RSA and recent records of the species have been observed approximately 0.5 mile east of I-405 in Bel Air Crest and in Fossil Ridge Park approximately 1.5 miles east of I-405, 1 mile south of US-101 (iNaturalist, 2024o).

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) is a perennial herb that is native, and endemic to California and is a CRPR 1B.2 rare species in California. This species has moderate potential to occur within the Alternative 5 RSA and grows in shaded, foothill canyons in Southern California, primarily in the Transverse Range region. It tends to grow on rocky slopes and open areas at elevations from 0 to 5,900 feet and typically blooms from March to June. Suitable habitat is present within the Alternative 5 RSA and records nearby of the species occur approximately 4.5 miles northeast of the Alternative 5 MSF (iNaturalist, 2024q).

Davidson's Bushmallow

Davidson's bushmallow (*Malacothamnus davidsonii*) is a shrub that is native and endemic to California and is a CRPR 1B.2 rare species in California. This species has high potential to occur within the Alternative 5 RSA; an observation from 2021 is located 0.5 mile west of the Alternative 5 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021). This species typically grows in chaparral, oak woodland, and other habitats on slope. It is known from three California regions, the southern San Francisco Bay Area, the Santa Lucia Mountains in Monterey County, and the Transverse Ranges including the San Gabriel Mountains, and the eastern San Fernando Valley, in Los Angeles County. Suitable habitat for this species is present in the Alternative 5 RSA, particularly along I-405 on the Sepulveda Pass in the Santa Monica Mountains.

Chaparral Nolina

Chaparral nolina (*Nolina cismontana*) is a CRPR 1B.2 rare shrub species native to California with high potential to occur within the Alternative 5 RSA. An individual was observed 0.5 mile west of the Alternative 5 RSA in 2020, in Deervale-Stone Canyon Park (iNaturalist, 2024u). This species occurs in coastal sage scrub and open chaparral habitats in foothills from Ventura County south to San Diego County and typically blooms from May to June. Suitable habitat for chaparral nolina is present within the Alternative 5 RSA, mainly in the central portion of the Alternative 5 RSA within the Santa Monica Mountains.

Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 perennial evergreen shrub species with high potential to occur that is native to the South Coast, Peninsular Ranges and San Jacinto Mountains of California. This species occurs in coastal sage scrub and chaparral habitats with sandy, clay or loam soils between 50 and 1,300 feet. Recent observations include one individual located 0.35 mile outside of the Alternative 5 RSA, east of the UCLA Gateway Plaza, (iNaturalist, 2024v) and a second in Kenneth Hahn State Recreation Area, 2.5 miles southeast of RSA (CDFW, 2023a). The former is likely to be a landscaped

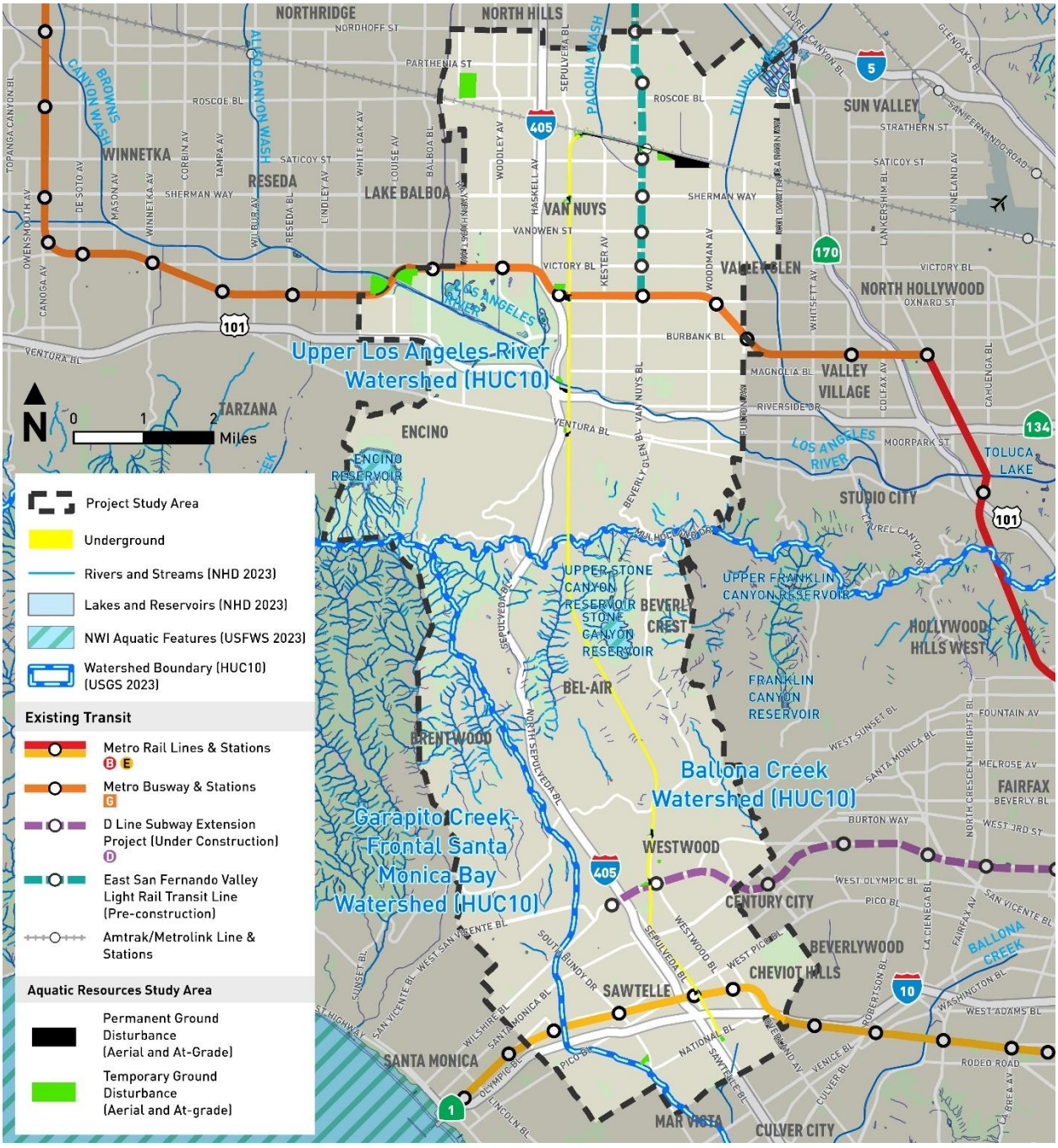
plant due to its location in a yard; the latter was described as a multi-stemmed, wind-cropped, very old individual with other chapparal relic species present.

9.2.5.6 Jurisdictional Resources

The Project Study Area was used to assess for water resources and local conditions that affect hydrology and water availability for the region including watershed context and drainage. For the purposes of the jurisdictional resource evaluation for potential impacts, field surveys occurred within the Ground Disturbance Area portion of the Alternative 5 RSA where direct impacts would occur, and an associated 500-foot buffer on ground disturbance was assessed through desktop analysis of vegetation communities for indirect impacts to potential aquatic resources. The underground tunnel alignment was not included as no impacts are anticipated to water resources.

An online review of the National Hydrography Dataset (NHD) (USGS, 2023) and National Wetlands Inventory (NWI) (USFWS, 2023a) indicates the presence of mapped aquatic features within the Project Study Area. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels in the vicinity of the Alternative 5 RSA (Figure 9-23). Named aquatic resources nearby the Alternative 5 RSA include the Los Angeles River, Pacoima Wash, Encino Creek, and the Sepulveda Channel. However, only the Los Angeles River is located within the Alternative 5 RSA and would be traversed by Alternative 5. The remainder of the aquatic resources within the Alternative 5 RSA are either underground, or ephemeral and unnamed.

Figure 9-23. Alternative 5: National Hydrography Dataset and National Wetlands Inventory Aquatic Features



Source: USFWS, 2023a, 2023b

While the larger Project Study Area includes the Upper Los Angeles River, Ballona Creek, and the Garapito Creek Frontal Santa Monica Bay Watersheds (Figure 9-23), only the Upper Los Angeles River and Ballona Creek Watersheds receive waters within the Alternative 5 RSA. Therefore, discussion is limited to the two watersheds relative to the Alternative 5 RSA. The receiving waters from the Alternative 5 RSA include the Los Angeles River and Ballona Creek with their respective tributaries. The

Los Angeles River crosses the Alternative 5 RSA from west to east, roughly parallel, and adjacent to the US-101, while Ballona Creek is 3 miles south of the Alternative 5 RSA.

Upper Los Angeles River Watershed

The Upper Los Angeles River Watershed is located is the northwest portion of Los Angeles County and covers over 613 square miles. This watershed includes the San Fernando Valley and portions of the San Gabriel and Santa Susana Mountains. The six major tributaries along the river include Tujunga Wash, Burbank Western Storm Drain, Verdugo Wash, Arroyo Secco, Rio Hondo, and Compton Creek. The primary source of input into the Los Angeles River watershed is wet weather runoff originating from direct precipitation, and dry weather inputs from urban runoff, and groundwater upwelling (LADPW, 2022).

The northern portion of the Alternative 5 RSA crosses the Los Angeles River in Reach 5, where the river flows west to east, at the base of the Santa Monica Mountains in the San Fernando Valley. Reach 5 of the Los Angeles River runs through low density residential neighborhoods, the Sepulveda Basin, other commercial developed areas, and under I-405, Sepulveda Boulevard, and Van Nuys Boulevard.

Topography throughout the coastal plain area of Upper Los Angeles River Watershed is generally defined by gradually sloping land from the foothills of the San Gabriel Mountains to the Pacific Ocean. Ground elevations range from 10,000 feet in the San Gabriel Mountains approximately 15 miles east of the Alternative 5 RSA, to mean sea level at the mouth of the Los Angeles River approximately 22 miles south of the Alternative 5 RSA. Most of the coastal plain is less than 1,000 feet in elevation (GLAC, 2014), while the upper portion of the watershed is covered by forest and open space. The majority of land in the Upper Los Angeles River Watershed is developed with urban uses, including the portion of the river that traverses the Alternative 5 RSA (LA County, 2023b).

Ballona Creek Watershed

Ballona Creek consists of a 9-mile-long flood protection channel that drains the Los Angeles Basin south of the Alternative 5 RSA. The Ballona Creek Watershed covers approximately 130 square miles in the western portion of the Los Angeles Basin and is made up by the Culver City, Wilshire, and Hollywood sub-watersheds. The headwaters of the watershed are in the Santa Monica Mountains, including a portion in the Alternative 5 RSA, and Baldwin Hills to the southeast of the Alternative 5 RSA. Most of the Ballona Creek drainage network consists of storm drains, underground culverts, and open concrete channels. However, Ballona Creek does not traverse the Alternative 5 RSA. Ballona Creek is an open channel between Venice Boulevard and Pickford Street and its confluence with Santa Monica Bay (a length of approximately 9 miles); it is located approximately 4 miles south of the Alternative 5 RSA. A few natural channels remain in the Santa Monica Mountains and Baldwin Hills. The Sepulveda Channel, which is mostly channelized and underground, runs along I-405 less than 2 miles south of the Alternative 5 RSA and is a major tributary to the Ballona Creek Watershed.

Riparian Habitats

Although not mapped in the NWI, riparian habitats may be present along many of the jurisdictional features identified in the NWI database. Riparian habitats fall under CDFW jurisdiction, which generally extends to the outer limits of riparian habitats occurring around aquatic features. Such habitats provide valuable buffers around aquatic features and provide specific habitat requirements for many plant and wildlife species, including many of the regional special-status species identified above. Based on Project vegetation mapping, 8.3 acres of undifferentiated riparian habitat are located within the 500-foot buffer on Ground Disturbance Area for Alternative 5 (Figure 10-17). Riparian vegetation is located

approximately 100 feet south of two potential off-site staging yards in the western end of Sepulveda Basin.

The RSA for Alternative 5 would traverse the Los Angeles River north of the US-101. Alternative 5 includes an underground tunnel that would cross under the river and under Sepulveda Boulevard north of US-101. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 5 would traverse the river. The Los Angeles River is a Traditional Navigable Water throughout its entire reach. However, it is only considered a Navigable Water[7] from the river's outlet into the San Pedro Bay to San Pedro Highway Bridge and/or up to 2.5 feet amsl, which is not within the Alternative 5 RSA. (USACE, 2023). Because Alternative 5 proposes traversing below the river (underground tunnel), impacts to the Los Angeles River are not expected.

No potential wetlands or riparian areas were observed throughout the Ground Disturbance Area. Therefore, no wetland delineation forms were required.

Non-wetland jurisdictional features mapped within the Alternative 5 RSA for Alternative 5 are summarized below.

- 0.06 acre (2,745 square feet) of non-wetland Waters of the United States (WOTUS), CDFW streambed, and Regional Water Quality Control Board (RWQCB) waters of the state within Los Angeles River

No other jurisdictional wetlands or waters were observed within the Alternative 5 RSA.

Further details of existing jurisdictional aquatic resources can be found in Appendix A, Aquatic Resources Delineation.

9.2.5.7 Other Protected or Managed Biological Resources

This section provides an overview of other protected or managed biological resources that may occur within the Alternative 5 RSA and were considered in this analysis.

USFWS Critical Habitat

Critical habitat is designated by USFWS for threatened or endangered species listed under the ESA; these areas are considered essential for species conservation (USFWS, 2024b). Critical habitat provides protection to locations necessary for life processes and reproduction where individuals and populations can thrive in habitat that is protected from disturbances. Specifically, it provides cover, shelter, food, water, light, minerals, and other nutritional or physiological requirements for survival of the species, along with sites for breeding and rearing offspring (USFWS, 2024b). Areas currently unoccupied may be included in critical habitat boundaries if it would be needed for species recovery (USFWS, 2024b).

No USFWS-designated critical habitat coincides with the Alternative 5 RSA. The nearest critical habitat for plant species listed under the federal ESA includes Braunton's milk-vetch; this unit is located approximately 5 miles west of the Alternative 5 RSA in Topanga State Park. The nearest critical habitat for wildlife includes western snowy plover (*Charadrius nivosus nivosus*), approximately 3 miles west of the Alternative 5 RSA along the coastline in the City of Santa Monica; southwestern willow flycatcher (*Empidonax extimus*) approximately 5 miles northeast of the Alternative 5 RSA near Hansen Dam in the Valley; Santa Ana sucker (*Catostomus santaanae*) approximately 5 miles northeast of the Alternative 5

[7] The term "Traditional Navigable Water" is used in reference to Section 404 of the Clean Water Act, while the term "Navigable Water" is used in reference to Section 10 of the Rivers and Harbors Act. The entire stretch of the Los Angeles River is considered a Traditional Navigable Water, but only the portion in proximity to its outlet into San Pedro Bay is considered a Navigable Water.

RSA near Hansen Dam in the Valley; and tidewater goby (*Eucyclogobius newberryi*) approximately 7 miles west of the Alternative 5 RSA along Topanga Creek in the Santa Monica Mountains. Also, no USFWS-proposed critical habitat coincides with Alternative 5 RSA.

Since no federally designated critical habitat occurs for any species within the Alternative 5 RSA, no impacts are anticipated; hence, critical habitat is not discussed in the impact evaluation section below.

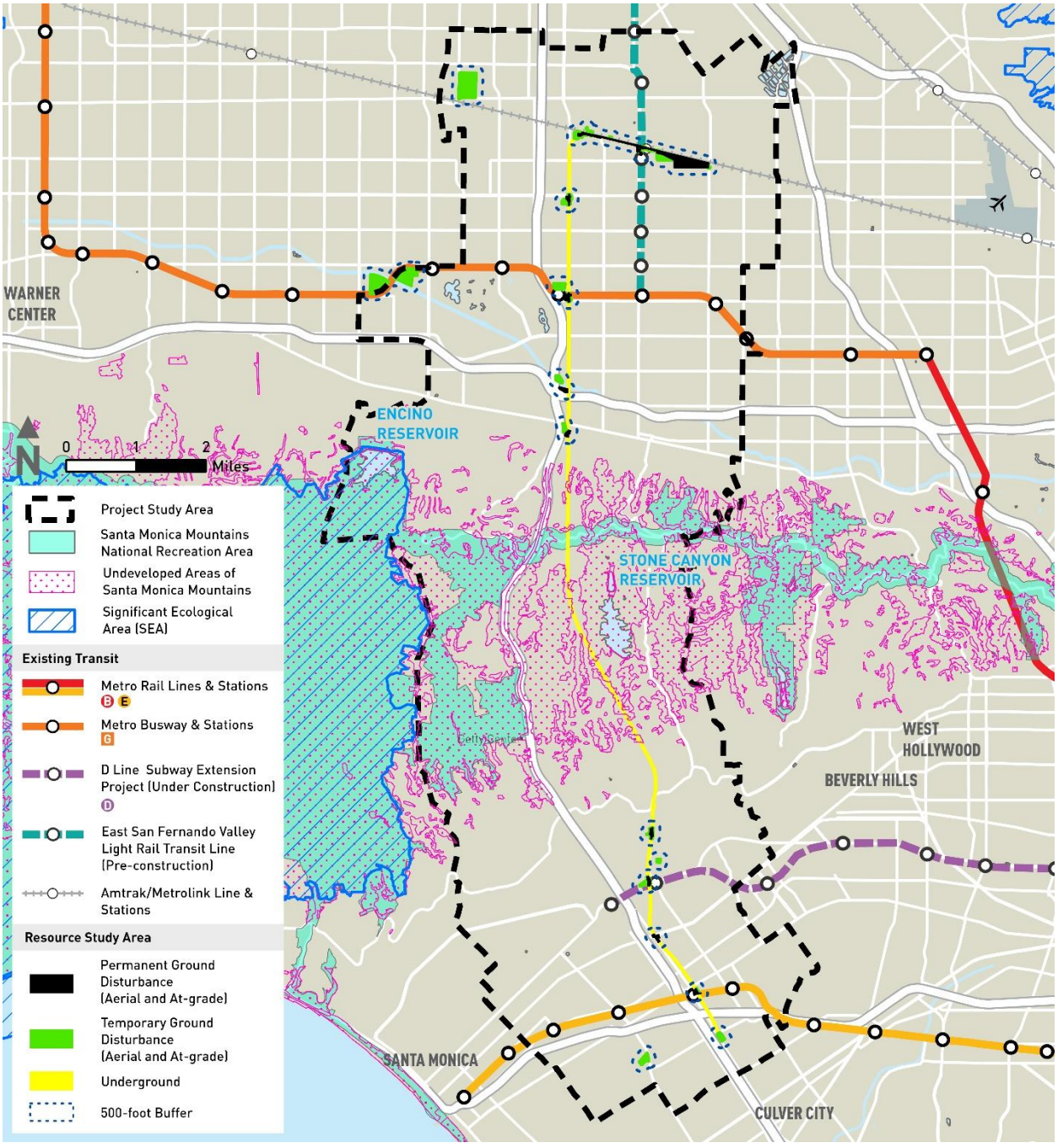
Santa Monica Mountains National Recreation Area

The SMMNRA extends from the Pacific coastline east across the middle of the Alternative 5 RSA, although 1.87 acres of the SMMNRA coincides with the Alternative 5 RSA; the Alternative 5 RSA is an underground tunnel where it intersects with the SMMNRA (Figure 9-24). On the west side of I-405 within the Alternative 5 RSA, two local parks, San Vicente Mountain Park and Westridge-Canyonback Wilderness Park and adjacent conserved lands occur along and extend into the western perimeter of the Alternative 5 RSA. Conserved lands under the SMMNRA also occur along Mulholland Drive and Fossil Ridge Park on the east side of I-405. The various parks and other conserved areas under the SMMNRA umbrella provide scenic vistas, nature viewing, and hiking, biking, and horseback riding opportunities, often through undisturbed native chaparral habitats.

Significant Ecological Areas

As introduced in Section 2 of this report, Los Angeles County-designated SEAs are ecologically important land and water systems that are valuable as plant or animal communities and are often important to the preservation of threatened or endangered species and conservation of biological diversity in the county. The Santa Monica Mountains SEA is outside the 500-foot buffer and does not intersect with the Alternative 5 RSA (Figure 9-24).

Figure 9-24. Alternative 5: Santa Monica Mountains National Recreation Area, Undeveloped Areas within the Santa Monica Mountains, and Los Angeles County Significant Ecological Areas



Source: LA County Planning, 2009; NPF, 2021

Natural Community Conservation Plan/Habitat Conservation Plan Areas

The RSA is not located within the boundary of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan (CDFW, 2023c; USFWS, 2023b).

9.3 Impact Evaluation

9.3.1 Impact BIO-1: Would the project 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 US Fish and Wildlife Service?

9.3.1.1 Operational Impacts

The potential for operational impacts such as injury or mortality due to collisions with vehicles, behavioral and habitat usage modifications due to exposure to noise and vibration from passing trains, habitat degradation due to edge effects, and impacts on movement due to infrastructure are limited for most wildlife species for Alternative 5 since it is predominantly an underground alignment. Anticipated impacts are described below.

Special-Status Invertebrates and Reptiles

Special-status invertebrates, such as Crotch's bumble bee, and special-status reptiles that may occur in habitats along the alignment are not anticipated to be subject to operation-associated direct impacts, including injury or mortality due to collision with vehicles, since the areal extent of suitable habitat that overlaps with Alternative 5 is very limited. The alignment is predominantly underground, with the only aboveground portion located immediately south of the LOSSAN corridor on developed land that is not suitable for these species.

Habitat degradation due to edge effects where native habitats are removed to facilitate construction (see Section 9.3.1.2) will be similarly limited due to the low amount of suitable habitat present along the alignment. Edge effects may include changes to the microclimate due to increase exposure to sun and wind, incursion by nonnative, weedy plant species that alter the vegetation structure, and changes in the distribution and diversity of foraging plant species (for bumble bees) and prey species (for reptiles). These habitat alteration impacts would persist through operation of the facility; however, due to the limited areal extent, this is anticipated to constitute a less than significant impact. Further, indirect habitat degradation would be mitigated through the habitat restoration measures related to construction of Alternative 5.

For these reason, operations-related impacts to special-status invertebrates and reptiles are anticipated to be less than significant.

Special-Status Birds and Bats

Special-status birds (including those protected by the MBTA) and special-status bats listed in Table 9-6 have the potential to be significantly impacted during operations and maintenance of Alternative 5 if nesting birds or roosting bats are present in trees and/or shrubs located at stations or within the MSF that require routine maintenance trimming. Adult birds and bats are highly mobile and are anticipated to be able to relocate away from maintenance trimming activities of their own volition; however, nests, eggs, and nestlings, and bat pups, could be injured, killed, or destroyed by maintenance activities if they are located in the vegetation slated for removal. Additionally, if breeding birds or bats are present in the adjacent areas, individuals may be subject to indirect impacts including exposure to noise, human presence, and dust, which could disrupt natural breeding behaviors such as incubation of eggs and feeding and care of young. In some cases, habitat changes due to vegetation removal could be sufficient to reduce protective cover, resulting in abandonment of nests and eggs.

Since Alternative 5 would be an underground alignment between the UCLA Gateway Plaza Station in the south and the tunnel portal east of Sepulveda Boulevard and south of Raymer Street, vegetation maintenance is not anticipated for this section. No impacts to special-status birds, bats, and other wildlife from noise, vibration and dust are anticipated during operation, since maintenance activities would primarily occur either underground in the tunnel segments, which are at sufficient depth to prevent these effects on the surface (a minimum of 40 feet except as it transitions to the aerial segment), or within developed or paved areas at ground level.

Special-Status Mammals

Impacts to special-status bats are addressed above with special-status birds.

While mountain lions are present within the Alternative 5 RSA, the alignment is underground through the Santa Monica Mountains where suitable habitat is present and they are known to occur. Depth of the tunnel (ranging from 50 feet to 470 feet below ground surface for the Santa Monica Mountains segment) is anticipated to be sufficient to reduce or prevent indirect impacts at the surface from operations noise and vibration. Therefore, there are no impacts to mountain lions anticipated due to operations of Alternative 5.

Special-Status Plants

No impacts to special-status plants during operation, such as crushing or trampling of individual plants during normal maintenance, or tree trimming for maintenance, are expected for this alternative since the majority of the Alternative 5 alignment is underground. At-grade maintenance work would occur within developed or paved areas. While one special-status plant, Nuttall's scrub oak (*Quercus dumosa*), has high potential to be present within the RSA in landscaping or within pockets of native vegetation in developed areas, the at-grade and aerial portion of Alternative 5 is located south of the LOSSAN rail corridor in a highly urbanized area. Tree species inventoried within the area are non-native ornamental species (Appendix B). Since Alternative 5 would be an underground alignment between the UCLA Gateway Plaza Station in the south and the tunnel portal east of Sepulveda Boulevard and south of Raymer Street, no significant impacts to special-status plants are expected during operation of Alternative 5.

Mitigation Measures

MM BIO-1 and MM BIO-2, presented in Section 9.4, are included to reduce potentially significant operations-related impacts that could occur to nesting birds and roosting special-status bats from maintenance vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro. MM BIO-3 would reduce operational-related impacts to special-status trees from vegetation maintenance to less than significant through application of mitigation as determined in the applicable local ordinance or policy where the impact would occur. Therefore, with the implementation of MM BIO-1, MM BIO-2, and MM BIO-3, operational impacts of Alternative 5 on special-status species would be reduced to a less than significant level.

9.3.1.2 Construction Impacts

Impacts to vegetation within the Ground Disturbance Area have the potential to affect sensitive vegetation communities, as well as special-status wildlife or plant species, both directly and through modifications to their habitat. Construction activities for Alternative 5 could result in significant impacts to special-status wildlife including nesting birds, special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potentially significant impacts include

injury to or mortality of individuals, habitat loss due to permanent vegetation removal, behavioral or health modifications from noise pollution or exposure to fugitive dust from prolonged heavy equipment operation, and behavioral modifications due to increased human presence within species habitats during construction.

Since Alternative 5 is an underground alignment, Ground Disturbance Area is only present within station footprints, staging areas, the tunnel portal, the MSF, and the approximately 0.5-mile segment of aerial alignment from the tunnel portal into the MSF. Construction of the three tunnel segments would be underground except for launch and extraction sites located within stations or staging areas that are included in the Ground Disturbance Area. Clearing and grading of native vegetation could be required within the Ground Disturbance Area for construction of Alternative 5 components, including structural support beams for the guideway track, the tunnel portal, staging yards, the aerial HRT station, the MSF, and "cut-and-cover" construction for underground stations. While most of the vegetation that could be impacted consists of non-native and ornamental landscaping, some native vegetation is also present within the Ground Disturbance Area.

Other anticipated construction impacts related to the construction of Alternative 5 include the possibility of increased noise, dust, and vibration during at-grade impacts such as drilling of the aerial track support structures, "cut-and-cover" installation of the stations, and at the TBM launch and extraction locations for the tunnel excavation (launch sites at National Boulevard and Sepulveda Boulevard in the south, Ventura Station in the north, extraction site at the UCLA Gateway Plaza Station). While these areas are developed and therefore less likely for special-status species to be present, trees are present that provide potential habitat for special-status birds.

For construction of the underground tunnel, impacts of noise, dust, and vibration are not expected at surface levels due to tunnel depth except at the tunnel portal near the Metrolink ROW. Excessive noise generated from the drilling and heavy equipment operation could significantly disturb avian species and/or other special-status species who are dependent on auditory signals during essential daily activities. Vibration-related disturbance from drilling could also disrupt their normal behavioral patterns near the TBM launch and extraction sites; impacts through the Santa Monica Mountains are not anticipated due to tunnel depth, which ranges from 50 feet to 470 feet below ground surface. Construction-related dust (associated with construction of stations, vegetation clearing, grading, etc.) could significantly impact habitat quality by depositing on vegetation, which may reduce photosynthesis and increase leaf temperature, making vegetation more susceptible to drought; however, fugitive dust effects on native vegetation are also only anticipated where the tunnel surfaces, not along the majority of the alignment (Farmer, 1993). Evaluation of the Project's impact on wildfire risk and occurrence is discussed in the wildfire chapter of the Safety and *Sepulveda Transit Corridor Project Safety and Security Technical Report* (Metro, 2025b).

Vegetation Communities/Land Cover Types and Sensitive Vegetation Communities

Direct impacts to vegetation communities would occur within the Ground Disturbance Area; acreages of temporary and permanent impacts to vegetation communities within Alternative 5 are detailed in in Table 9-9. Due to the sparse vegetation, lack of diversity, and continued anthropogenic disturbance, special-status wildlife and plant species are less likely to be found in developed, agricultural, and ruderal land cover types. Approximately 86 percent (186.5 acres) of acreage for Alternative 5 planned for ground disturbing activities consists of developed, agricultural, and ruderal vegetation. Excluding these areas, construction of Alternative 5 is anticipated to result in 29.8 acres of temporary impacts and no permanent impacts. Within the vegetated areas subject to impacts, approximately 10 percent (26.2

acres of temporary impacts) is California annual grassland. The one native vegetation community within the Ground Disturbance Area, coyote brush shrubland, represents just over 1 percent of the cover classes that will be impacted, with 3.6 acres of temporary impacts. Indirect impacts to vegetation communities may also occur during construction activities. For example, fugitive dust deposition on foliage may reduce photosynthesis and increase plant vulnerability to drought. Additionally, vegetation removals may increase edge effects, including incursion of nonnative, weedy plants that compete with natives for space and resources.

There are no sensitive vegetation communities within the Alternative 5 Ground Disturbance Area. However, one vegetation community has potential to be considered sensitive (** in Table 9-9) depending on the associated codominant species present (Sections 3.2.2 and 9.2.5.4). Up to an additional 3.6 acres of coyote brush scrubland, a potentially sensitive community, is located within potential off-site staging yard N2 at the western end of the Sepulveda Basin. For this analysis, Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping.

The removal and degradation of native and sensitive vegetation communities would constitute potentially significant impacts.

Table 9-9. Alternative 5: Impacts on Vegetation Communities within Resource Study Area

Vegetation Community/Land Cover Type [a]	Permanent Impacts (acres)	Temporary Impacts (acres)[b]	Total Impacts (acres)[b]	Percent of Total Project Impacts
Developed	86.9	28.1	115.0	53.1
Agricultural Land	0	65.8	65.8	30.4
Ruderal	0	5.7	5.7	2.7
Developed, Agricultural, Ruderal Total	**86.9**	**99.7**	**186.5**	**86.2**
California Annual Grassland	0	26.2	26.2	12.1
Coyote Brush Shrubland**	0	3.6	3.6	1.7
Vegetation Total	**0**	**29.8**	**29.8**	**13.8**
GRAND TOTAL	**86.9**	**129.5**	**216.3**	**100.0**

Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in calculations due to rounding errors.

** Potential sensitive vegetation community based on codominant species on-site.

Special-Status Invertebrates

One special-status invertebrate, Crotch's bumble bee, has potential to be present within the Alternative 5 RSA during construction activities. Despite having a relatively narrow range, this species is known to occupy a wide variety of natural and disturbed habitat for nesting and foraging and could be present throughout the RSA in undeveloped areas where pavement is not present and the earth is not regularly maintained through grading, tilling or planting. Based on their broad range of suitable habitat and generalist foraging behavior, Crotch's bumble bee is likely to forage throughout the RSA where preferred flowering plants are present (e.g., native sage species [*Salvia* spp.], milkweeds [*Asclepias* spp.], and plants within the pea family [*Fabaceae*]) and may nest where abandoned rodent burrows are present.

Individuals in occupied burrow nests or overwintering queens in surface soils could be crushed or trapped during construction if present within the Ground Disturbance Area. Additionally, foraging Individuals also could be injured or killed if they are foraging during vegetation clearing activities. This species could also be impacted by the removal of nectar sources and nests in the Ground Disturbance Area resulting from construction of Alternative 5 features including cut-and-cover construction associated with tunnel portal transition to aerial guideway, stations, and construction staging locations. Ground-disturbing impacts from grading and vegetation clearing throughout the RSA could impact individuals and would likely result in loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for Crotch's bumble bee.

The loss of individual Crotch's bumble bees and suitable habitat for this species would constitute a significant impact.

Special-Status Reptiles

Three special-status reptiles are known to occur and two have a high or moderate potential to occur within the Alternative 5 RSA; individuals of these species may be present during construction activities. Reptiles present during construction activities could be directly injured or killed due to collisions with vehicles and equipment or during vegetation clearing activities. Species that shelter in burrows or under debris could be entrapped and suffocate or be crushed during grading activities; buried nests could similarly be crushed or destroyed. Additionally, if individuals become entrapped in open trenches or excavations during construction activities, they could be subject to injury or mortality due to dehydration, opportunistic predation, inability to properly thermoregulate, starvation, or other causes associated with constrained movement. Indirect impacts could include disruption of normal feeding, basking, sheltering, and breeding behaviors due to avoidance of excessive noise and vibration, fugitive dust, and increased human presence. Normal movement patterns throughout a home range also may be disrupted temporarily by avoidance of areas adjacent to construction activities, or permanently by habitat structure modifications. During construction, special-status reptiles also may be subject to higher predation rates by opportunistic predators such as common ravens (*Corvus corax*), coyote, or skunk, that could be attracted to work areas if food debris is present.

Two of these species, southwestern pond turtle and two-striped garter snake, are most likely to occur near aquatic resources such as the ponds in the Sepulveda Basin. Since aquatic resources are limited in Alternative 5 and the alignment is underground adjacent to Sepulveda Basin, impacts to these two species are expected to be less than significant.

- Southwestern pond turtle (*Actinemys pallida*, FP, SSC) is known to occur in the Alternative 5 RSA in ponds or other aquatic habitat found within UCLA campus. This species could be impacted by ground disturbance activities within the Alternative 5 RSA including by construction of structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, and stations. This species has potential to use upland habitat for nesting in the Sepulveda Basin at the N1 and N2 construction staging locations where it could be impacted by ground-disturbance activities such as vegetation removal, destruction of buried nest sites, or degraded water quality.
- Two-striped garter snake (*Thamnophis hammondii*, SSC) has moderate potential to occur along the Santa Monica Mountains and could be impacted by the removal of vegetation and ground-disturbance activities occurring along the Ground Disturbance Area for Alternative 5 features, such as structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, stations, the MSF, and construction staging locations.

Based on habitat requirements, the remaining three species are most likely to be found in the Sepulveda Pass and Santa Monica Mountains. However, a broad range of acceptable habitats could result in potentially significant impacts in any location with ground disturbance. The clearing of vegetation could result in injury or mortality of individuals, disruptions of natural behaviors, and loss of suitable habitat that could be used for nesting, breeding, sheltering, and/or foraging for the following three special-status reptiles:

- Southern California legless lizard (*Anniella stebbinsi*, SSC) has high potential to occur in loose soil, sand and leaf litter in patches of chaparral and coastal scrub in the Alternative 5 RSA, such as those associated with construction staging locations. This species could be impacted by ground disturbing activities within these patches, such as drilling, grading, pile driving, and excavating for Alternative 5.
- Coastal whiptail lizard (*Aspidoscelis tigris stejnegeri*, SSC) is known to occur in the southern and central portions of the Alternative 5 RSA and has potential to occur throughout. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring for construction and installation of Alternative 5 features, including structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, stations, the MSF, and construction staging locations.
- Coast horned lizard (*Phrynosoma blainvillii*, SSC) is known to occur in the Alternative 5 RSA in the south and central portions and has the potential to occur throughout the Alternative 5 RSA during construction. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring along the Ground Disturbance Area for Alternative 5 features such as structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, stations, the MSF, and construction staging locations. Coast horned lizards are particularly vulnerable to injury or mortality due to vehicle collisions since their defensive strategy is to rely on natural camouflage and remain still when approached by potential predators.

The loss of individuals and suitable habitat for these special-status species would constitute a significant impact.

Special-Status Birds

One special-status bird species was identified as present and eight have high potential to occur within the Alternative 5 RSA. Based on habitat requirements for these nine species, they are likely to be found throughout the RSA in transit, resting, and/or foraging from the Los Angeles National Cemetery in the south to the Sepulveda Basin in the north. Birds in transit are unlikely to be affected by construction activities; adults are highly mobile and can be expected to relocate away from construction activities of their own volition. However, migratory individuals may experience temporary or permanent loss of transitory habitat. If overwintering burrowing owls are present, individuals could be entrapped and suffocate or be crushed if burrows are present in the work areas during grading and vegetation removal. Additionally, grading could result in loss of suitable wintering burrows for migratory burrowing owls. If native birds breeding within or adjacent to work areas, nests, eggs, and nestlings would be vulnerable to destruction, injury, or mortality if they are present during vegetation clearing and other construction activities. Ground nests may be vulnerable to crushing, trampling, or destruction by pedestrians and vehicles. Nests in adjacent areas also may be exposed to noise, fugitive dust, human presence, and vibration that could disrupt natural breeding behaviors including incubation of eggs and care and feeding of young; these disruptions could result in failure of a nest to successful produce young. Excessive disruption, or substantial changes in habitat during the nesting period, could also result in abandonment of nest sites, eggs, or young. Further, impacts associated with clearing and grading of

vegetation adjacent to I-405 would likley result in loss of suitable habitat used for nesting, breeding, shelter, and/or foraging for the following nine special-status avian species and nesting birds protected under the MBTA:

- Tricolored blackbird (*Agelaius tricolor*, state threatened and SSC) has high potential to occur while flying over in transit to foraging grounds in freshwater marshes, freshwater lakes, and agricultural fields in the Sepulveda Basin Wildlife Preserve west of the Alternative 5 RSA. This species could be impacted construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 5 features including off-site staging yards N1 and N2.
- Burrowing owl (*Athene cunicularia*, state candidate and SSC) has high potential to occur in California annual grassland and coyote brush shrubland at the off-site staging yards N1 and N2 in the northern portion of the Alternative 5 RSA. This species could be impacted by construction noise and activity, removal of burrows, and ground-disturbance activities during construction of Alternative 5 features at these staging areas. Impacts to nests and nestlings are not anticipated as the RSA is outside the breeding range for this species; only overwintering adult burrowing owls are anticipated to occur. If burrowing owls are present in burrows during construction, individuals could be trapped and suffocate or be crushed during vegetation clearing, grading, and other initial ground disturbance.
- Swainson's hawk (*Buteo swainsoni*, state threatened) has high potential to occur throughout the Alternative 5 RSA during migration, particularly in grasslands. This species could be impacted construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 5 features including stations and off-site staging yards N1, N2, and N4.
- Northern harrier (*Circus hudsonius*, SSC) has high potential to occur throughout the Alternative 5 RSA during migration, particularly in grasslands. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 5 features including off-site staging yards N1, N2, and N4.
- Olive-sided flycatcher (*Contopus cooperi*, SSC) has high potential to occur throughout the Alternative 5 RSA during migration. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 5 features, such as structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, stations, staging areas, and the MSF. Breeding habitat is not expected to be impacted due to its absence.
- Bald eagle (*Haliaeetus leucocephalus*, state endangered and Fully Protected) has high potential to occur near bodies of water, particularly in the Sepulveda Basin Wildlife Preserve, and as a flyover in the Alternative 5 RSA. This species is not expected to be impacted during construction of Alternative 5 since the RSA is an underground tunnel in the vicinity of the Sepulveda Basin, as are nearby TPSS sites 7 and 8. Construction staging yard 5 is located across I-405, between US-101 and the Los Angeles River, and activities at this location are unlikely to affect in-transit birds or those within the Sepulveda Basin. Breeding habitat is absent from the RSA.
- Loggerhead shrike (*Lanius ludovicianus*, SSC) has high potential to occur and breed in grasslands or chaparral, particularly in the Santa Monica Mountains and in the Sepulveda Basin Wildlife Preserve. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 5 features such as stations, construction staging yard 5, and off-site staging yards N1, N2, and N4.

- Vermilion flycatcher (*Pyrocephalus obscurus*, SSC) is known to occur in the RSA near off-site staging yards N1 and N2 and has potential to occur and breed in a variety of open habitats in the Alternative 5 RSA, including parks and cemeteries. This species could be impacted from vegetation removal during construction for Alternative 5 features such as stations, cut-and-cover construction associated with tunnel portal transition to aerial guideway, and staging areas including yard 5 and off-site staging yards N1, N2, and N4.
- Least Bell's vireo (*Vireo bellii pusillus*, FE and SE) has high potential to occur and breed in riparian habitat in the Sepulveda Basin. This species could be impacted by the construction noise and activity, removal of vegetation, and ground-disturbance activities occurring for Alternative 5 features including stations and staging yards, specifically yard 5, N1, and N2 adjacent to the Los Angeles River.

The loss of nests, eggs, or nestlings, impacts to natural breeding behaviors, eviction from wintering burrows, and loss of suitable habitat for these special-status species would constitute a significant impact.

Special-Status Mammals

Three special-status mammals were identified as likely to be present within the Alternative 5 RSA, including mountain lion, silver-haired bat, and hoary bat. Mountain lions are known to occur within the Santa Monica Mountains, while the silver-haired and hoary bat have broader habitat requirements and have potential to forage in both natural and developed habitats. Within the Sepulveda Pass and Santa Monica Mountains, special-status mammals could occur in or proximate to work areas along I-405. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway. Within the developed northern and southern ends of the projects, special-status bats could be present in ornamental street trees or on existing infrastructure, such as bridges and buildings. Individuals may be subject to injury or mortality if they are present as roosting adults during vegetation clearing activities. Roosting adults also may be disturbed by construction-related noise and vibration, causing them to flee roosts during daylight hours. Maternal roosts would also be vulnerable to injury or mortality if present, as pups are unable to take flight and would be likely to be killed if present. Suitable foraging, sheltering, and roosting habitats have potential to be removed during vegetation clearing and grading, or temporarily impacts by construction noise, fugitive dust, and increased human presence. Nighttime construction lighting also may impact foraging habitat by attracting prey species, which may attract some bat species and repel others.

Individual larger mammals, including mountain lions, are unlikely to be directly impacted by construction activities as they are highly mobile and can be anticipated to relocate away from work areas of their own volition. Individuals are not likely to be vulnerable to collisions with slower moving construction equipment and vehicles. However, natural foraging, sheltering, and breeding behaviors may be disrupted by construction activities, both temporarily through avoidance of areas with construction-related noise, human presence, vibration, and fugitive dust, and permanently through changes in habitat due to vegetation clearing and grading.

The clearing of vegetation in the Sepulveda Pass and along city streets and demolition of structures with suitable roosts would also likely result in loss of suitable habitat that could be used for roosting, breeding, shelter, and/or foraging for the following three special-status mammals:

- Silver-haired bat (*Lasionycteris noctivagans*, WBWG medium priority) is known to occur in the northern and southern portions of the Alternative 5 RSA. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 5 features, such as structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, stations, staging areas, roadway configuration changes, and the MSF.
- Hoary bat (*Lasiurus cinereus,* WBWG-Medium Priority) is known to occur in the RSA in Sherman Oaks and has potential to occur in the Santa Monica Mountains and in portions of the Alternative 5 RSA with large mature trees. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 5 features, such as structural support beams for the guideway track, stations, cut-and-cover construction associated with tunnel portal transition to aerial guideway, staging areas, roadway configuration changes, and the MSF.
- Mountain lion (*Puma concolor*, state candidate for listing) is known to occur in the Alternative 5 RSA in the Santa Monica Mountains. This species is unlikely to be significantly impacted by the construction of Alternative 5 features since the RSA is an underground alignment through the Santa Monica Mountains from the southern terminus to south of Raymer Street and the LOSSAN corridor in Van Nuys. Alternative 5 is unlikely to result in significant impacts to suitable habitat due to the small size and linear nature of the clearing and grading activities in comparison to the species large home range size. The construction and operation of Alternative 5 is unlikely to significantly impact mountain lion movement and usage of wildlife corridors based on the underground configuration without associated ground-disturbance activities through the Santa Monica Mountains from UCLA Gateway Plaza Station in the south until the tunnel portal located east of Sepulveda Boulevard and south of Raymer Street. Movements of other vertebrate species could be impacted (evaluated in Section 9.3.4).

The loss of suitable habitat for silver-haired bats and hoary bats would constitute a significant impact.

Special-Status Plants

Six special-status plant species were identified with medium or high potential to occur within the Alternative 5 RSA; none were identified as present. Based on habitat requirements for these six species, they are most likely to occur in chaparral and/or coastal sage scrub, which occurs on the Project in the Sepulveda Pass and could occur in or proximate to work areas along I-405 in the Santa Monica Mountains. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway. Clearing and grading of vegetation would also be required for construction of the structural support beams for the guideway track, staging yards, TPSSs, and aerial MRT stations; although vegetation to be impacted is largely non-native and/or ornamental landscaping, native vegetation is also present. If individuals are present during clearing and grading activities, they could be subject to trampling, crushing, and removal. Individuals present in adjacent areas may be exposed to fugitive dust, which can settle on vegetation and interrupt natural photosynthesis. Following vegetation clearing, adjacent areas also may be subject to edge effects including higher exposure to sun, dust, and wind, and incursion by nonnative, weedy species, which can increase competition for space and resources and decrease habitat value for special-status plants.

The clearing of vegetation in the Sepulveda Pass could result in loss of suitable habitat for the following special-status plant species:

- Braunton's milk-vetch (*Astragalus brauntonii*, federally endangered, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 5 features including structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, and stations.
- Slender mariposa-lily (*Calochortus clavatus* var. *gracilis*, CRPR 1B.2) has moderate potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 5 features including structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, and stations.
- Davidson's bushmallow (*Malacothamnus davidsonii*, CRPR 1B.2) has high potential to occur in the Santa Monica Mountains, the Sepulveda Basin, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for Alternative 5 features such as structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, and stations.
- Chaparral nolina (*Nolina cismontana*, CRPR 1B.2) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 5 features including structural support beams for the guideway track, cut-and-cover construction associated with tunnel portal transition to aerial guideway, and stations.
- Nuttall's scrub oak (*Quercus dumosa*, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation in the Ground Disturbance Area for construction of Alternative 5 features including structural support beams for the guideway track, the tunnel portal and associated roadway configuration changes, and stations.
- Sanford's arrowhead (*Sagittaria sanfordii*, CRPR 1B.1) has high potential to occur where shallow freshwater with an earthen bottom is present, such as the Los Angeles River adjacent to the off-site staging yards N1 and N2. This species could be impacted by dust associated with removal of vegetation within N1 and N2 and inadvertent impacts from construction within the staging areas (e.g., unnecessary erosion, runoff and sedimentation to an aquatic resource).

The loss of individuals or suitable habitat for these special-status plants would constitute a significant impact.

Mitigation Measures

As described in Section 9.4, mitigation measures would be implemented to reduce construction-related impacts to special-status plant and wildlife species and their habitats to a less than significant level through establishment of survey and monitoring requirements (MM BIO-4, MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-17, and MM BIO-29); monitoring of bird nests and determination if no-disturbance buffers require adjustments (such as due to noise from construction activities) (MM BIO-4); education and training of personnel about Project 's biological concerns and requirements (MM BIO-18); establishment and demarcation of Environmentally Sensitive Areas (MM BIO-16); and creation of a habitat restoration plan (MM BIO-9).

General construction measures to protect special-status species include protection from wildfire (MM BIO-19), domestic pets (MM BIO-20), night lighting (MM BIO-22), invasive plants (MM BIO-23), entrapment (MM BIO-26), vehicular collisions (MM BIO-25), dust (MM BIO-24), and construction-related trash (MM BIO-27).

9.3.1.3 Maintenance and Storage Facility

Maintenance of the Alternative 5 HRT vehicles and equipment would occur at the MSF and may occasionally require maintenance trimming of ornamental trees and shrubs located within the MSF. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected birds protected from operational-related activities through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, described in Section 9.4, are included to reduce operations-related impacts to nesting birds and special-status bats from vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The MSF for Alternative 5 would be located on developed property located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east; no habitat modifications or removal would be required for the construction of the MSF. No impacts to special-status plant species would result from the construction of the MSF since suitable habitat is not present. Roosting bats and MBTA-protected nesting birds have potential to be impacted during construction of the MSF if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed; impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, presented in Section 9.4, are included to reduce construction-related impacts to special-status bats and nesting birds from vegetation trimming or removal to a less than significant level.

9.3.2 Impact BIO-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, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

There is no riparian habitat within the Alternative 5 Ground Disturbance Area; 8.3 acres of undifferentiated riparian habitat is located in the RSA in the 500-foot buffer. Sensitive natural vegetation communities are not present within the Ground Disturbance Area or 500-foot buffer for Alternative 5. One vegetation community, coyote brush shrubland, is present within the Alternative 5 Ground Disturbance Area has potential to be sensitive with further refinement. This potentially sensitive community is assumed to be as such for discussion of impact analysis.

9.3.2.1 Operational Impacts

No riparian habitat or sensitive natural communities occur within the Ground Disturbance Area, resulting in no operational impacts from maintenance vegetation trimming. Since the one potentially

sensitive vegetation community is only present within potential off-site staging yard N2 (located in the western end of the Sepulveda Basin), no operations work is associated with this location; there are no impacts to sensitive vegetation communities from operation of Alternative 5.

9.3.2.2 Construction Impacts

No riparian habitat occurs within the Ground Disturbance Area of Alternative 5; 8.3 acres of undifferentiated riparian habitat are located in the RSA, specifically in the Los Angeles River at the western end of Sepulveda Basin, in the 500-foot buffer for off-site staging yards N1 and N2 (Figure 10-17). Clearing of vegetation for staging locations N1 and N2 would occur approximately 100 feet from the riparian habitat; no riparian habitat is likely to be present within the staging yard footprints as the areas are previously disturbed (as indicated through vegetation mapping of agricultural and California annual grasslands). Therefore, direct impacts such as removal of riparian vegetation are unlikely.

No sensitive natural vegetation communities are known to occur within the Ground Disturbance Area or 500-foot buffer for Alternative 5. One potentially sensitive community, coyote brush shrubland, occurs within off-site staging yard N2 located adjacent to the Los Angeles River at the western end of Sepulveda Basin; 3.6 acres are present within the Alternative 5 Ground Disturbance Area. Clearing of vegetation in this area for construction activities would likely result in loss of sensitive natural communities within the Ground Disturbance Area of the Alternative 5 RSA. Vehicle tires on equipment used for construction of Alternative 5 have potential to transport invasive plant seeds into native habitat at this location during clearing and grading. Additionally, sensitive natural communities may be exposed to particulate matter and dust from active construction within the staging yard. Dust and particulate matter deposition on foliage can disrupt photosynthesis and other processes critical for plant survival (Farmer, 1993).

The Project may cause indirect impacts to riparian habitat as a result of excessive dust from construction activities within the yards following vegetation clearing; this would be a less than significant impact. The Project also has potential to cause significant impacts to sensitive vegetation communities due to clearing for N2 staging yard. MM BIO-10, MM BIO-16 through MM BIO-18, and MM BIO-23 through MM BIO-25, described in Section 9.4, are included to reduce construction-related impacts to sensitive natural communities to a less than significant level through establishment of Environmentally Sensitive Areas, biological monitoring of work within these communities, environmental training to Project workers, protection from invasive weeds, and protection from dust from speeding or other sources.

9.3.2.3 Maintenance and Storage Facility

The MSF for Alternative 5 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. No riparian habitat or sensitive natural communities are present within the Ground Disturbance Area or the 500-foot buffer of the MSF. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF.

9.3.3 Impact BIO-3: Would the project 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?

9.3.3.1 Operational Impacts

There are no state or federally protected wetlands within the Ground Disturbance Area for Alternative 5; therefore, there would be no impacts to protected wetlands related to the operation of Alternative 5.

However, non-wetland waters do occur in the Alternative 5 Ground Disturbance Area. Alternative 5 will traverse the Los Angeles River north of US-101 and includes an underground alignment that will cross under the river via tunnel, and under Sepulveda Boulevard north of US-101. The Los Angeles River and is a WOTUS under the jurisdiction of the USACE, RWQCB, and CDFW. As Alternative 5 is underground at the crossing of the river, operations would not result in significant impacts to the course, location, or conditions of the Los Angeles River.

No other non-wetland jurisdictional features occur in the Alternative 5 Ground Disturbance Area. Thus, there would be no operations-related impacts to non-wetland waters.

9.3.3.2 Construction Impacts

The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 5 traverses the river; no wetlands are associated with the river at this location. There are no state or federally protected wetlands that occur within the Ground Disturbance Area for Alternative 5; consequently, no impacts to wetlands impacts are anticipated from construction of Alternative 5.

The Los Angeles River is considered WOTUS under the jurisdiction of the USACE, RWQCB, and CDFW. A total of 0.06 acres of non-wetland waters associated with the Los Angeles River is located within the Alternative 5 Ground Disturbance Area. However, because Alternative 5 is underground at the crossing of the Los Angeles River, no direct or indirect construction-related impacts to the river bed or banks is anticipated. As no other non-wetland jurisdictional waters occur within the Alternative 5 Ground Disturbance Area, tunneling under the Los Angeles River will avoid construction-related impacts to jurisdictional, non-wetland waters for Alternative 5.

9.3.3.3 Maintenance and Storage Facility

The MSF for Alternative 5 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Since there are no wetlands or non-wetland waters present within the Ground Disturbance Area of the MSF, no impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of the MSF.

9.3.4 Impact BIO-4: Would the project 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?

The SMMNRA and the Santa Monica Mountains overall represent a regional connectivity corridor with respect to habitat patches. The SMMC habitat linkage planning map (SMMC, 2021) has identified several potential wildlife corridors within the Santa Monica Mountains in the Alternative 5 RSA. Since Alternative 5 would be an underground configuration with no associated ground disturbance in the mountains between the UCLA Gateway Plaza Station and the Ventura Boulevard/Sepulveda Boulevard Station, impacts to these wildlife corridors are not anticipated. Habitat for nesting and roosting bats and birds is present in the aerial portion of the project and at areas associated with ground disturbance for the underground tunnel, in the form of vegetation such as ornamental trees and infrastructure such as buildings and bridges.

9.3.4.1 Operational Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 5 RSA. Thus, no operations-related impacts to the movement of resident or migratory fish is anticipated for Alternative 5.

Native Resident or Migratory Wildlife

Wildlife movement of large mammals, specifically mountain lions, is unlikely to be impacted by operational activities since the Alternative 5 traverses the Santa Monica Mountains underground with the tunnel operating at depths ranging from approximately 470 feet as it passes under the Santa Monica Mountains to 50 feet near UCLA. Noise and vibration would not be evident at surface level due to these depths of operation. Due to the tunnel portal location by Raymer Street, where it transitions to an aerial guideway, impacts to wildlife movement are anticipated to be minimal and confined to the immediate area. While the aerial guideway from the portal to the MSF could dissuade wildlife during operation, this location is already highly developed with the LOSSAN corridor present. Elusive wildlife species like bobcats or mountain lions are unlikely to be present in northern extent of the alignment regardless of guideway presence. More adaptable, urbanized species, such as coyote and raccoons, are more likely to be resilient to guideway disturbance since the aerial guideway is in a highly developed area with high levels of baseline disturbance.

The Sepulveda Basin Recreation Area is a potential local movement corridor, with habitat for avian species, coyotes, and herpetological species. The eastern edge of the Sepulveda Basin Recreation Area is adjacent to the Alternative 5 RSA, just outside the 500-foot ground-disturbance buffer. The operation of Alternate 5 would be underground when adjacent to the refuge and, therefore, is not anticipated to affect movement corridors.

Special-status bats and MBTA-protected birds have the potential to occur in the Alternative 5 RSA during operation of Alternative 5. Operations-related activities associated with Alternative 5, such as vegetation removal or trimming, would be restricted to the aerial guideway from the tunnel portal south of Raymer Street to the MSF and at-grade components such as the Van Nuys Metrolink/Amtrak, underground station entrances, and the MSF. Vegetation maintenance within the aerial segment could result in significant impacts to special-status bats and nesting birds due to the removal of potential nesting, roosting, and foraging habitat. However, vegetation maintenance would not be required for the remainder of the alignment, as the HRT vehicles and stations would be underground, where habitat is not present.

The aerial guideway associated with Alternative 5 could hinder to avian movement. For regional movement corridors, this alignment would run west to east within the Alternative 5 RSA and, therefore, would be perpendicular to the primary direction of avian movement for migrating birds. Most bird species would migrate above the height of the aerial guideway (45 to 55 feet above the existing ground level), so disruptions are expected to be minimal. Lights on the vehicles or guideway are unlikely to pose a risk of disorienting birds during migration periods (early April through late May and mid-August through early November), since the aerial guideway on Alternative 5 is located within a highly developed area where light pollution is abundant. Dispersing local resident or younger, recently fledged birds have potential to collide with the guideway track or vehicles while flying along local movement corridors.

If special-status bat species have roosting or maternity habitat adjacent to the guideway, or if individuals are commuting or foraging in flyways (e.g., roads through or alongside tree stands, riparian corridors)

adjacent to the guideway, impacts to bats could occur from vehicle collisions (Caltrans, 2019). One special-status migratory bat species, the hoary bat, has moderate potential to occur within the Alternative 5 RSA during migratory flyover events. In an urban environment, street trees as well as park trees have been shown to be important for bats; spacing between street trees combined with urban lighting provides space for insects to aggregate, providing ample foraging opportunities for hoary bats (Moretto et al., 2019). Hoary bats have been documented by the Natural History Museum of Los Angeles in highly urban, park-deprived settings including South L.A. (Ordeñana, 2018). Artificial lighting on guideway structures and within vehicle during operation on the aerial portion could negatively affect adjacent bat roosting locations. However, the aerial guideway of Alternative 5 is only present for approximately 0.5-mile segment between Sepulveda Boulevard and the MSF. Impacts to movement corridors for special-status birds, including those covered under MBTA, and special-status bats during operations are anticipated to be less than significant due to the underground stations and alignment for all but 0.5 mile of Alternative 5.

MM BIO-1 and MM BIO-2, described in Section 9.4, are included to reduce operations-related impacts to migratory wildlife species from aerial train presence to a less than significant level through limiting of vegetation trimming to outside of nesting bird and roosting season where feasible and installation of appropriate anti-collision devices to aerial vehicles and support structures where an aerial alignment is present.

9.3.4.2 Construction Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 5 RSA. Thus, no construction-related impacts to the movement of resident or migratory fish is anticipated for Alternative 5.

Native Resident or Migratory Wildlife

Construction of the three underground tunnel segments and associated TPSSs for Alternative 5 would be underground except for TBM launch and extraction sites (located in staging yards or stations). The Ground Disturbance Area associated for the north-south section of the alignment, where the best quality habitat within Alternative 5 would be located, would include cut-and-cover construction of the seven underground stations and clearing and grading of construction staging areas. Construction of the aerial guideway, stations, staging areas, and MSF could potentially impact wildlife movement due to increased construction noise, lights, and air pollution. Based on the size of the station footprints and no surface impacts in the Santa Monica Mountains, construction impacts to movement of wildlife species are anticipated to be localized and temporary.

One special-status migratory bat species, the hoary bat has potential to occur in the Alternative 5 RSA during construction of Alternative 5 as do migratory and special-status birds. Ground disturbance activities, including removal of vegetation/habitat, excavating, pile-driving, topsoil removal, and grading associated with the construction of Alternative 5, could result in potential impacts to migratory bat and avian species. MM BIO-4, MM BIO-5, MM BIO-7, and MM BIO-14, described in Section 9.4, are included to reduce construction-related impacts to migratory species to a less than significant level through protection to nesting birds and special-status bats, protections for least Bell's vireo, vegetation restoration, and development of a monitoring plan to document changes in wildlife movement over time.

9.3.4.3 Maintenance and Storage Facility

The MSF for Alternative 5 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Since there is no open habitat, waterways, or native vegetation present in the MSF, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of the MSF.

9.3.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

To assess for conflicts with local policies or ordinances that protect biological resources, policies and ordinances were evaluated by landowner for applicability to the Project. The Alternative 5 RSA does not include unincorporated County land, so the County of Los Angeles General Plan and Sustainability Plan "OurCounty" are not applicable.

For Alternative 5, the *City of Los Angeles General Plan*'s (DCP, 2001) policies to create and maintain an integrated open space system that apply to and are addressed by the Project include conservation and management of watersheds (MM BIO-15 through Jurisdictional Aquatic Resource mitigation); and onsite evaluation of sensitive habitats (MM BIO-10) and species (MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9). Since no SEAs intersect with the RSA, this policy does not apply to Alternative 5. The city's General Plan includes a policy to protect wild areas such as the Sepulveda Basin; Alternative 5 includes potential offsite staging yards N1 and N2 at the western edge of the Basin (Figure 9-16). Per the Master Plan and Environmental Assessment (USACE, 2011), N1 is subject to an agricultural lease and N2 is slated for recreation and is an ornamental tree/maintained lawn. The Los Angeles River and riparian habitat is also present within the 500-foot ground disturbance buffer. The Project would comply with policies related to protecting wild areas through avoiding, minimizing and/or mitigating for impacts to CDFW sensitive vegetation communities (MM BIO-10), protected trees and shrubs (MM BIO-12), and jurisdictional aquatic resources (MM BIO-15), and implementation of construction measures related to delineating work boundaries and environmentally sensitive areas (MM BIO-16), monitoring vegetation clearing (MM BIO-17), protecting wildlife from pets (MM BIO-20), minimizing wildlife exposure to night lighting (MM BIO-22), avoiding the introduction of invasive seeds (MM BIO-23), and reducing the risk of wildlife entrapment (MM BIO-26). Additionally, MM BIO-9 requires Metro to prepare a Habitat Restoration Plan, which will restore temporary impacted locations like staging yards.

The City of Santa Monica's General Plan applies to potential offsite staging yard S1, by the Santa Monica Airport. The Project complies with the goal of preserving ecological balance and reducing air pollution as impacts to the 18 trees present within this area will be avoided, minimized, and/or mitigated for (MM BIO-10) through coordination with the Director of Community and Cultural Services at the City.

Four local ordinances or policies protecting biological resources are present within the Alternative 5 RSA, including the City of LA Ordinance, City of Santa Monica Tree Code (Tree Code), City of Los Angeles Street Tree Policy (City of LA Policy), and the Metro Tree Policy. No other ordinances or policies related to biological resources were identified in the operation of Alternative 5.

Each tree or cluster within the Tree Survey Area was assigned to one ordinance or policy; the applicable ordinance or policy per tree is included in the detailed tree inventory (Appendix B, Attachment 1, Tree Inventory Tables). When protection requirements for City of LA Ordinance or Tree Code were not met, trees were considered protected through either the City of LA Policy or Metro Tree Policy. Mitigation amounts and maintenance periods vary between ordinances and policies (Table 9-11).

There is potential for significant impacts related to tree and vegetation removal within the City of Los Angeles during construction and operation of Alternative 5. Additionally, significant impacts related to tree removal within property owned by the City of Santa Monica exist related to the construction of Alternative 5.

Table 9-10. Details of Jurisdiction, Mitigation Ratios, and Maintenance Period for Landowners with Potential for Impacts to Trees

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
City of LA Protected Tree and Shrub Ordinance	City of LA including private property	4:1	3 years	Survival of continuously living replacements for maintenance period required.
City of Santa Monica Tree Code	City of Santa Monica Public ROW	2:1 to 4:1 [c]	3 to 5 years [c]	Mitigation ratio and maintenance period at discretion of City of Santa Monica. Replacement ratio and maintenance period presented represent a preliminary estimate.
Metro Tree Policy	Metro ROW, Properties & Capital Project Sites	2:1	3 years	Heritage trees, as defined by local ordinance, are protected at 4:1[a].
City of Los Angeles Street Tree Policy	City of LA Public ROW	2:1	5 years	Applicable to any tree or upon any street or parkway in the City, but does not apply to trees within private properties, in Caltrans ROW, or on UCLA[b] unless the tree was planted and maintained by the City.

Source: HTA, 2024

[a]Mitigation ratios are for number of replacement trees required per individual tree impacted.

[b]Teresa Estrada, phone call by C. Hargreaves to LA Dept of Urban Forestry Division, July 19, 2024.

[c]Mitigation ratio and maintenance period for trees within the City of Santa Monica estimated from the range of accepted ratios for replacement trees, between 2:1 and 4:1, for the Metro Tree Policy to the City of LA Ordinance.

9.3.5.1 Operational Impacts

During operations of Alternative 5, activities such as trimming, encroaching into the protection zone (i.e., dripline or canopy), or other actions that could damage root systems or alter the grade around a trunk may impact protected tree and shrub species. These activities would result in a potentially significant impact to protected trees.

Protected tree species on Alternative 5 that may require operational maintenance include coast live oak and Mexican elderberry at the proposed UCLA station. Maintenance to these protected trees would constitute a significant impact.

To address this impact, Alternative 5 would implement MM BIO-3, described in Section 9.4, which would require the installation and maintenance of replacement trees or shrubs when impacts are unavoidable. With implementation of MM BIO-3, impacts to protected trees during operations of Alternative 5 would

be reduced to a less than significant level through installation and maintenance of replacement trees or shrubs following the requirements of the pertinent tree preservation ordinance.

9.3.5.2 Construction Impacts

For the purpose of this assessment, protected trees and shrubs included in the inventory (i.e., of the appropriate size and species whose Tree Protection Zone (TPZ) (dripline or canopy of the tree/shrub) falls at least partially within the Tree Survey Area) are presumed to require removal.

For Alternative 5, a total of 1,162 protected trees and shrubs are mapped within the Tree Survey Area of Alternative 5 (Table 9-11, map series in Appendix B, Attachment 2). Of those, 69 are protected under the purview of the City of LA Ordinance, irrespective of land ownership, and require permits for any alterations made to protected trees and shrubs during construction, including trimming and encroaching into the tree/shrub protection zone in any manner that will cause a protected tree or shrub to die, such as damaging the root system with compaction or injury and changing the grade around the trunk. Seventy-six trees are located on property owned by the City of Santa Monica that could be used during construction as a potential off-site staging yard. These are covered by the Tree Code and would require a City permit from the Santa Monica City Director before trees can be altered in any manner, including but not limited to removal, trimming, pruning, and planting.

The remaining 1,017 trees are under the jurisdiction of the City of LA Policy or the Metro Tree Policy. Heritage or protected trees as determined by local ordinances or policy, may be present within the Alternative 5 Tree Survey Area; impacts to these trees are anticipated to be less than significant for Alternative 5.

Unless mitigated, the anticipated removal and alteration of protected trees and shrubs during construction of Alternative 5 would conflict with the City and County tree ordinances and with Metro and City tree policies. This is considered a significant impact.

Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. See Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, for the full list of these recorded trees.

Table 9-11. Alternative 5: Protected Trees and Shrubs by Jurisdiction within Tree Survey Area

Jurisdiction	Scientific Name	Common Name	Quantity	Mitigation Amount (# replacement trees)
City of Los Angeles Protected Tree and Shrub Ordinance	*Platanus racemosa*	western sycamore	9	36
	Quercus agrifolia	coast live oak	43	172
	Quercus chrysolepis	canyon live oak	13	52
	Quercus lobata	valley oak	2	8
	Sambucus mexicana	Mexican elderberry	2	8
City of Santa Monica Tree Code	Numerous native and non-native tree species[a]		76	152 to 304[b]
TOTAL			**145**	**428 to 580**
Metro/City of Los Angeles Street Tree Policy	Numerous native and non-native tree species[a]		1,017	2,034 plus additional for heritage trees
GRAND TOTAL			**1,162**	**2,462 to 2,614 plus heritage trees**

Source: HTA 2024

[a]Full list of Policy-protected trees and trees under City of Santa Monica Tree Code jurisdiction listed in Appendix B, Attachment 1, Tree Inventory Tables.

[b]Mitigation amounts would be at discretion of City of Santa Monica. City of Santa Monica Tree Code mitigation amounts presumed to be within range of ordinances and policies within the area, between 2:1 and 4:1 for the purposes of this analysis.

To address this impact, Alternative 5 would implement MM BIO-12, described in Section 9.4, which would require installation and maintenance of replacement trees or shrubs following requirements of the pertinent preservation policy or ordinance. With implementation of MM BIO-12, impacts associated with the removal of protected trees and shrubs during construction of Alternative 5 would be reduced to a less than significant level.

9.3.5.3 Maintenance and Storage Facility

The MSF for Alternative 5 would be on developed land located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Within the Alternative 5 MSF, there are 43 ornamental trees including Mexican fan palm, Canary Island pine, Chinese elm, and eucalyptus trees among others. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF.

Tree removal at the Electric Bus MSF during the operations phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW; however, no impacts to trees within the Electric Bus MSF are anticipated during operations since trees within the MSF would have been removed during construction.

Tree removal at the Electric Bus MSF during construction would conflict with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact.

To address this impact, the MSF for Alternatives 5 would implement MM BIO-12, described in Section 9.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-12, impacts associated with removal of protected trees and shrubs during construction of the MSF for Alternatives 4 and 5 would be reduced to less than significant.

9.3.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 5 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

9.3.6.1 Maintenance and Storage Facility

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 5 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

9.4 Mitigation Measures

9.4.1 Operational Mitigation Measures

Operational Mitigation Measures can be re-evaluated through discussion with Metro about presence with consideration of any of programmatic permits or operation and maintenance plans that pertain to potential impacts to biological resources during operation of the Project.

MM BIO-1: ***Avoid and Minimize Operations-Related Impacts to Nesting Birds.*** *Vegetation trimming for operation of the Project related to operational maintenance shall be under the purview and conducted in compliance with the existing Metro Tree Policy on facilities owned by Metro. The Metro Tree Policy's measures to protect native nesting birds (generally February 15 through September 15), including implementation of bird surveys if tree maintenance must occur within the breeding season, shall be implemented. Metro shall be responsible for ensuring compliance with the Metro Tree Policy throughout operations where such activities occur on its own properties.*

- *Project features and/or mitigation recommendations to avoid direct impacts to bird movement shall be implemented where possible, such as Implementation of appropriate deterrents (e.g., visual and/or auditory) on aerial vehicles and/or support structures of the aerial alignment (where present) to prevent bird collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*

MM BIO-2: ***Avoid and Minimize Operations-Related Impacts to Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from operations-related activities, the following shall be implemented:*

- *Specific mitigation measures related to operational work for the Project shall be detailed in a Bat Habitat Mitigation and Monitoring Plan (BHMMP) created by a Qualified Biologist and approved by the California Department of Fish and Wildlife prior to initiation of construction. The BHMMP shall include site-specific measures for operational work to avoid and minimize Project-related impacts to roosting, overwintering, and breeding special-status bat species. The BHMMP also shall include reporting requirements to document activities and the results of these measures. Bat protection measures may include, but not be limited to, the following:*
  - *Limiting vegetation removal wherever possible.*
  - *Implementation of appropriate deterrents (e.g., visual, sonar, and/or auditory) on aerial vehicles and/or support structures of the aerial alignment where present to prevent bat collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*
  - *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed including but not limited to obstacles presented from construction equipment use and staging, location and type*

of lighting or reconfiguration of staged materials (vehicles, equipment, etc.) at night relative to roosting locations.

- *If swallow nests need to be removed during operations, they shall be removed only during the fall (September 1 to October 31) or a time recommended by a Qualified Biologist to ensure removal occurs outside of bat maternity and hibernation seasons. Removal shall occur at night whenever feasible to minimize disturbances. Before removal, a Qualified Bat Bioogist shall inspect each swallow nest for occupancy. If the nest is unoccupied, it may be removed immediately. If bats are present, a small portion of the nest shall be carefully removed to make it less suitable for roosting. This process shall be repeated nightly until the nest is vacated. If the next is not vacated after successive attempts, consultation with the California Department of Fish and Wildlife shall occur to determine appropriate actions.*

- *Trees, bridges, or other structures that may need to have maintenance work conducted during operations shall be evaluated for potential to support bat roosts. Before work is conducted, a Qualified Biologist shall conduct a one-night emergence survey during acceptable weather conditions. The following measures shall apply to trees, bridges, or other structures should bat roosts be detected.*

  - *If roosting bats are determined to be present during the maternity season (April 15 through August 31), work on the tree/structure shall be avoided to the extent feasible until after the maternity season when young are self-sufficient. If work on a tree/structure must occur during the maternity season (for repairs or other activities that cannot wait until the end of the maternity season), bat surveys shall be conducted by a Qualified Biologist to determine the use of the roost by bats, if a maternity roost is present, etc. This shall help inform additional avoidance and minimization measures that may need to be implemented in conjunction with the California Department of Fish and Wildlife to permit work during the maternity season.*

  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state, which occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of operations activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, impacts to the roost shall be avoided, to the extent feasible, until after the winter season when bats are once again active. If avoidance of roosting bats is not possible due to the need for repairs, discussion with the California Department of Fish and Wildlife may be necessary to reduce potential impacts while permitting repair activities.*

- *Trees, bridges, or structures with potential colonial bat habitat that require trimming or repairs during operations outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October*

30, or as determined by a Qualified Biologist) can be conducted using a two-step process that occurs over two consecutive days.

- *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities that would potentially be used by bats shall be removed by hand (e.g., using handsaws) or smaller components of the structure should begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree will likely cause bats roosting in the tree to either abandon the roost immediately or avoid returning to the roost after emergence.*
- *Day 2, Step 2: Removal of the remainder of the tree, bridge, or structure can occur the following day under the supervision of a Qualified Biologist.*
- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-3: ***Avoid and Minimize Operations-Related Impacts to Protected Trees and Shrubs.*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *Compliance with the applicable tree policies requirements for permitting and mitigation.*
- *Impacts to protected trees and shrubs during operation of the Project shall be minimized to the maximum extent feasible. When impacts to protected trees and shrubs are unavoidable — including alterations made such as trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy of the tree/shrub) — the following measures shall be required.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities with jurisdiction as follows:*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of LA Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*

  - *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
  - *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority).*

- *If operations and maintenance requires removal of protected trees or shrubs, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***Special-status trees afforded protection under the California Endangered Species Act or federal Endangered Species Act:*** *Impacts to all trees protected by the California Endangered Species Act or federal Endangered Species Act (e.g., Quercus dumosa) shall require coordination with the California Department of Fish and Wildlife or U.S. Fish & Wildlife Service, as applicable, in addition to the appropriate tree protection ordinance or policy.*
  - ***Los Angeles County Oak Tree Ordinance:*** *All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:*** *Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***Policy-Protected Trees****: All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1, or an in-lieu fee shall be made. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*
  - ***Santa Monica Mountains National Recreation Area****: Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*
- *All trees occurring on private property, including within the Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*

MM BIO-28: ***Avoid and Minimize Operations-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors during operations shall be avoided, minimized, and/or mitigated as follows:*

- *Metro shall develop, in coordination with the California Department of Fish and Wildlife and relevant species experts, and implement a five-year monitoring plan to track wildlife movement across corridors during operations of the Project. This shall include a survey of the Project area prior to construction to establish baseline conditions, as well as monitoring the Project area during operations. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is adversely impacted by the presence of the Project (e.g., injury or mortality due to collisions and other effects, reduced habitat patch connectivity, disruptions in corridor usage or avoidance of pre-existing travel corridors), additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to the California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

9.4.2 Construction Mitigation Measures

9.4.2.1 Resource-Specific Mitigation Measures

MM BIO-4: ***Avoid and Minimize Construction-Related Impacts to Nesting Birds.***
Vegetation clearance for construction of Alternative 5 related to construction activities shall occur outside of the nesting bird season (generally February 15 through September 15) to the extent feasible. If vegetation removal outside this time period is not feasible, the following additional measures shall be employed to avoid and minimize impacts to special-status bird species and nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code:

- *A preconstruction nesting bird survey of the work area (as defined by the Ground Disturbance Area, including staging and laydown yards) plus a 300-foot buffer shall be conducted by a Qualified Biologist within three days prior to the start of ground disturbing activities (including vegetation removal activities) to determine whether active nests (defined as nests with eggs or young) are present within or adjacent to (i.e., within 100 feet for non-special status songbirds, 300 feet for raptors and special-status species) the work zone. Any active nests found shall be recorded and a nest avoidance zone shall be established where no work shall occur. If project activities are delayed beyond 72 hours, a new nesting bird survey shall be completed within 72 hours prior to the resumption of ground disturbing activities.*
- *Active bird nests for species protected by the Migratory Bird Treaty Act shall have a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer established as follows: 300-foot radius buffer for raptors and special-status birds (refer to MM BIO-7 for additional least Bell's vireo measures) and 100-foot-radius buffer for non-raptor and non-special-status avian nests. The Qualified Biologist can adjust buffer distances to increase or decrease the radius contingent on*

topography, existing noise levels, planned operational activities, species specific tolerances to disturbances such as noise and vibration from construction activities, and observations specific nesting pair tolerance to disturbances. Nest monitoring by the Qualified Biologist shall be required following buffer modifications to ensure new buffer is appropriate; adjustments can be made only following monitoring of nesting pair to determine if the buffer is adequate to protect the nest from construction impacts, including from noise and vibrations. Installation of temporary noise barriers between the work area and nest can also be evaluated, if installation can occur in a manner to not disturb the nesting pair based on the Qualified Biologist's recommendation. If a Qualified Biologist determines work activities may result in nest failure, project work shall cease within the recommended no-disturbance buffer until a Qualified Biologist determines nest status. Additional follow-up surveys shall be conducted as necessary to determine nest status. Once the nest is determined to be fledged or no longer active, the buffer shall be removed.

- *A Qualified Biologist shall inform maintenance personnel of any active nests, facilitate avoidance measures, and verify operational activities do not cause disturbance. Maintenance personnel shall be updated on nest status and when avoidance buffers are no longer necessary.*
- *A Qualified Biologist shall monitor each nest on a biweekly basis and project activities shall not occur within the buffer until a Qualified Biologist determines the nest is no longer active (either by fledging or failing naturally). If a nest is adjacent to an access road where no project activities are being conducted, vehicles can drive past the nest without stopping or parking. Signage stating no stopping or idling vehicles shall be posted (facing outwards from the buffer) at the start and end of the nest buffer where it crosses the road.*
- *A Qualified Biologist can determine a nest is inactive (defined as eggs and young no longer present or reliant on the nest site, including fledged young that still depend upon the nest), following no observations of activity at the nest location for 1 hour for non-raptor avian nests and 4 hours for raptors.*
- *A summary of nesting bird surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented by the biologist at the conclusion of each nesting season and submitted to Metro. In the event that an active bird nest identified is associated with a special-status species afforded protection under the California Endangered Species Act or the federal Endangered Species Act, then the appropriate agency shall be immediately informed, and additional coordination shall occur, as needed.*

MM BIO-5: ***Avoid and Minimize Construction-Related Impacts to Roosting Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from construction activities, the following shall be implemented:*

- *A bat habitat assessment shall be conducted during the bat maternity season (generally April 15 through August 31 for southern California, yearly timing dependent on weather conditions) at least one year prior to construction. A Qualified Biologist shall conduct surveys to determine the presence of bat*

roosting or maternity habitat within suitable areas where vegetation trimming, tree removal, bridge repair activities, structure demolition, or other construction-related activities may occur and bats may be present. A visual inspection and/or one-night emergence survey of potential bat habitat that may be impacted by activities shall be completed utilizing acoustic recognition technology to determine if any maternity roosts are present. Results from this survey shall be used to create a Bat Habitat Mitigation and Monitoring Plan (BHMMP), produced by a Qualified Biologist, and shill include site-specific minimization and avoidance measures for operations and construction of the Project. These measures shall include but not be limited to disturbances such as noise and vibration from Project activities, mitigation for habitat impacts, and humane eviction or exclusion. If monitoring indicates established no-disturbance buffer is not adequate to prevent disturbances to roosting bats, a Qualified Biologist can adjust the buffer as needed.

- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during operational Project work. Modifications to ingress and egress routes are not allowed including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (e.g., vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during construction, removal shall occur in the fall (September 1 to October 31 or based on local expert bat biologist input as long as it is outside of bat maternity or hibernation season), preferably at night. Nests shall be inspected for occupancy by a Qualified Biologist and if empty, removed. If a bat is present, if feasible a small portion of the nest can be carefully removed to make the nest a less suitable for roosting. The following night, if the nest is empty, it can be removed entirely. If not, another small portion can be removed if feasible. If removal is not feasible or bats are still present, consultation with the California Department of Fish and Wildlife may be appropriate.*
- *Trees or structures to be removed as part of the Project shall be evaluated for their potential to support bat roosts. An experienced bat biologist shall conduct a one-night emergence survey during acceptable weather conditions, prior to tree removal beginning. The following measures shall apply to trees or structures slated for removal that provide potential bat roost habitat; these measures shall be implemented by a Qualified Biologist.*
  - *If roosting bats are determined to be present in a tree or on a structure during the maternity season (April 15 through August 31), the tree/structure shall be avoided until after the maternity season when young are self-sufficient. If other trees in the immediate vicinity are slated for removal, or other work shall occur in the immediate vicinity that might disturb roosting bat, a no-work buffer may be needed.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly*

lowered their physiological state that occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of project activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, the tree or structure shall be avoided until after the winter season when bats are once again active.

- *Trees or structures with potential to serve as colonial bat habitat can be removed outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities shall be removed by hand (e.g., using handsaws) or smaller components of the structure shall begin to be removed by hand (e.g., hammer, screwdriver. The associated vibrational and noise disturbance and physical alteration of the tree/structure will likely cause bats roosting to either abandon the roost immediately or avoid returning to the roost after emergence.*
  - *Day 2, Step 2: Removal of the remainder of the tree or structure can occur the following day under the supervision of a Qualified Biologist.*
- *Trees that are only to be trimmed and not removed shall also require a two-step process with these deviations from the removal process explained above: if a branch with a potential roost must be removed, all surrounding branches shall be trimmed on Day 1 under supervision of a Qualified Biologist and then the limb with the potential roost shall be removed on Day 2.*
- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-6: ***Avoid and Minimize Construction-Related Impacts to Crotch's Bumble Bee.***
To reduce impacts on Crotch's bumble bee from construction activities, the following shall be implemented:

- *A pre-construction habitat assessment for Crotch's bumble bee shall be conducted by a Qualified Biologist within the Ground Disturbance Area and a surrounding 100-foot buffer to demarcate potentially suitable nesting and foraging habitat.*
- *Nesting surveys and foraging surveys shall be conducted during the most active flight period and peak blooming period of nectar and pollen sources (generally April 1 through July 31). The survey shall be conducted between at least 1 hour after sunrise and at least 2 hours before sunset, with ambient air temperature between 60- and 90-degrees Fahrenheit. Surveys shall not be conducted during*

windy periods with speeds of over 10 mph, during fog or low visibility, or precipitation heavier than drizzling rain.

- *Foraging surveys shall focus on areas of high abundance of nectar and pollen sources with meandering transects within these areas at a rate of no more than 2.5 acres per hour.*
- *Nesting surveys shall focus on areas with existing, abandoned, rodent burrows; the biologist shall focus on detecting potential Crotch's bumble bee nest within suitable habitat.*
- *If a nest is documented, a 50-foot "no-disturbance" buffer shall be established and clearly identified in the field for avoidance. Construction activities shall avoid the nest location and surrounding buffer until the nest has senesced.*
- *Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed and/or a nest is located, the California Department of Fish and Wildlife shall be informed, and additional coordination shall occur as needed.*

MM BIO-7: ***Avoid and Minimize Project-Related Impacts to Least Bell's Vireo.***

To reduce impacts on least Bell's vireo from construction activities, the following shall be implemented:

- *Prior to initiation of construction activities, the Project shall perform one full season of protocol surveys for least Bell's vireo in suitable habitat within 500 feet of construction activities following the accepted U.S. Fish & Wildlife Service protocol. Focused surveys shall be completed prior to construction initiation and results shall be used to inform a consultation process with the U.S. Fish & Wildlife Service for project permitting. Eight surveys shall be conducted between April 10 and July 31, with each survey spaced at least 10 days apart. Reduction in the prescribed number of individual surveys may be evaluated in accordance with the U.S. Fish & Wildlife Service protocol. Surveys shall be conducted between dawn and 11:00 a.m. and outside of periods of inclement weather (excessive heat or cold, high winds, rain, etc.). Surveys shall not be conducted concurrently with other surveys. Per the U.S. Fish & Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.*
- *Following completion of protocol surveys, pre-construction presence/absence clearance surveys shall be required if construction is planned to begin within the nesting season. Clearance surveys shall be required within 500 feet of suitable habitat and must occur 3 or fewer days prior to start of activities. Presence/absence surveys shall be conducted by a Qualified Biologist who is familiar with species visually and aurally, and who is able to differentiate similar species. The Qualified Biologist shall not be required to have an Endangered Species Act Section 10(a) recovery permit covering this species since recorded vocalizations shall not be used to illicit responses and nest monitoring (i.e., locate and monitor the nest, including removal of brown-headed cowbird*

(Molothrus ater) eggs and chicks from parasitized nests) and handling of individual are not proposed.

- *If protocol and pre-construction survey results are negative, construction activities can commence, and a Qualified Biologist shall conduct presence/absence surveys weekly during the breeding season while construction is occurring within 500 feet of suitable habitat. If least Bell's vireo are detected during a survey, a Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat until the end of the breeding season. If construction within 500 feet of suitable habitat is paused for more than 3 days, a new survey must be conducted to verify if least Bell's vireo are present.*
- *If an active nest is documented, a no-disturbance 300-foot radius buffer shall be established and clearly identified in the field. Construction activities shall avoid the nest location and buffer until a Qualified Biologist declares the nest inactive. A Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat every day work is occurring while the nest is active. Noise monitoring shall be required weekly on varying days to account for changes in construction-related noise levels from before the nest is active to after. Monitoring shall be to ensure noise levels remain at or below 60 A-weighted decibels (dBA) or to the ambient noise level if it already exceeds 60 dBA before construction at specified monitoring locations within 100 feet of the nest. The Qualified Biologist shall either conduct the noise monitoring or escort the noise monitor if they are not a Qualified Biologist.*
- *The results of the surveys shall be used to design project features and temporary work areas to avoid direct impacts to occupied habitat for listed riparian bird species. Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*

MM BIO-8: ***Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles.*** *To reduce impacts on special-status reptiles from construction activities, the following shall be implemented:*

- *Prior to the start of vegetation removal, the Ground Disturbance Area shall be clearly fenced (usually with silt fencing) to delineate the extent of the construction area.*
- *Once fencing is in place, a Qualified Biologist shall conduct a pre-vegetation clearance sweep to look for and remove any special-status reptile species (e.g., coast horned lizard, two-striped garter snake, southwestern pond turtle, coastal whiptail, and southern California legless lizard) that may occur within the Ground Disturbance Area. If any special-status reptile species are detected within the Ground Disturbance Area, personnel shall allow the species to escape unimpeded if possible. Alternatively, the Qualified Biologist shall move the species outside of the fencing to the closest suitable habitat pending*

authorization from the U.S. Fish & Wildlife Service or California Department of Fish and Wildlife, if required.

- *Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*
- *Any observations of special-status reptiles shall be summarized in writing and submitted to Metro. In the event that an observed special-status species is afforded protection under the California Endangered Species Act or federal Endangered Species Act, then the appropriate agency shall be immediately informed and additional coordination shall occur, as needed.*

MM BIO-9: ***Avoid and Minimize Construction-Related Impacts to Special-Status Plants.*** *Impacts to special-status plants shall be avoided, minimized and/or mitigated through incorporation of the following:*

- *Prior to any Project activities that may modify vegetation, focused rare plant surveys shall be conducted following California Department of Fish and Wildlife protocols. Focused surveys shall occur during optimal blooming periods for special-status species likely to occur, which typically results in multiple visits within one growing season (e.g., early, mid- and late-season surveys). In the event a federally listed species is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*
- *If focused rare plant data is more than 1 year old at commencement of construction, pre-construction surveys during the optimal blooming periods shall occur to demarcate special-status plant populations for avoidance (where feasible). The results of the focused surveys shall be used to design Project features and temporary work areas to avoid direct impacts to federally and state-listed plant species.*
- *All observations of special-status plants prior to and during Project construction activities shall be documented in writing, including detailed descriptions of the location, species, and condition of the plant. If a special-status species protected under the California Endangered Species Act or the federal Endangered Species Act is observed, Metro shall immediately notify the appropriate agency (e.g., California Department of Fish and Wildlife or U.S. Fish & Wildlife Service) and coordinate further actions as required by law. This may include consultation to determine the need for additional avoidance, minimization, or mitigation measures. If impacts to special-status plants cannot be avoided, the Project shall prepare and implement a Habitat Restoration Plan. The Habitat Restoration Plan shall include mitigation ratios for impacted special-status plants and native habitats, installation methods, a detailed monitoring plan that includes quantifiable data collection, maintenance strategies, reporting requirements, and quantifiable performance criteria for restoration success.*
- *Special-status plant mitigation strategies shall include restoration of impacted areas through seeding and/or plantings. Weed abatement shall be implemented*

if Project activities result in non-native species within the Ground Disturbance Area that were not present before activities began. Specific strategies shall be implemented as described below:

- *If special-status plant species observed during surveys can feasibly be transplanted, such as slender mariposa lily (Calochortus clavatus var. gracilis), individuals shall be salvaged prior to ground disturbance for translocation. Salvage may include collection by hand of individual plants, storage in an appropriate manner depending on species, and replanting within suitable habitat close to its original location following completion of construction activities. For the purposes of this measure, "feasible" shall mean the ability to transplant plants without jeopardizing plant viability, project design, or safety requirements.*
- *If on-site repair or restoration efforts are not feasible or adequate to mitigate for impacted plants, alternative measures, such as off-site compensation, shall be implemented. Off-site compensation shall achieve equivalent or greater ecological value and shall utilize a minimum 3:1 replacement ratio (three replacement plants for every one impacted plant). The replacement ratio shall be based on the number of individuals impacted or the acreage of habitat affected, depending on the specific circumstances, and the species affected. The compensation area shall be protected in perpetuity through mechanisms such as conservation easements, deed restrictions, or long-term management agreements.*
- *To protect special-status plant populations from human disturbance after construction is completed, fencing or signage shall be installed around restored areas where public access is anticipated.*

MM BIO-10: ***Avoid and Minimize Construction-Related Impacts to Sensitive Vegetation Communities.*** *Impacts to sensitive vegetation communities shall be avoided, minimized, and/or mitigated as follows:*

- *The Project shall prioritize avoiding impacts to sensitive vegetation communities, including but not limited to California walnut woodland and sugar bush shrubland, and any other communities ranked S1 to S3 by the California Department of Fish and Wildlife. When avoidance is not possible, impacts shall be minimized by planning construction activities in previously disturbed areas to the extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid impacts without compromising essential project design, safety, regulatory compliance, or causing environmental impacts that would be greater than those being minimized.*
- *Impacts to any natural vegetation communities designated sensitive, such as California walnut woodland and sugar bush shrubland, shall be reduced by trimming vegetation instead of removing entire trees or shrubs where feasible. For the purposes of this measure, "feasible" is defined as the ability to trim vegetation without compromising plant health, public or worker safety, or essential project design requirements. Where trimming alone is infeasible,*

removal shall be conducted in a manner that avoids further damage to surrounding vegetation.

- *When feasible, temporary impact areas shall have vegetation trimmed and rootballs left intact to enable regrowth once construction is complete.*
- *In conjunction with appropriate entities with jurisdiction (i.e., Caltrans for their right-of-way, Santa Monica Mountains Conservancy for Santa Monica Mountains National Recreation Area), Metro shall design, develop and implement a 5-year restoration plan to restore native vegetation communities disturbed by construction activities. A preconstruction assessment of sensitive vegetation communities shall be conducted to collect a comprehensive plant species list, community structure data, native and nonnative plant cover assessments, and preconstruction photos for permanent photo points; this information shall be incorporated into the restoration plan. The plan shall include a monitoring program that includes both qualitative and quantitative data collection, quantified performance criteria that consider pre-construction conditions, irrigation and maintenance actions, and the use of native plantings and/or seedlings to restore native communities. Performance criteria shall be defined with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and shall include the following habitat characteristics: native plant species cover and diversity, container plant survivorship (if applicable), non-native annual species cover, absence of non-native, woody perennial species cover, and self-sufficiency of restoration plants (i.e., ability to persist without supplemental irrigation).*
- *Native species such as succulents, bulb species, and cactus shall be salvaged from the Ground Disturbance Area before work begins, to the maximum extent feasible, and stored in an appropriate manner depending on species requirements. These species shall be replanted within the Ground Disturbance Area at project conclusion as part of the restoration efforts.*
- *Progress toward these performance criteria shall be evaluated on a regular basis as defined in the restoration plan, but a minimum of once annually for the 5-year maintenance period. If the success standards are not met by the end of Year Five, additional measures such as replanting, remedial seeding, and/or supplemental watering shall be implemented. Monitoring shall continue thereafter until performance criteria are attained.*
- *Restoration monitoring results and future recommendations shall be submitted in annual reports submitted to Caltrans, the Santa Monica Mountains Conservancy, and other relevant agencies until success criteria are achieved.*

MM-BIO-12: ***Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Applicable to Alternatives 4 and 5).*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *A Tree Expert, as defined under the City of Los Angeles Protected Tree and Shrub Ordinance, shall complete a detailed tree survey report prior to construction and once access is obtained to properties within the alignment. The report shall build*

upon the Initial Protected Tree and Shrub Inventory Memorandum (Appendix B) and include detailed field methods and data for each protected tree or shrub, such as species, height, diameter, canopy spread, physical condition, and precise location. The City of Los Angeles Protected Tree and Shrub Ordinance has jurisdiction in the Project; therefore, a Tree Expert shall be required to conduct the detailed survey and procure permits for protected tree/shrub removal from the Los Angeles Board of Public Works. The Tree Expert's follow-up report shall expand upon the initial assessment to provide a comprehensive dataset with verification of tree/shrub species, height, canopy width, and tree/shrub health for the Ground Disturbance Area. This follow-up report shall be used to procure the required permit prior to commencement of tree impacts within the City of Los Angeles.

- *Impacts to protected trees and shrubs shall be minimized to the maximum extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid or minimize impacts while meeting project design, safety, and operational requirements, as determined by the Tree Expert and project engineers. When trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy) is needed, the following measures shall be required.*
  - *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture and conducted in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities as follows:*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of Los Angeles Street Tree Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of Santa Monica Tree Ordinance shall require coordination with the Director of Community and Cultural Services for pruning, maintenance, removal, and care for all affected trees.*
  - *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*
- *For impacts to protected trees and shrubs beyond trimming, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:** Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and*

two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.

- ***City of Santa Monica Tree Code**: Trees protected under the City of Santa Monica Tree Code shall require coordination with the Director of Community and Cultural Services for pruning, maintenance, removal, and care for all affected trees.*
- ***Policy-Protected Trees:** All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1. The Los Angeles Street Tree Policy allows for an in-lieu fee to be made with approval of the Board of Public Works following verification that replacement trees cannot be feasibly planted onsite. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*

- *All trees occurring on private property, or Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*
- *For protected trees and shrubs that are not anticipated to be impacted, a Tree Protection Zone shall be established around each tree/shrub or cluster of trees/shrubs prior to the commencement of work. The Tree Protection Zone shall be erected using temporary fencing in an environmentally sensitive manner and remain in place until all site work has been completed. Specific installation timeframe may vary but the Tree Protection Zone must be inspected and approved by a Qualified Arborist prior to construction work occurring including staging of equipment. Work can commence directly following arborist inspection and approval. No construction-related materials shall be stored or staged within the Tree Protection Zone (fenced areas*).
- *The LA Street Tree Policy would require coordination with the City of Los Angeles Department of Public Works for removal or maintenance of protected trees; this policy does not apply to trees within private property, UCLA, or within the Caltrans right-of-way. Metro Tree Policy would not require permitting but would require coordination with the landowners (e.g., private landowners, UCLA, Caltrans) when a tree must be removed. Additionally, Metro Tree Policy states a mitigation plan would be required to be developed in consultation with a Certified Arborist if construction impacts damaged or removed a tree; decisions would be made in accordance with local ordinances identifying protected trees.*

MM BIO-14: ***Avoid and Minimize Construction-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors shall be avoided, minimized, and/or mitigated as follows:*

- *Prior to any ground-disturbing activity, a Qualified Biologist shall conduct a detailed analysis of wildlife movement and corridors within the Santa Monica Mountains as they relate to ground disturbance activities for the Project. Analysis*

shall include desktop review of publicly available documentation — including research publications, project reports, environmental analyses, and high-quality aerial imagery — to anticipate wildlife movement patterns within the project vicinity. Field surveys shall also be conducted to identify and document wildlife crossings.

- *Prior to construction, Metro shall coordinate with the California Department of Fish and Wildlife, Caltrans, the Santa Monica Mountains Conservancy/Santa Monica Mountains National Recreation Area, and species experts (as appropriate) to identify and implement appropriate minimization and avoidance measures to facilitate mountain lion and other vertebrate movement and connectivity across the Santa Monica Mountains. Performance standards for wildlife connectivity shall require that post-construction conditions maintain or improve wildlife movement. Specifically, the Project shall achieve a 0 percent increase in road mortality for mountain lions and other sensitive species in the Project Study Area, as measured through tracking and monitoring for at least five years post-construction.*
- *Prior to any ground-disturbing activities, field surveys shall be conducted by a Qualified Biologist to survey for (1) confirm mountain lion presence or absence (2) identify known or potential mountain lion natal dens within suitable habitat with 600 feet of ground-disturbing activities during the breeding season (April through September), and (3) identify and document wildlife crossings in the Project vicinity. Surveys shall be conducted at dawn and dusk to increase probability of detection.*
  - *If a mountain lion natal den is identified during the survey, the Qualified Biologist shall establish a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer where work shall cease until the den is no longer occupied or the cubs have successfully reared. The size of the buffer shall be determined based on characteristics of the den (e.g., distance, direction facing, observed behavior) and through consultation with species experts and California Department of Fish and Wildlife to ensure the buffer is of appropriate size to not adversely affect rearing of cubs.*
  - *Vegetation removal shall be limited wherever possible, particularly within the Santa Monica Mountains.*
  - *Vegetation restoration within temporarily disturbed areas adjacent to wildlife crossings shall be designed to facilitate wildlife movement. Installed vegetation patches shall be designed to act as "stepping stones" to provide cover for wildlife approaching crossings. All vegetation provided shall be consistent with any Habitat Restoration Plan required pursuant to MM BIO-9.*
- *A summary of survey results from presence/absence and den surveys shall include maps of the survey area and possible denning locations and shall be submitted to Metro and California Department of Fish and Wildlife. If a natal den or presence is confirmed, California Department of Fish and Wildlife shall be immediately informed, and additional coordination shall occur, as needed.*

- *Metro shall also develop a five-year monitoring plan, in coordination with California Department of Fish and Wildlife and species experts, to track wildlife movement across corridors during and after construction. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is negatively impacted, additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

MM BIO-15: ***Avoid and Minimize Construction-Related Impacts to Jurisdictional Aquatic Resources.*** *Potential impacts to drainages shall be avoided and/or minimized when working in or adjacent to aquatic resources as defined in the Aquatic Resources Delineation Report (Appendix A) through incorporation of the following:*

- *A Qualified Biologist/Aquatic Specialist shall monitor construction activities adjacent to jurisdictional aquatic resources during vegetation clearing and/or initial ground-disturbance activities. Additionally, they shall support impact avoidance and minimization measures detailed in permits and approvals obtained for the Project.*
- *Limits of the Ground Disturbance Areas shall be designated with lathe staking or a similar method. All equipment and workers shall remain within approved work limits.*
- *Wherever possible, construction personnel shall utilize existing access roads or previously disturbed areas to reach the project area or stage their vehicles and equipment.*
- *Maintenance personnel shall also not leave any waste or debris behind which could impact natural habitats.*
- *To protect water quality:*
  - *Appropriate best management practices shall be installed to prevent erosion and guide runoff during rain events.*
  - *Equipment and materials shall be staged within the alignment and away from water drainages. Parked equipment shall have secondary containment to prevent any fluid leaks from coming into contact with the ground surface.*
  - *Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter into an aquatic resource.*
  - *Disposal or temporary placement of excess fill, brush, or other debris shall not be allowed in Waters of the United States, Waters of the State, and California Department of Fish and Wildlife streambeds or their banks.*

MM BIO-29: ***Avoid and Minimize Construction-Related Impacts to Overwintering Burrowing Owls.*** *To avoid and reduce impacts on overwintering burrowing owls from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, a Qualified Biologist familiar with the ecology of burrowing owls shall conduct the following field investigations:*
  - *A habitat assessment to map Project areas with potential to support overwintering burrowing owls. The habitat assessment shall follow the methodology outlined in Appendix C of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012) and shall include the Project footprint and a 150 meter buffer of these areas.*
  - *One season of non-breeding season surveys, including at least four (4) visits spread evenly throughout the non-breeding season (defined as September 1 to January 31).*
  - *Results of these investigations shall be summarized in writing and submitted to the California Department of Fish and Wildlife, and used to inform the need for pre-construction take avoidance surveys or additional permitted as needed.*
- *A Qualified Biologist shall conduct a pre-construction take avoidance survey in all areas of known or potentially suitable overwintering habitat, following the methodology outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012). The take avoidance survey shall be conducted no less than 14 days prior to initiating ground disturbance and may be repeated if work activities are paused for a period of 7 days or more during the non-breeding season (September 1 to January 31).*
  - *At the discretion of the Qualified Biologist, an additional pre-construction clearance survey shall be conducted no more than 24 hours prior to ground disturbance, to ensure that no burrowing owls have colonized the work areas or adjacent habitats.*
  - *If an occupied wintering burrow is located, an appropriate no-disturbance buffer shall be implemented. The width of the buffer shall be determined by the Qualified Biologist with consideration of the level of disturbance that is anticipated for the burrowing, following the recommended buffer distances outlined below.*
    - *Low level of disturbance: 50 meters*
    - *Medium level of disturbance: 100 meters*
    - *High level of disturbance: 500 meters*
  - *Results of the survey shall be summarized in writing and submitted to the California Department of Fish and Wildlife for review.*
  - *If an occupied burrow cannot be avoided, work in the vicinity of the burrow shall stop, the California Department of Fish and Wildlife shall be contacted, and additional coordination shall occur as needed in compliance with the California Endangered Species Act.*

9.4.2.2 General Construction Measures

The following general construction measures are proposed for implementation during construction activities:

MM BIO-16: *Prior to vegetation clearing, grading, and/or construction activities that may impact habitats of special-status species, a Qualified biologist(s) shall oversee installation of appropriate temporary Environmentally Sensitive Area fencing and/or flagging to delineate the limits of construction and the approved construction staging areas for protection of identified sensitive resources outside the approved construction/staging zones. All construction access and circulation shall be limited to designated construction/staging zones. Fencing shall be of a type that shall not entangle or otherwise detrimentally effect wildlife or the environment. Fencing shall be checked weekly to ensure it is intact and functioning as intended, to look for signs of degradation that might cause harm to wildlife or the environment, and to ensure fenced construction limits are not exceeded. This fencing shall be removed upon completion of construction activities.*

MM BIO-17: *A Qualified Biologist(s) shall monitor project activities during vegetation clearing, grading, and/or construction within or adjacent to areas identified as sensitive habitat and/or jurisdictional aquatic resources. If special-status species and/or sensitive habitats adjacent to the project sites are inadvertently impacted by activities, then the Qualified Biologist(s) shall immediately inform the on-site construction supervisor who shall temporarily halt or redirect work away from the area of impact. If unanticipated impacts occur to occupied habitat for special-status species, the Project shall consult with the appropriate regulatory agencies.*

MM BIO-18: *A Worker Environmental Awareness Plan (WEAP) shall be developed and implemented prior to the start of construction. Environmental training shall be led by the Qualified Biologist(s) and shall cover the sensitive resources found on-site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. New workers added to construction after the initial training at work start shall be required to receive WEAP training before they may begin work on the Project. Documentation of personnel who have attended WEAP training shall be maintained and submitted to Metro. All information included in WEAP training shall be kept on Project sites to be readily accessible to any personnel in a form deemed appropriate for the Project (e.g., wallet cards, printed flyers, etc.).*

MM BIO-19: *Wildfires shall be prevented by exercising care when driving to prevent sparks and by not parking construction vehicles where catalytic converters could ignite dry vegetation. All construction vehicles shall carry water and shovels or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. Smoking shall take place within designated areas and away from vegetated areas.*

MM BIO-20: *Construction workers shall be prohibited from bringing pets and firearms to the site.*

MM BIO-21: *To prevent unnecessary erosion, runoff, and sedimentation, all construction activities within 100 feet of drainages or wetlands shall cease during Stormwater Pollution*

Prevention Plan-defined rain events and shall not resume until conditions are suitable for the movement of equipment and materials. Vehicle access along unpaved access routes shall not occur during saturated soil condition to avoid rutting or other soil disturbance.

MM BIO-22: *If night work shall occur, all lighting used during night construction shall be temporary and shall be implemented to reduce lighting effects onto adjacent open space areas (i.e., downcast, away from habitat) and/or shall also be directed away from nests/roosting sites on man-made structures. Light shields shall be used to minimize light pollution adjacent to the Project.*

MM BIO-23: *Prior to entering the construction areas, equipment and personnel shall be free of mud, debris, or vegetation to prevent the introduction and spread of weeds or invasive species to the Project. If required, vehicle washing shall occur within designated areas within project construction areas where appropriate containment has been established, or at a suitable off-site facility.*

MM BIO-24: *Dust suppression measures shall be implemented during construction to minimize the creation of dust clouds and possible degradation of sensitive vegetation communities and special-status species suitable habitat. These measures shall include applying water at least once per day or as determined necessary by the Qualified Biologist(s) to prevent visible dust emissions from exceeding 100 feet in length in any direction. In addition, watering frequency shall be increased to four times per day if winds exceed 25 miles per hour. Nontoxic soil stabilizers may be used on access roads to control fugitive dust, as needed.*

MM BIO-25: *Vehicle speeds shall be restricted to posted speed limits on existing paved roads and to 15 miles per hour on dirt or gravel access roads during all phases of the Project. Speed limit signs shall be posted on dirt or gravel access roads throughout the site to remind workers of travel speed restrictions.*

MM BIO-26: *Trenches and excavations located within open areas shall be backfilled with earth at the end of each workday or have one edge sloped into an escape ramp with a less than 1:1 (45 degree) slope to prevent wildlife entrapment. A non-slip material may be used (e.g., wooden ramp with traction) when an earthen escape ramp cannot be created. For instances when these methods are not feasible (e.g., deep, long-term excavations for underground segments), temporary exclusion fencing can be installed around the perimeter of the work area to prevent animal entrapment. The Qualified Biologist shall ensure the temporary exclusion fencing is sufficiently supported to maintain integrity under all conditions and shall be checked daily to ensure integrity is maintained and inspect it daily while work is occurring. Fencing shall be repaired each day, as needed to ensure integrity is maintained. A Qualified Biologist shall inspect all trenches and excavations for trapped animals at the beginning and end of each day, as well as before excavations are backfilled. Should wildlife become trapped in any trenches or excavations, a Qualified Biologist(s) shall remove and relocate them outside the construction zone. When entrapped wildlife is a listed species with handling restrictions, relocation must be conducted by a biologist permitted to handle the species. Where trenches or excavations cannot be immediately backfilled or sloped, open excavations shall be covered and the end of*

each day with boards or plates. The edges of the boards shall be sealed with native spoils to prevent wildlife from entering the excavation in gaps at the board edges.

MM BIO-27 *Spoils, trash, and any construction-generated debris shall be removed to an approved off-site disposal facility. Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*

9.4.3 Impacts After Mitigation

Implementation of the mitigation measures listed above would mitigate impacts to biological resources related to project operations and construction to a level that is considered less than significant.

10 ALTERNATIVE 6

10.1 Alternative Description

Alternative 6 is a heavy rail transit (HRT) system with an underground track configuration. This alternative would provide transfers to five high-frequency fixed guideway transit and commuter rail lines, including the Los Angeles County Metropolitan Transportation Authority's (Metro) E, Metro D, and Metro G Lines, East San Fernando Valley Light Rail Transit Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.9 miles.

The seven underground HRT stations would be as follows:

1. Metro E Line Expo/Bundy Station (underground)
2. Santa Monica Boulevard Station (underground)
3. Wilshire Boulevard/Metro D Line Station (underground)
4. UCLA Gateway Plaza Station (underground)
5. Ventura Boulevard/Van Nuys Boulevard Station (underground)
6. Metro G Line Van Nuys Station (underground)
7. Van Nuys Metrolink Station (underground)

10.1.1 Operating Characteristics

10.1.1.1 Alignment

As shown on Figure 10-1, from its southern terminus station at the Metro E Line Expo/Bundy Station, the alignment of Alternative 6 would run underground through the Westside of Los Angeles (Westside), the Santa Monica Mountains, and the San Fernando Valley (Valley) to the alignment's northern terminus adjacent to the Van Nuys Metrolink/Amtrak Station.

The proposed southern terminus station would be located beneath the Bundy Drive and Olympic Boulevard intersection. Tail tracks for vehicle storage would extend underground south of the station along Bundy Drive for approximately 1,500 feet, terminating just north of Pearl Street. The alignment would continue north beneath Bundy Drive before turning to the east near Iowa Avenue to run beneath Santa Monica Boulevard. The Santa Monica Boulevard Station would be located between Barrington Avenue and Federal Avenue. After leaving the Santa Monica Boulevard Station, the alignment would turn to the northeast and pass under Interstate 405 (I-405) before reaching the Wilshire Boulevard/Metro D Line Station beneath the Metro D Line Westwood/UCLA Station, which is currently under construction as part of the Metro D Line Extension Project. From there, the underground alignment would curve slightly to the northeast and continue beneath Westwood Boulevard before reaching the UCLA Gateway Plaza Station.

Figure 10-1. Alternative 6: Alignment

Source: HTA, 2024

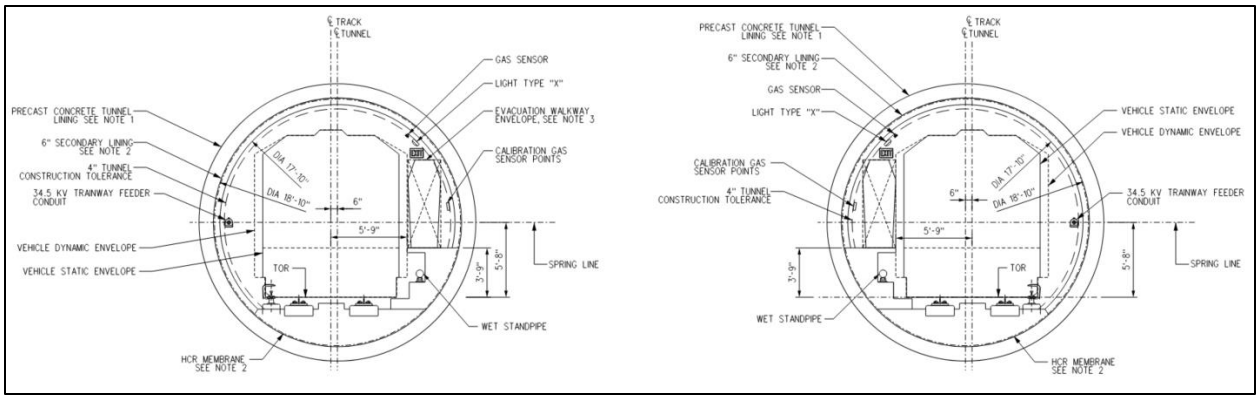
After leaving the UCLA Gateway Plaza Station, the alignment would continue to the north and travel under the Santa Monica Mountains. While still under the mountains, the alignment would shift slightly to the west to travel under the City of Los Angeles Department of Water and Power (LADWP) Stone Canyon Reservoir property to facilitate placement of a ventilation shaft on that property east of the reservoir. The alignment would then continue to the northeast to align with Van Nuys Boulevard at Ventura Boulevard as it enters the San Fernando Valley. The Ventura Boulevard Station would be beneath Van Nuys Boulevard at Moorpark Street. The alignment would then continue under Van Nuys

Boulevard before reaching the Metro G Line Van Nuys Station just south of Oxnard Street. North of the Metro G Line Van Nuys Station, the alignment would continue under Van Nuys Boulevard until reaching Sherman Way, where it would shift slightly to the east and run parallel to Van Nuys Boulevard before entering the Van Nuys Metrolink Station. The Van Nuys Metrolink Station would serve as the northern terminus station and would be located between Saticoy Street and Keswick Street. North of the station, a yard lead would turn sharply to the southeast and transition to an at-grade configuration and continue to the proposed maintenance and storage facility (MSF) east of the Van Nuys Metrolink Station.

10.1.1.2 Guideway Characteristics

The alignment of Alternative 6 would be underground using Metro's standard twin-bore tunnel design. Figure 10-2 shows a typical cross-section of the underground guideway. Cross-passages would be constructed at regular intervals in accordance with Metro Rail Design Criteria (MRDC). Each of the tunnels would have a diameter of 19 feet (not including the thickness of wall). Each tunnel would include an emergency walkway that measures a minimum of 2.5 feet wide for evacuation.

Figure 10-2. Typical Underground Guideway Cross-Section



Source: HTA, 2024

10.1.1.3 Vehicle Technology

Alternative 6 would utilize driver-operated steel-wheel HRT trains, as used on the Metro B and D Lines, with planned peak headways of 4 minutes and off-peak-period headways ranging from 8 to 20 minutes. Trains would consist of four or six cars and are expected to consist of six cars during the peak period. The HRT vehicle would have a maximum operating speed of 67 miles per hour; actual operating speeds would depend on the design of the guideway and distance between stations. Train cars would be 10.3 feet wide with three double doors on each side. Each car would be approximately 75 feet long with capacity for 133 passengers. Trains would be powered by a third rail.

10.1.1.4 Stations

Alternative 6 would include seven underground stations with station platforms measuring 450 feet long. The southern terminus underground station would be adjacent to the existing Metro E Line Expo/Bundy Station, and the northern terminus underground station would be located south of the existing Van Nuys Metrolink/Amtrak Station. Except for the Wilshire Boulevard/Metro D Line, UCLA Gateway Plaza, and Metro G Line Van Nuys Stations, all stations would have a 30-foot-wide center platform. The Wilshire/Metro D Line Station would have a 32-foot-wide platform to accommodate the anticipated passenger transfer volumes, and the UCLA Gateway Plaza Station would have a 28-foot-wide platform because of the width constraint between the existing buildings. At the Metro G Line Van Nuys Station,

the track separation would increase significantly in order to straddle the future East San Fernando Valley Light Rail Transit Line Station piles. The platform width at this station would increase to 58 feet.

The following information describes each station, with relevant entrance, walkway, and transfer information. Bicycle parking would be provided at each station.

Metro E Line Expo/Bundy Station

- This underground station would be located under Bundy Drive at Olympic Boulevard.
- Station entrances would be located on either side of Bundy Drive between the Metro E Line and Olympic Boulevard, as well as on the northeast corner of Bundy Drive and Mississippi Avenue.
- At the existing Metro E Line Expo/Bundy Station, escalators from the plaza to the platform level would be added to improve inter-station transfers.
- An 80-space parking lot would be constructed east of Bundy Drive and north of Mississippi Avenue. Passengers would also be able to park at the existing Metro E Line Expo/Bundy Station parking facility, which provides 217 parking spaces.

Santa Monica Boulevard Station

- This underground station would be located under Santa Monica Boulevard between Barrington Avenue and Federal Avenue.
- Station entrances would be located on the southwest corner of Santa Monica Boulevard and Barrington Avenue and on the southeast corner of Santa Monica Boulevard and Federal Avenue.
- No dedicated station parking would be provided at this station.

Wilshire Boulevard/Metro D Line Station

- This underground station would be located under Gayley Avenue between Wilshire Boulevard and Lindbrook Drive.
- A station entrance would be provided on the northwest corner of Midvale Avenue and Ashton Avenue. Passengers would also be able to use the Metro D Line Westwood/UCLA Station entrances to access the station platform.
- Direct internal station transfers to the Metro D Line would be provided at the south end of the station.
- No dedicated station parking would be provided at this station.

UCLA Gateway Plaza Station

- This underground station would be located underneath Gateway Plaza on the University of California, Los Angeles (UCLA) campus.
- Station entrances would be provided on the north side of Gateway Plaza, north of the Luskin Conference Center, and on the east side of Westwood Boulevard across from Strathmore Place.
- No dedicated station parking would be provided at this station.

Ventura Boulevard/Van Nuys Boulevard Station

- This underground station would be located under Van Nuys Boulevard at Moorpark Street.
- The station entrance would be located on the northwest corner of Van Nuys Boulevard and Ventura Boulevard.
- Two parking lots with a total of 185 parking spaces would be provided on the west side of Van Nuys Boulevard between Ventura Boulevard and Moorpark Street.

Metro G Line Van Nuys Station

- This underground station would be located under Van Nuys Boulevard south of Oxnard Street.
- The station entrance would be located on the southeast corner of Van Nuys Boulevard and Oxnard Street.
- Passengers would be able to park at the existing Metro G Line Van Nuys Station parking facility, which provides 307 parking spaces. No additional automobile parking would be provided at the proposed station.

Van Nuys Metrolink Station

- This underground station would be located immediately east of Van Nuys Boulevard between Saticoy Street and Keswick Street.
- Station entrances would be located on the northeast corner of Van Nuys Boulevard and Saticoy Street and on the east side of Van Nuys Boulevard just south of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor.
- Existing Metrolink Station parking would be reconfigured, maintaining approximately the same number of spaces. Metrolink parking would not be available to Metro transit riders.

10.1.1.5 Station-to-Station Travel Times

Table 10-1 presents the station-to-station distance and travel times for Alternative 6. The travel times include both run time and dwell time. Dwell time is 30 seconds for stations anticipated to have higher passenger volumes and 20 seconds for other stations. Northbound and southbound travel times vary slightly because of grade differentials and operational considerations at end-of-line stations.

Table 10-1. Alternative 6: Station-to-Station Travel Times and Station Dwell Times

From Station	To Station	Distance (miles)	Northbound Station-to-Station Travel Time (seconds)	Southbound Station-to-Station Travel Time (seconds)	Dwell Time (seconds)
Metro E Line Station					*20*
Metro E Line	Santa Monica Boulevard	1.1	111	121	—
Santa Monica Boulevard Station					*20*
Santa Monica Boulevard	Wilshire/Metro D Line	1.3	103	108	—
Wilshire/Metro D Line Station					*30*
Wilshire/Metro D Line	UCLA Gateway Plaza	0.7	69	71	—
UCLA Gateway Plaza Station					*30*
UCLA Gateway Plaza	Ventura Boulevard	5.9	358	358	—
Ventura Boulevard Station					*20*
Ventura Boulevard	Metro G Line	1.8	135	131	—
Metro G Line Station					*30*
Metro G Line	Van Nuys Metrolink	2.1	211	164	—
Van Nuys Metrolink Station					*30*

Source: HTA, 2024

— = no data

10.1.1.6 Special Trackwork

Alternative 6 would include seven double crossovers within the revenue service alignment, enabling trains to cross over to the parallel track with terminal stations having an additional double crossover beyond the end of the platform.

10.1.1.7 Maintenance and Storage Facility

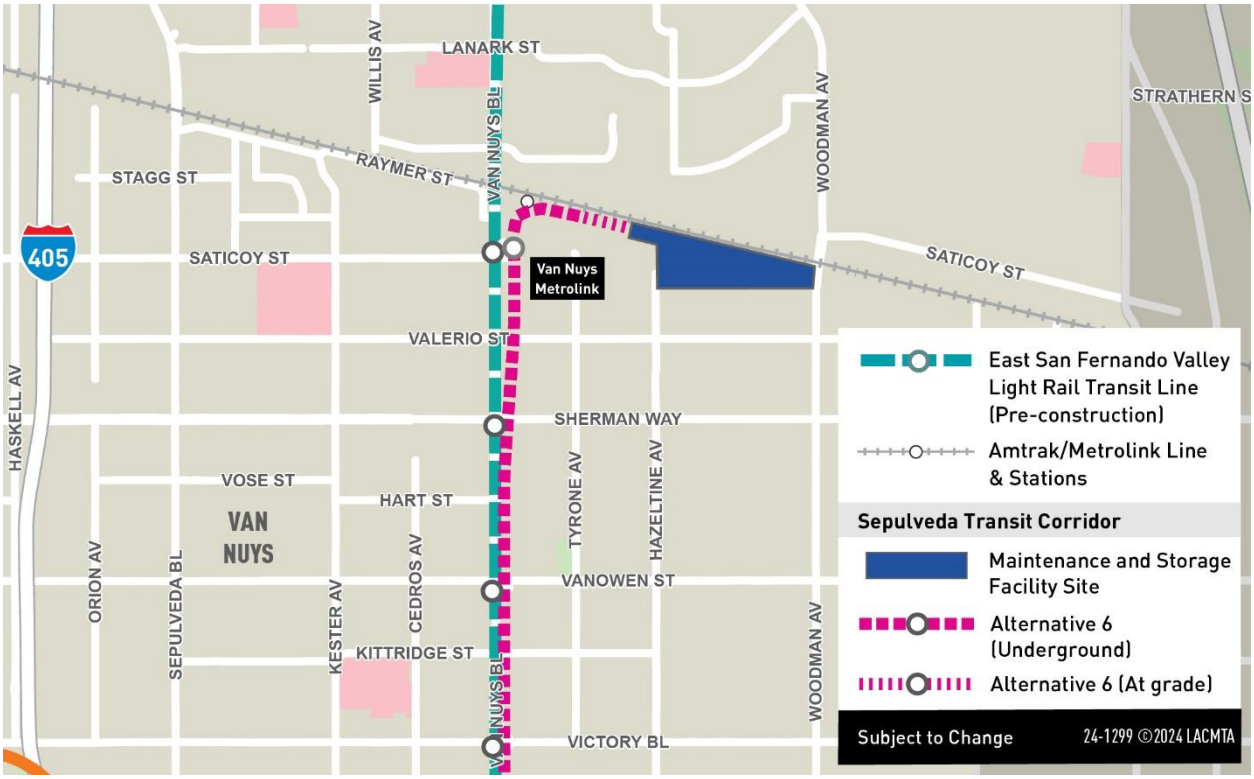
The MSF for Alternative 6 would be located east of the Van Nuys Metrolink Station and would encompass approximately 41 acres. The MSF would be designed to accommodate 94 vehicles and would be bounded by single-family residences to the south, the LOSSAN rail corridor to the north, Woodman Avenue to the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west. Heavy rail trains would transition from underground to an at-grade configuration near the MSF, the northwest corner of the site. Trains would then travel southeast to maintenance facilities and storage tracks.

The site would include the following facilities:

- Two entrance gates with guard shacks
- Maintenance facility building
- Maintenance-of-way facility
- Storage tracks
- Carwash
- Cleaning platform
- Administrative offices
- Pedestrian bridge connecting the administrative offices to employee parking
- Two traction power substations (TPSS)

Figure 10-3 shows the location of the MSF for Alternative 6.

Figure 10-3. Alternative 6: Maintenance and Storage Facility Site



Source: HTA, 2024

10.1.1.8 Traction Power Substations

TPSSs transform and convert high voltage alternating current supplied from power utility feeders into direct current suitable for transit operation. Twenty-two TPSS facilities would be located along the alignment and would be spaced approximately 1 mile apart except within the Santa Monica Mountains. Each at-grade TPSS along the alignment would be approximately 5,000 square feet. Table 10-2 lists the TPSS locations for Alternative 6.

TPSS No.	TPSS Location Description	Configuration
1 and 2	TPSSs 1 and 2 would be located immediately north of the Bundy Drive and Mississippi Avenue intersection.	Underground (within station)
3 and 4	TPSSs 3 and 4 would be located east of the Santa Monica Boulevard and Stoner Avenue intersection.	Underground (within station)
5 and 6	TPSSs 5 and 6 would be located southeast of the Kinross Avenue and Gayley Avenue intersection.	Underground (within station)
7 and 8	TPSSs 7 and 8 would be located at the north end of the UCLA Gateway Plaza Station.	Underground (within station)
9 and 10	TPSSs 9 and 10 would be located east of Stone Canyon Reservoir on LADWP property.	At-grade
11 and 12	TPSSs 11 and 12 would be located at the Van Nuys Boulevard and Ventura Boulevard intersection.	Underground (within station)
13 and 14	TPSSs 13 and 14 would be located immediately south of Magnolia Boulevard and west of Van Nuys Boulevard.	At-grade
15 and 16	TPSSs 15 and 16 would be located along Van Nuys Boulevard between Emelita Street and Califa Street.	Underground (within station)
17 and 18	TPSSs 17 and 18 would be located east of Van Nuys Boulevard and immediately north of Vanowen Street.	At-grade
19 and 20	TPSSs 19 and 20 would be located east of Van Nuys Boulevard between Saticoy Street and Keswick Street.	Underground (within station)
21 and 22	TPSSs 21 and 22 would be located south of the Metrolink tracks and east of Hazeltine Avenue.	At-grade (within MSF)

Source: HTA, 2024

Figure 10-4Figure 10-4 shows the TPSS locations along the Alternative 6 alignment.

Table 10-2. Alternative 6: Traction Power Substation Locations

TPSS No.	TPSS Location Description	Configuration
1 and 2	TPSSs 1 and 2 would be located immediately north of the Bundy Drive and Mississippi Avenue intersection.	Underground (within station)
3 and 4	TPSSs 3 and 4 would be located east of the Santa Monica Boulevard and Stoner Avenue intersection.	Underground (within station)
5 and 6	TPSSs 5 and 6 would be located southeast of the Kinross Avenue and Gayley Avenue intersection.	Underground (within station)
7 and 8	TPSSs 7 and 8 would be located at the north end of the UCLA Gateway Plaza Station.	Underground (within station)
9 and 10	TPSSs 9 and 10 would be located east of Stone Canyon Reservoir on LADWP property.	At-grade
11 and 12	TPSSs 11 and 12 would be located at the Van Nuys Boulevard and Ventura Boulevard intersection.	Underground (within station)
13 and 14	TPSSs 13 and 14 would be located immediately south of Magnolia Boulevard and west of Van Nuys Boulevard.	At-grade
15 and 16	TPSSs 15 and 16 would be located along Van Nuys Boulevard between Emelita Street and Califa Street.	Underground (within station)
17 and 18	TPSSs 17 and 18 would be located east of Van Nuys Boulevard and immediately north of Vanowen Street.	At-grade
19 and 20	TPSSs 19 and 20 would be located east of Van Nuys Boulevard between Saticoy Street and Keswick Street.	Underground (within station)
21 and 22	TPSSs 21 and 22 would be located south of the Metrolink tracks and east of Hazeltine Avenue.	At-grade (within MSF)

Source: HTA, 2024

Figure 10-4. Alternative 6: Traction Power Substation Locations

Source: HTA, 2024

10.1.1.9 Roadway Configuration Changes

In addition to the access road described in the following section, Alternative 6 would require reconstruction of roadways and sidewalks near stations.

10.1.1.10 Ventilation Facilities

Tunnel ventilation for Alternative 6 would be similar to existing Metro ventilation systems for light and heavy rail underground subways. In case of emergency, smoke would be directed away from trains and extracted through the use of emergency ventilation fans installed at underground stations and crossover locations adjacent to the stations. In addition, a mid-mountain facility located on LADWP property east of Stone Canyon Reservoir in the Santa Monica Mountains would include a ventilation shaft for the extraction of air, along with two TPSSs. An access road from the Stone Canyon Reservoir access road would be constructed to the location of the shaft, requiring grading of the hillside along its route.

10.1.1.11 Fire/Life Safety – Emergency Egress

Each tunnel would include an emergency walkway that measures a minimum of 2.5 feet wide for evacuation. Cross-passages would be provided at regular intervals to connect the two tunnels to allow for safe egress to a point of safety (typically at a station) during an emergency. Access to tunnel segments for first responders would be through stations.

10.1.2 Construction Activities

Temporary construction activities for Alternative 6 would include construction of ancillary facilities, as well as guideway and station construction and construction staging and laydown areas, which would be co-located with future MSF and station locations. Construction of the transit facilities through substantial completion is expected to have a duration of 7½ years. Early works, such as site preparation, demolition, and utility relocation, could start in advance of construction of the transit facilities.

For the guideway, twin-bore tunnels would be constructed using two tunnel boring machines (TBM). The tunnel alignment would be constructed over three segments—including the Westside, Santa Monica Mountains, and Valley—using a different pair of TBMs for each segment. For the Westside segment, the TBMs would be launched from the Metro E Line Station and retrieved at the UCLA Gateway Plaza Station. For the Santa Monica Mountains segment, the TBMs would operate from the Ventura Boulevard Station in a southerly direction for retrieval from UCLA Gateway Plaza Station. In the Valley, TBMs would be launched from the Van Nuys Metrolink Station and retrieved at the Ventura Boulevard Station.

The distance from the surface to the top of the tunnels would vary from approximately 50 feet to 130 feet in the Westside, between 120 feet and 730 feet in the Santa Monica Mountains, and between 40 feet and 75 feet in the Valley.

Construction work zones would also be co-located with future MSF and station locations. All work zones would comprise the permanent facility footprint with additional temporary construction easements from adjoining properties. In addition to permanent facility locations, TBM launch at the Metro E Line Station would require the closure of I-10 westbound off-ramps at Bundy Drive for the duration of the Sepulveda Transit Corridor Project (Project) construction.

Alternative 6 would include seven underground stations. All stations would be constructed using a “cut-and-cover” method whereby the station structure would be constructed within a trench excavated from the surface that is covered by a temporary deck and backfilled during the later stages of station construction. Traffic and pedestrian detours would be necessary during underground station excavation until decking is in place and the appropriate safety measures have been taken to resume cross traffic. In addition, portions of the Wilshire Boulevard/Metro D Line Station crossing underneath the Metro D Line Westwood/UCLA Station and underneath a mixed-use building at the north end of the station would be

constructed using sequential excavation method as it would not be possible to excavate the station from the surface.

Construction of the MSF site would begin with demolition of existing structures, followed by earthwork and grading. Building foundations and structures would be constructed, followed by yard improvements and trackwork, including paving, parking lots, walkways, fencing, landscaping, lighting, and security systems. Finally, building mechanical, electrical, and plumbing systems, finishes, and equipment would be installed. The MSF site would also be used as a staging site.

Station and MSF sites would be used for construction staging areas. A construction staging area, shown on Figure 10-5, would also be located off Stone Canyon Road northeast of the Upper Stone Canyon Reservoir. In addition, temporary construction easements outside of the station and MSF footprints would be required along Bundy Drive, Santa Monica Boulevard, Wilshire Boulevard, and Van Nuys Boulevard. The westbound to southbound loop off-ramp of the I-10 interchange at Bundy Drive would also be used as a staging area and would require extended ramp closure. Construction staging areas would provide the necessary space for the following activities:

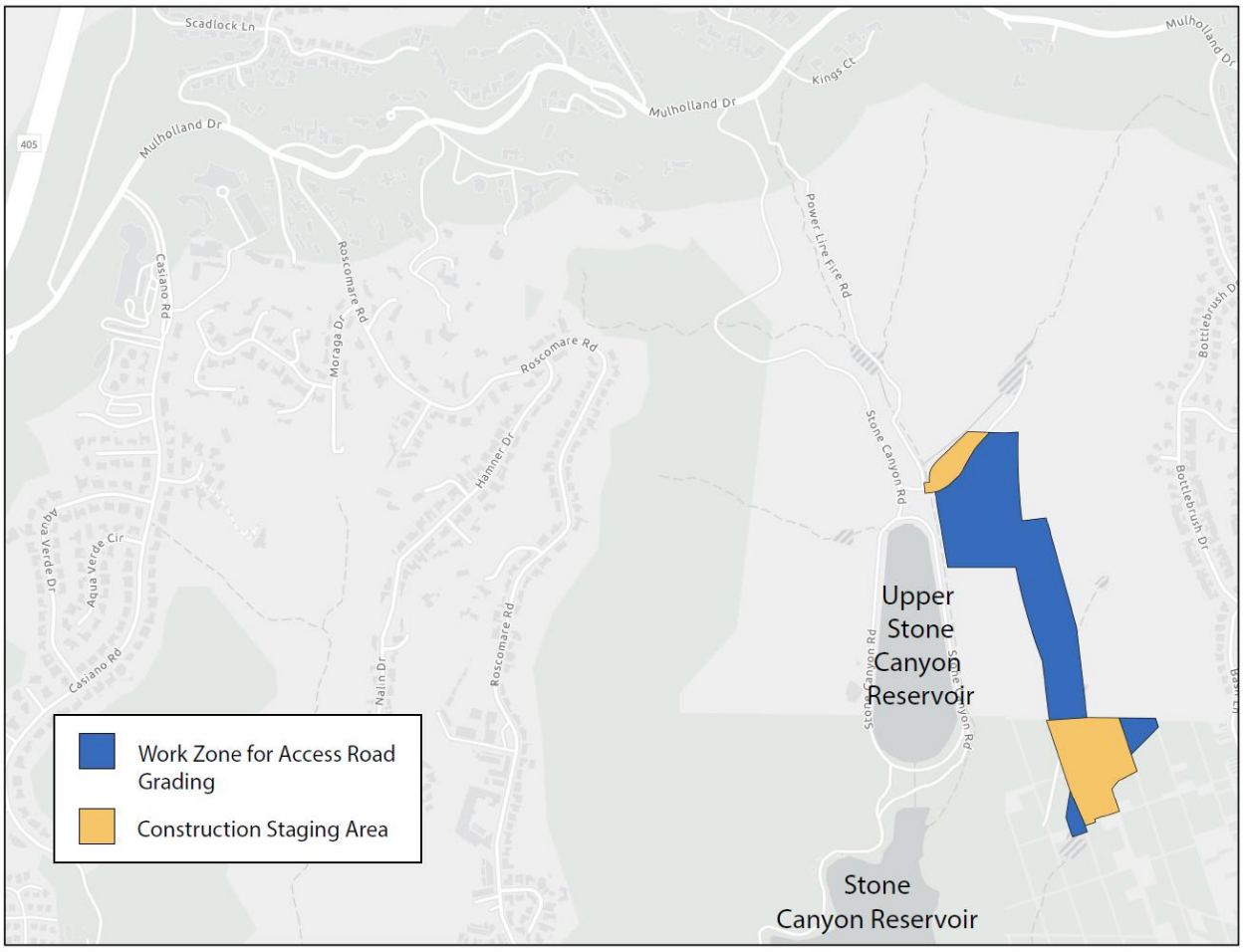
- Contractors' equipment
- Receiving deliveries
- Testing of soils for minerals or hazards
- Storing materials
- Site offices
- Work zone for excavation
- Other construction activities (including parking and change facilities for workers, location of construction office trailers, storage, staging and delivery of construction materials and permanent plant equipment, and maintenance of construction equipment)

The size of proposed construction staging areas for each station would depend on the level of work to be performed for a specific station and considerations for tunneling, such as TBM launch or extraction. Staging areas required for TBM launching would include areas for launch and access shafts, cranes, material and equipment, precast concrete segmental liner storage, truck wash areas, mechanical and electrical shops, temporary services, temporary power, ventilation, cooling tower, plants, temporary construction driveways, storage for spoils, and space for field offices.

Alternative 6 would also include several ancillary facilities and structures, including TPSS structures, a deep vent shaft structure at Stone Canyon Reservoir, as well as additional vent shafts at stations and crossovers. TPSSs would be co-located with MSF and station locations, except for two TPSSs at the Stone Canyon Reservoir vent shaft and four along Van Nuys Boulevard in the Valley. The Stone Canyon Reservoir vent shaft would be constructed using a vertical shaft sinking machine that uses mechanized shaft sinking equipment to bore a vertical hole down into the ground. Operation of the machine would be controlled and monitored from the surface. The ventilation shaft and two TPSSs in the Santa Monica Mountains would require an access road within the LADWP property at Stone Canyon Reservoir. Construction of the access road would require grading east of the reservoir. Construction of all mid-mountain facilities would take place within the footprint shown on Figure 10-5.

Additional vent shafts would be located at each station with one potential intermediate vent shaft where stations are spaced apart. These vent shafts would be constructed using the typical cut-and-cover method, with lateral bracing as the excavation proceeds. During station construction, the shafts would likely be used for construction crew, material, and equipment access.

Figure 10-5. Alternative 6: Mid-Mountain Construction Staging Site



Source: HTA, 2024

Alternative 6 would utilize precast tunnel lining segments in the construction of the transit tunnels. These tunnel lining segments would be similar to those used in recent Metro underground transit projects. Therefore, it is expected that the tunnel lining segments would be obtained from an existing casting facility in Los Angeles County and no additional permits or approvals would be necessary specific to the facility.

10.2 Existing Conditions

10.2.1 General Characterization of the Resource Study Area

The northern and southern portions of the Resource Study Area (RSA), depicted on Figure 101-10-6, comprise highly developed and urbanized neighborhoods, with the alignment running along Van Nuys Boulevard in the north and including the UCLA campus in the south. These urbanized areas contain limited biological resources generally restricted to parks and other undeveloped areas that contain predominantly non-native landscape; occasional patches of native vegetation are present, typically as plantings rather than naturally occurring vegetation. Habitat provided under these conditions is primarily suitable for species that can tolerate at least some level of urbanization and are acclimated to

human influence including numerous bird species protected under the Migratory Bird Treaty Act (MBTA) and wildlife (e.g., raccoon, striped skunk, Virginia opossum, and coyote).

The Los Angeles River flows west to east through the Alternative 6 RSA, crossing immediately north of US-101 in a concrete-lined channel without riparian habitat present (see Appendix A). The Alternative 6 RSA would traverse the Los Angeles River as an underground tunnel.

I-405 is a major arterial freeway that runs north-south through the Santa Monica Mountains, connecting communities in the San Fernando Valley with the City of Santa Monica and Westside communities in the City of Los Angeles. The Alternative 6 RSA crosses I-405 as an underground tunnel in the southern portion of the alignment at Massachusetts Avenue, just north of Santa Monica Boulevard/Highway 2; the surrounding habitat is urbanized neighborhoods and development associated with the VA Hospital site. The RSA is a minimum of 1 mile east of I-405 from the UCLA campus to the northern terminus of the alignment. The freeway serves as a barrier for wildlife movement within the Santa Monica Mountains, as roads in urban areas threaten wildlife by acting as barriers to movement through increased mortality, reduced habitat quality and connectivity, changes in behavior, and restrictions to genetic flow (Riley et al., 2014; Coffin, 2007; Riley et. Al, 2006).

The middle portion of the Alternative 6 RSA includes the Santa Monica Mountains which run east-west through the Alternative 6 RSA. This area is less developed with steep slopes covered by remnant native chaparral habitats and non-native grasslands. Native habitat is interspersed with upscale single-family residences along north-south–oriented roadways atop ridge lines and through canyons and valleys. Alternative 6 runs through the Santa Monica Mountains immediately west of LADWP's Stone Canyon Reservoir. Portions of the SMMNRA are within the Santa Monica Mountains in the Alternative 6 RSA; SMMNRA consists of approximately 150,000 acres and provides habitats to more than 1,000 different plant and 500 wildlife species (National Park Conservation Association, 2023). Approximately 32 acres of the Alternative 6 RSA are within the SMMNRA surrounding Mulholland Drive; Alterative 6 would be an underground tunnel within SMMNRA (Figure 10-20).

Figure 101-10-6. Alternative 6: Resource Study Area Location Map

Source: HTA, 2024

10.2.2 Elevations and Topography

Elevations range within the Alternative 6 RSA from approximately 700 feet above mean sea level (amsl) at the northern end to 1,000 feet amsl in the middle, and approximately 150 feet amsl at the southern end of the Alternative 6 RSA. The general topography of the Alternative 6 RSA includes several, parallel, north-to-south–oriented inland valleys that run through the Santa Monica Mountains. The Santa Monica

Mountains are composed of rugged steep mountain terrain with narrow canyons that are located between two flat urbanized valleys.

10.2.3 Climate

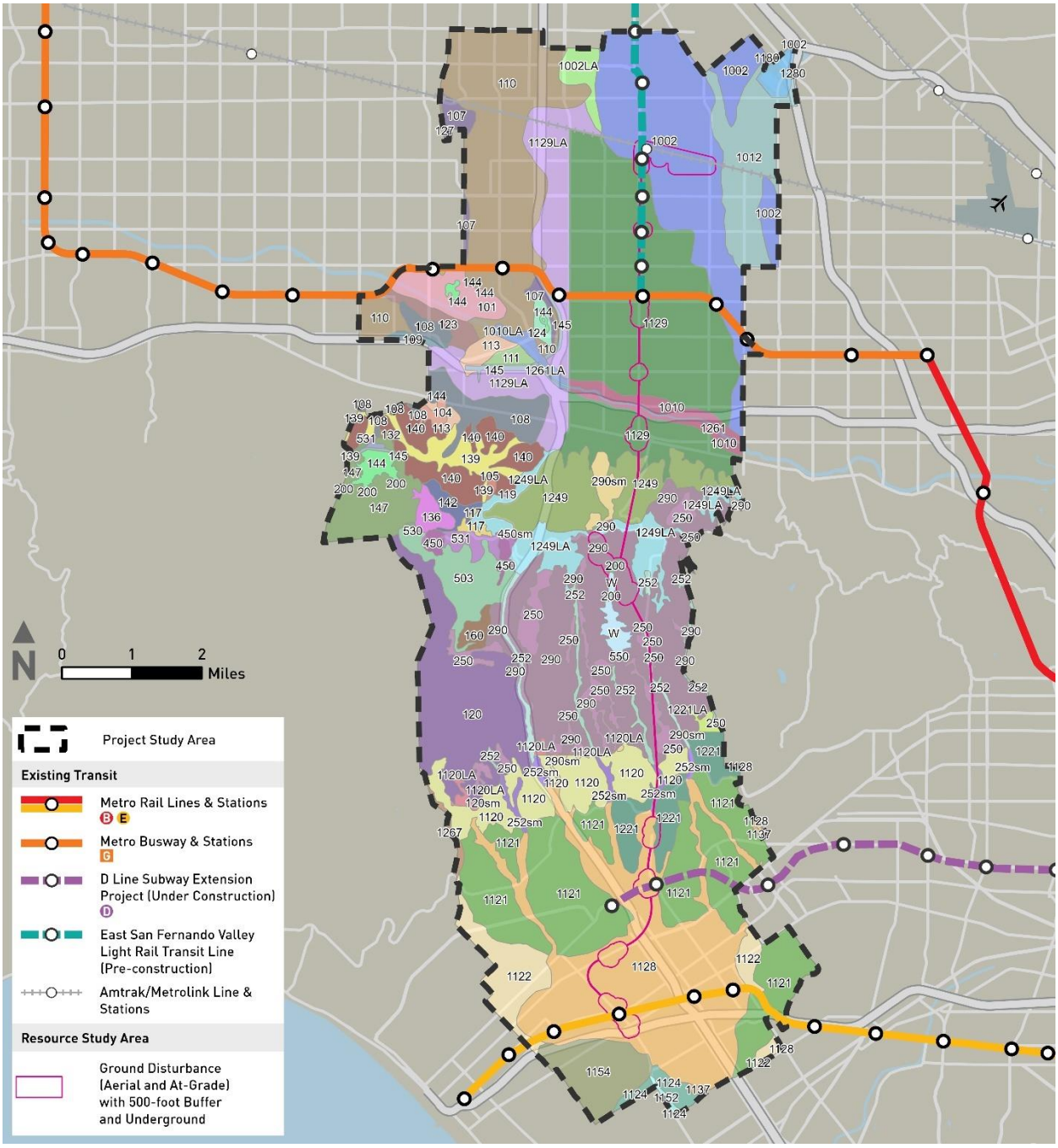
Precipitation in Los Angeles County is derived from frontal low-pressure systems that originate over the Pacific Ocean and generally travel southeast into southern California. Precipitation normally occurs during the cooler months of the year from November through March and is infrequent during the summer months. As throughout southern California, rainfall in the Los Angeles River Watershed and the Ballona Creek Watershed alternates between wet and dry periods. The average annual precipitation in the Alternative 6 RSA is approximately 13 to 18 inches. Differences in topography are responsible for large variations in temperature, humidity, precipitation, and cloud cover throughout the region. The RSA is located within a Mediterranean climate zone, characterized by dry, warm summers and mild, wet winters. The mean temperature range for the months of November through April is 41 degrees Fahrenheit (°F) to 73°F. The mean temperature range for the months of May through October is 58°F to 79°F.

During the 2023 water year (October 2022 through September 2023), approximately 26.46 inches of precipitation was recorded at LAX approximately 6 miles south of the Alternative 6 RSA; 88 percent of the precipitation occurred between November and March. Compared to the 30-year average for this location, the 2023 water year was 206 percent above normal (NOAA, 2023), indicating the 2023 biological and wetlands and waters surveys were conducted during an above-average rainfall season.

10.2.4 Soils

The RSA comprises several soil types that serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. Soil analysis was included in the Aquatic Resources Delineation (Appendix AAppendix A) to evaluate for presence or absence of hydric soils that would form under anerobic conditions, such as those that occur in wetlands. An in-depth detailed analysis of subsurface components including soils is presented in the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic and Paleontological Technical Report* (Metro, 2025a). According to the U.S. Department of Agriculture, Natural Resources Conservation Service Soils Report for Los Angeles County, California, part of the Alternative 6 RSA falls in the Los Angeles County, California, Southeastern soil survey area, as well as the West San Fernando Valley soil survey area and SMMNRA soil survey area (USDA-NRCS, 2023a, 2023b). Fine-loamy and coarse-loamy-mixed alluvial fan soils cover the northern portion of the alignment. Colluvium and urban land the middle portion of the alignment and fine-loamy-mixed and alluvial fan and remnants comprise the southern portion of the alignment. Soil types in these soil survey areas are shown on Figure 10-7 with the figure legend on Figure 10-8.

Figure 10-7. Alternative 6: Soils Map



Source: USDA-NRCS, 2023a

Figure 10-8. Alternative 6: Soils Map Legend

Source: USDA-NRCS, 2023a

10.2.5 Biological Resources within the Resource Study Area

This section describes biological resources known or with potential to occur within the Alternative 6 RSA associated with Alternative 6. The search area for biological resources with potential to occur was defined as all U.S. Geological Survey (USGS) 7.5-minute quadrangles that co-occur with the Alternative 6 RSA, and adjacent quadrangles when the Alternative 6 RSA was within 2 miles of the boundary. For Alternative 6, database searches were conducted within three quads: Beverly Hills and Van Nuys where the Alternative 6 RSA is located, and Venice due to the Alternative 6 RSA's proximity to the quadrangle boundary.

Wildlife, vegetation communities, plant species, and jurisdictional aquatic features within this area are described below.

10.2.5.1 Wildlife

Wildlife expected in the urbanized areas of the Alternative 6 RSA such as the San Fernando Valley to the north and the City of Los Angeles to the south, are mostly regionally common species adapted to human disturbances. These common species include birds (most of which are protected by the MBTA), reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, bats), and larger mammals such as coyotes.

One of the primary indicators of wildlife distribution within the Alternative 6 RSA is the location of permanent and ephemeral water sources. Within and adjacent to the Alternative 6 RSA, water is present in multiple locations, which is likely to positively affect the diversity of species that occur within the Alternative 6 RSA. Water is present in the Alternative 6 RSA in the Los Angeles River within a concrete-lined drainage and at the Stone Canyon Reservoir, both in and adjacent to the Alternative 6 RSA in an upper and lower reservoir. These water bodies provide foraging, breeding, migrating, and wintering habitat for a variety of wildlife species such as amphibians, birds, bats, and others.

The middle portion of the Alternative 6 RSA coincides with the Santa Monica Mountains, which have greater wildlife diversity than the developed urban areas of the Alternative 6 RSA. Native habitat is present in larger tracts of undeveloped land, and can provide suitable conditions for additional local, native species compare to urban environments, as well as potential for less common local, native species to exist. Approximately 450 wildlife species occur across the Santa Monica Mountains (NPS, 2019a), although not all species are expected to occur within the Alternative 6 RSA. The Santa Monica Mountains provide important core habitat for wildlife species to reproduce and connect to other open space areas essential to wildlife dispersal. Additionally, avian species migrate into the Santa Monica Mountains during the summer for breeding, and during the fall to. A list of wildlife species detected during the spring 2023 field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general wildlife observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Special-Status Wildlife Species

Of the 66 special-status wildlife species identified with potential to occur in the Project Study Area, 25 were identified as having potential to occur within the Alternative 6 RSA based on database searches of California Natural Diversity Database (CNDDB), Information for Planning and Consultation (IPaC), iNaturalist and eBird (CDFW, 2023a; USFWS, 2024a; iNaturalist, 2024a to 2024n; iNaturalist, 2024y to 2024aa; eBird, 2024a through 2024k). These species are listed in Table 10-3 with an assessment of their potential to occur within the Alternative 6 RSA.

Twenty-three of the wildlife species were concluded to be known or have potential to occur within the Alternative 6 RSA (Table 10-3); the remaining one was determined to have no potential to occur and is not discussed further for Alternative 6. The six species with low potential to occur are considered unlikely to be detected within the Alternative 6 RSA or impacted by Alternative 6 due to the lack of known recent occurrences and suitable habitat within the Alternative 6 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 10-3. Within Table 10-3, rows discussing species that were determined to be present or to have a high potential to occur within the RSA are highlighted blue.

Table 10-3. Alternative 6: Special-Status Wildlife Species Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC	Occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Is a dietary generalist but often prefers to forage in grasslands and shrublands with abundant milkweeds, wild buckwheat, dusty maidens, lupines, medics and sages.	**High**. Suitable habitat for the species is found in the Alternative 6 RSA and several observations have occurred in 2023 within 0.50 mile of the Alternative 6 RSA in the northern and southern portions (iNaturalist, 2024a). Additionally, there are several historical observations within 1.5 mile of the Alternative 6 RSA from the mid-1900s (CDFW, 2023a).
Danaus plexippus	Monarch	FC	Two subpopulations within the United States; within California, monarchs are considered *Danaus plexippus* pop 1, California overwintering population (CDFW, 2023a). Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress; occasionally western sycamore and coast live oak), with nectar and water sources nearby. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico; small aggregations also observed inland in Inyo and Kern Counties. Typically within 1.5 miles of the Pacific Ocean.	**Low**. Suitable habitat such as Eucalyptus tree groves occur within the Alternative 6 RSA however the species normally overwinters in dense Eucalyptus tree groves along the coastal plain in close proximity to the Pacific Ocean. There are no known overwintering locations within the Alternative 6 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Fish				
Catostomus santaanae	Santa Ana sucker	FT	Endemic to Southern California and only found within the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. This species was once historically present throughout the Los Angeles and Santa Ana basins in southern California but is now restricted to three geographically separate populations. Specifically, within the Los Angeles River Watershed, known populations occur at Big Tujunga Creek in the Hansen Reach, two tributaries in the Hansen Reach, and one tributary in either the Big Tujunga Reach or Los Angeles Reach (potentially including but not limited to Fall Creek, Mill Creek, Arroyo Seco Creek, and Bell Creek) (USFWS, 2017).	**Low.** The Alternative 6 RSA falls within the geographic range for Santa Ana sucker and suitable habitat in the form of the Los Angeles River is present. However, the portion of this body of water that occurs within the Alternative 6 RSA demonstrates common habitat degradation symptoms characteristic of urban areas, including degraded water quality and hydrological modifications. Within the Alternative 6 RSA, the river is a concrete-lined channelized river and therefore does not provide the habitat characteristics preferred by this species (i.e., substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of algae) (USFWS, 2010). The combination of limited known population extent, poor habitat quality, and presence of movement barriers within the Alternative 6 RSA greatly limit potential for this species to occur.
Gila orcuttii	Arroyo chub	SSC	Prefers slow-moving sections of permanent, small to moderate-sized streams with sand or mud substrate with more than half of the habitat as runs and pools ~10 cm deep and reaches of permanent water more than 2 km long.	**No Potential.** No suitable habitat is present in the Alternative 6 RSA.
Reptiles				
Actinemys pallida	Southwestern pond turtle	FP/SSC	Found in marshes, rivers, streams, ponds, and similar water sources, usually with aquatic vegetation.	**Present.** Suitable habitat within the Alternative 6 RSA is small and limited in size. Recent observations from 2018 are present within the Alternative 6 RSA approximately 0.15 mile south of US-101 and on UCLA's campus (iNaturalist, 2024b). Adjacent to the Alternative 6 RSA, observations are present within 0.72 mile east of the Alternative 6 RSA in the human-made stream in the Mildred E. Mathias Botanical Garden on UCLA's campus (iNaturalist, 2024b).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Anniella stebbinsi	Southern California legless lizard	SSC	Habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. May occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Lives mostly underground, burrowing in loose sandy soil.	**Moderate**. Suitable habitat within the Alternative 6 RSA is of marginal quality. A recent observation from 2016 was located south of Kenneth Hahn State Recreation Area, over 5 miles from the Alternative 6 RSA (iNaturalist, 2024c).
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC	A variety of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	**Present**. Suitable habitat is present and a recent observation within the Alternative 6 RSA from 2016 is present is located 400 feet south of Wilshire Boulevard (iNaturalist, 2024d). Additionally, a 2007 CNDDB occurrence places two adults within 2.25 miles west of the Alternative 6 RSA (CDFW, 2023a).
Phrynosoma blainvillii	Coast horned lizard	SSC	Occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation throughout the central and Southern California coast. Ants are the main food source but also spiders, beetles, and termites. Forages on the ground in open areas, usually between shrubs and often near ant nests.	**Present**. Suitable habitat is present and recent observations within the Alternative 6 RSA are present on UCLA's campus ins 2018, in Bel Air in 2022, and at the southern terminus in 2024 (iNaturalist, 2024e).
Thamnophis hammondii	Two-striped garter snake	SSC	Ranges from near Salinas in Monterey County south along the coast, mostly west of the Southern Coast Ranges, to southern California where it ranges east through the Transverse Ranges and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather.	**High.** Suitable habitat is present within the Alternative 6 RSA. There are recent sightings of the species within 0.35 mile of the Alternative 6 RSA in 2017 and 2020 in the northern, central or southern portions of the Alternative 6 RSA, although exact locations are obscured (iNaturalist, 2024f). Also, there is a CNDDB occurrence with an obscured location approximately 4 miles west of the Alternative 6 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Birds				
Agelaius tricolor	Tricolored blackbird	ST/SSC	Historically breeds in freshwater marshes with cattails and other emergent vegetation; increasingly breeds in agricultural fields when traditional wetlands are not present. Forages in wetlands, cultivated fields, grasslands, and at dairies and feedlots.	**Moderate**. Suitable breeding habitat is not present within the Alternative 6 RSA; individuals do have flyover potential. Suitable foraging habitat is present in Sepulveda Basin approximately 1.5 miles west of the Alternative 6 RSA; individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve (iNaturalist, 2024g).
Aquila chrysaetos	Golden eagle	CFP	Nests on cliff ledges and trees on steep slopes. Hunting grounds include nearby grasslands, sage scrub, or broken chaparral. Require very large territories.	**Low**. Suitable nesting habitat is not present in the Alternative 6 RSA. However, this species does have potential to fly or forage locally while in transit locally to preferred habitat and/or during migration in the isolated grasslands or sparsely vegetated hillsides within the Alternative 6 RSA. There are no historical records of this species within the vicinity (iNaturalist, 2024y; CDFW, 2023a).
Athene cunicularia	Burrowing owl	SC, SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows.	**High**. Isolated patches of suitable habitat are present within the Alternative 6 RSA. This species has been recently observed within 1 mile of the northern portion (2016) and 0.25 mile of the southern portion (2021) of the Alternative 6 RSA (iNaturalist, 2024z); observations were documented during the non-breeding season.
Buteo swainsoni	Swainson's hawk	ST	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**High**. Suitable migration habitat is present within Alternative 6 RSA; suitable breeding habitat is not present. The species may transit through during migration; migrating individuals have been recently observed within 1 mile of the Alternative 6 RSA (iNaturalist, 2024aa; eBird, 2024d).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Circus hudsonius	Northern harrier	SSC	Breeds predominantly in wetland habitats but will also use upland habitats. Prefers grasslands and agricultural fields during migration and in winter. The species occurs year-round in Los Angeles County.	**High**. Suitable migration habitat is present within the Alternative 6 RSA; suitable breeding habitat is not present. The species has potential to transit through the Alternative 6 RSA during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed within 0.25 mile of the Alternative 6 RSA east of Stone Canyon Reservoir in 2015 and west of UCLA's campus in 2023 (iNaturalist, 2024h; eBird, 2024e).
Contopus cooperi	Olive-sided flycatcher	SSC	Breeds in coniferous forests throughout California from sea level to high mountain elevations.	**High.** Suitable migration habitat is present within the Alternative 6 RSA; breeding habitat is not present. This species can briefly use areas in the Alternative 6 RSA as stopover habitat during migration. Individuals have been observed within 0.25 mile of the Alternative 6 RSA in 2007, 2020, and 2021 (iNaturalist, 2024i).
Haliaeetus leucocephalus	Bald eagle	SE/CFP	Nests in old growth trees near the coast or other bodies of water where fish or other prey sources are available.	**Moderate**. No suitable breeding habitat is present, although potential to fly over the Alternative 6 RSA exists. This species is known to occur approximately 1.25 miles west of the Alternative 6 RSA, with observations in 2021 and 2023 at the Sepulveda Basin Wildlife Reserve (eBird, 2024g). The closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).
Lanius ludovicianus	Loggerhead shrike	SSC	Uncommon year-round resident of southern California. Found in grassland, chaparral, desert, and desert edge scrub, particularly near dense vegetation used for concealing and protecting nests.	**Moderate.** Suitable habitat is present within the Alternative 6 RSA. This species is known to occur as recently 2022 approximately 1.25 miles from the Alternative 6 RSA (eBird, 2024h).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Polioptila californica	Coastal California gnatcatcher	FT/SSC	Prefers Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*). Generally avoids steep slopes above 25% and dense, tall vegetation.	**Low**. While the Alternative 6 RSA is located within the species range, suitable breeding habitat is generally absent. Low quality chaparral habitat is present in some of the urban canyons in the Alternative 6 RSA and may be used for dispersal. There are species records primarily south of the Alternative 6 RSA (Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve [iNaturalist, 2024g]), but the species is a short distance disperser, and given the lack of suitable habitat north of the Alternative 6 RSA, the species is unlikely to occur within the Alternative 6 RSA. Furthermore, the species appears to be rare within the Santa Monica Mountains with few recent records, all located over 5 miles away (CDFW, 2023a; iNaturalist, 2024j; eBird, 2024i).
Pyrocephalus obscurus	Vermilion flycatcher	SSC	Inhabits a variety of habitats associated with open country and stream systems including, deserts, farmlands, scrublands, parks, and cemeteries.	**High.** Suitable habitat is present within the Alternative 6 RSA. This species is known to occur within 0.50 mile of the RSA as recently as 2024 in the south at Los Angeles National Cemetery (eBird, 2024j).
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Migrate into California in late March/early April and depart for their winter grounds in September. Nest in low, dense riparian thickets along water or along intermittent streams. Forages in riparian and adjacent shrubland in the nesting season.	**No Potential**. No suitable habitat is present within the Alternative 6 RSA (eBird, 2024k). Individuals have been observed during nesting season in the Sepulveda Basin approximately 1.5 miles west of the Alternative 6 RSA in 2004 (CDFW, 2023a) and as recently as 2024 (iNaturalist, 2024k; eBird, 2024k).
Mammals				
Euderma maculatum	Spotted bat	SSC/WBWG – High Priority	Occurs in foothills, mountains, grasslands, and deserts in Southern California. Requires large, isolated cliffs for roosting (Luce and Keinath 2007). Distribution is patchy, likely due to roosting habitat requirements.	**No Potential**. No suitable habitat is present in the Alternative 6 RSA.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Eumops perotis californicus	Western mastiff bat	SSC/WBWG – High Priority	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**Low**. Suitable habitat is present in the Alternative 6 RSA. One recent observation from 2021 is located approximately 4 miles east of the Alternative 6 RSA (iNaturalist, 2024l) and two historical records (1921 and 1925) without precise locations exist within approximately 2 miles from the Alternative 6 RSA (CDFW, 2023a).
Lasionycteris noctivagans	Silver-haired bat	WBWG – Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Present**. Suitable foraging and roosting habitat are present in the Alternative 6 RSA. Two observations from 1985 are within the Alternative 6 RSA (CDFW, 2023a).
Lasiurus frantzii	Western red bat	SSC/WBWG – High Priority	Generally associated with stands of riparian habitat consisting of mature sycamores and cottonwoods. Forages over grasslands, shrublands, open woodlands, forests, croplands, and occasionally urban settings. Roosts primarily in trees.	**Low.** Suitable habitat is present in the Alternative 6 RSA. One recent observation from 2019 was made 7 miles east of the Alternative 6 RSA (iNaturalist, 2024m) and a second from 2007 was made approximately 10 miles west of the Alternative 6 RSA (CDFW, 2023a).
Lasiurus cinereus	Hoary bat	WBWG – Medium Priority	Most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. Prefers open habitats or habitat mosaics; requires water. Spends winter months in warmer habitats such as Southern California, Mexico, and Central America while summer is typically spent in the northern portions of California and north into Canada (Bolster, 1998). Roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat with large mature trees.	**Present.** Portions of the Alternative 6 RSA provide both suitable, foraging, and roosting habitat in the form of trees, vegetation, and human-made structures. One observation from 1986 (CDFW, 2023a) included a female hoary bat collection in Van Nuys within the Alternative 6 RSA.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Sparsely vegetated areas with alluvial deposits of sandy soils.	**Low**. Suitable habitat is present in the Alternative 6 RSA; however, the species has only been found historically in the San Fernando Valley which is now highly urbanized. One historical observation from 1903 of a collected male specimen was located approximately 1.5 miles east of the Alternative 6 RSA (CDFW, 2023a).

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Alternative 6 RSA
Puma concolor	Mountain lion	SC	Generally found throughout California in temperate coniferous/deciduous forest, coastal chaparral, foothills and mountains occurs. Often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are present. Within the Santa Monica Mountains, mule deer make up the bulk of a mountain lion's diet (87% of 700 kills analyzed by NPS), although smaller prey can supplement when opportunity arises, preferentially coyotes then raccoons (NPS, 2023).	**Present.** High-quality habitat is present within the Alternative 6 RSA, specifically in the Santa Monica Mountains. West of I-405 and outside the RSA, an estimated population of 10 to 15 adult individuals has been well documented by the National Park Service (NPS, 2023). Lion movement is hindered by I-405 and mortality has been documented on the freeway (NPS, 2024b), including as recently as July 2024 on northbound I-405 near The Getty Museum (Darling, 2024). Two lions are known to have recently crossed west to east across I-405 successfully and were present within the Alternative 6 RSA: P-22 who was residing in Griffith Park until his death, and P-61, who successfully crossed I-405 in the Sepulveda Pass area in July 2019 and roamed as far east as Benedict Canyon (NPS, 2019b) but was struck and killed while attempting to cross back two months later (NPS, 2022). An additional uncollared male lion has been photographed east of I-405 (NPS, 2019b).

Source: HTA, 2024

[a]Special-status wildlife species identified during reviews of the California Natural Diversity Database (CNDDB) (CDFW, 2023a), IPaC (USFWS, 2024a), eBird and iNaturalist for the Beverly Hills, Van Nuys, and Venice quadrangles.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened
FP = Federally Proposed

State Status Designations:
CFP = CDFW Fully Protected
SE =– State Endangered
SC = State Candidate Species for Listing
SSC = Species of Special Concern designated by CDFW
ST = State Threatened

Western Bat Working Group (WBWG) Priority Levels:

WBWG-High = Designated by the WBWG as High Priority - species that are imperiled or are at high risk of imperilment.

WBWG-Medium = Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, eBird, iNaturalist, or another database as occurring within the Alternative 6 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 6 RSA; however, no records occur directly within the Alternative 6 RSA. Species has been detected within 1 mile of the Alternative 6 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 6 RSA is of marginal quality. No records occur within the Alternative 6 RSA, but the species has been documented over 1 mile from the Alternative 6 RSA.

Low = Suitable habitat within the Alternative 6 RSA is of low quality. There are no known recent within or near the Alternative 6 RSA.

No Potential = Suitable habitat is not present for the species.

Many special-status wildlife species listed in Table 10-3, have no potential to occur within the Alternative 6 RSA due to a lack of suitable habitat. This is mainly related to species that occur in very specific habitat types (such as coastal marshes, sand dunes, vernal pools, etc.) which are not present in the Alternative 6 RSA. Species with no potential to occur due to a lack of suitable habitat within the Alternative 6 RSA are not discussed further. Species with low potential to occur were considered, but ultimately dismissed due to the lack of suitable habitat within the Alternative 6 RSA and lack of known recent occurrences, indicating they are unlikely to be detected within the Alternative 6 RSA or impacted by Alternative 6. Species with a moderate or high potential to occur, or species that are considered present are discussed in further detail below.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a state candidate species that has high potential to occur within Alternative 6 RSA. This species of bumble bee occurs primarily throughout southwestern California in the coastal, desert, valley, and adjacent foothill regions. Crotch's bumble bee is found in a wide variety of natural and disturbed habitat types; they are dietary generalists and are often found foraging in grasslands and shrublands on a wide variety of plant species with strong preferences for native sage species (*Salvia* spp.), milkweed (*Asclepias* spp.), and species within the pea family (*Fababcea*) including lupines, vetches, and deerweed. On June 12, 2019, the California Fish and Game Commission voted to add Crotch's bumble bee as a Candidate Endangered species under the California Endangered Species Act (CESA) (Hatfield and Jepsen, 2021). Suitable habitat for the species is found in the Alternative 6 RSA and several observations have occurred in 2023 within 0.50 mile of the Alternative 6 RSA in the northern and southern portions (iNaturalist, 2024a). Additionally, there are several historical observations within 1.5 mile of the Alternative 6 RSA from the mid-1900s (CDFW, 2023a).

Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys pallida*) is listed as a CDFW SSC is known to occur within the Alternative 6 RSA. In October 2023, this species was also proposed for listing as Federally Threatened by the USFWS. While proposed species are not protected from take prohibitions under ESA until the rule to list is finalized, consultation with USFWS is required under Section 7 if actions will risk the continued existence of a proposed species. As of 2014, western pond turtle (*A. marmorata*) was recognized as two distinct species: northwestern (which remained *A. marmorata*) and southwestern pond turtle (*A. pallida*) based on geographic range. The range of the southwestern pond turtle extends from central and southern California south into Baja California, Mexico. This includes areas of the central Coast Range from near northern Monterey County, California, portions of the Transverse Range into the Mojave River watershed, and areas south into Baja California, Mexico (50 CFR Part 17; Federal Register / Vol. 88, No. 190 / Tuesday, October 3, 2023 / Proposed Rules). This species occurs in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation, basking sites and suitable upland habitat for egg-laying. The southwestern pond turtle's population is in decline due to disease, habitat destruction and alteration, and the introduction of predators such as the American bullfrog (*Lithobates catesbeianus*) and striped bass (*Morone saxatilis*) (USFWS, 2024c). Suitable habitat for the species occurs within and adjacent to the Alternative 6 RSA. Records for either *A. marmorata* or *A. pallida* were included in database searches as records of the former would be misidentifications of the latter based on geographic range for each species. Suitable habitat for the species occurs intermittently within the Alternative 6 RSA, and the species has been observed in 2018 within UCLA's campus and in Sherman Oaks approximately 0.15 mile south of US-101. Additional 2018 observations adjacent to the Alternative 6 RSA are present at the human-made stream found at the UCLA Mildred E. Mathias Botanical Garden (0.72 mile east of the RSA) (iNaturalist, 2024b).

Southern California Legless Lizard

The southern California legless lizard (*Anniella stebbinsi*) is a CDFW SSC and has a moderate potential to occur within the Alternative 6 RSA. It is a fossorial lizard potentially present in suitable habitat in the Coast Ranges from Antioch, Contra Costa County to south of the Mexican border. The Southern California legless lizard may occur in several habitats such as coastal dune, valley-foothill, chaparral, and coastal scrub types. Marginally suitable habitat for the species occurs along the Sepulveda Pass within the Alternative 6 RSA, where a mixture of chaparral and coastal scrub habitat types were observed during the field survey. The species has been detected in the Kenneth Hahn State Recreation Area to the southeast of the Alternative 6 RSA (approximately 3.5 miles), and approximately 2 miles south of the Alternative 6 RSA in Playa Vista in 2016 (iNaturalist, 2024c).

Coastal Whiptail

The coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a CDFW SSC and is known to occur within the Alternative 6 RSA. This subspecies occurs in Southern California and as far south as Baja California and is often observed in a variety of habitats including deserts, chaparral, sage scrub, woodlands, open dry forests, and riparian habitats. Suitable habitat including chaparral and coastal sage scrub is present within the Alternative 6 RSA and a recent 2016 observation is located individual within the Alternative 6 RSA, approximately 400 feet south of Wilshire Boulevard (iNaturalist, 2024d). Additionally, a 2007 CNDDB occurrence places two adults 2.25 miles of the Alternative 6 RSA (CDFW, 2023a).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvilli*) is a CDFW SSC and is known to occur within the Alternative 6 RSA. This species occurs in coastal sage scrub, chaparral, and woodland habitats within open vegetation. It occurs throughout the central and southern California coast. The coast horned lizard's main food source consists of ants, but also includes spiders, beetles, and termites. It forages on the ground in open areas, usually between shrubs and often near ant nests. Suitable habitat for the species occurs in the Santa Monica Mountains specifically in the Sepulveda Pass in the form of chaparral and coastal sage scrub. The CNDDB occurrences are historical 1916 and 1947 (CDFW, 2023a); however, there have been several recent observations of the species within the Alternative 6 RSA (2022 in Bel Air, 2018 on UCLA's campus, and 2024 at the southern terminus). Numerous observations are also present adjacent to the Alternative 6 RSA in the central and southern portions (observed in the years 2015, 2016, 2017, 2019, 2020, 2021, and 2022; iNaturalist, 2024e).

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW SSC and has high potential to occur within the Alternative 6 RSA. The two-striped garter snake ranges from near Salinas in Monterey County south along the coast mostly west of the south Coast Ranges, to southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California. This species is primarily aquatic and diurnal but may also be active at night and at dusk during hot weather. The loss of wetland habitats has contributed to a reduction in the range of this snake (California Herps, 2023) and declines in population of the species have been attributed to human impacts, including urban development and flood control in the southern part of its range, as well as habitat modification by livestock, drought, loss of native prey, and predation by invasive species in its northern range (Jennings and Hayes, 1994). Suitable habitat for the species occurs within the Alternative 6 RSA and recent sightings of the species within 0.35 mile of the Alternative 6 RSA in the north in Sherman Oaks in 2017, in the central portion in Beverly Glen near Stone Canyon Reservoir (2020), and in the south in the Sawtelle neighbor on the Westside in 2020 (iNaturalist, 2024f). Also, there is a 2010

CNDDB occurrence of two-striped garter snake within 1 mile of I-405, west of the Alternative 6 RSA, in a flood control debris basin (CDFW, 2023a).

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as state threatened and a CDFW SSC that has moderate potential to occur as a flyover within the Alternative 6 RSA. A resident songbird of California that shares its limited range with Washington, Oregon, and a short distance into Baja California, Mexico. Populations are in decline mainly due to the loss of preferred breeding habitats consisting of native wetlands and marshes where it can form nesting colonies that include thousands of breeding individuals. It feeds on available insects, snails, grains, and a variety of other locally abundant resources. Suitable foraging habitat is present in the Sepulveda Basin over 1 mile west of the Alternative 6 RSA; suitable breeding habitat is not. Individuals have been reported as recently as May 2023 at a human-made lake located in the Sepulveda Basin Wildlife Preserve over 1 mile west of the Alternative 6 RSA (iNaturalist, 2024g; eBird, 2024b). This species also has potential to forage in the grassland parcels to the northwest of the Alternative 6 RSA.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is CDFW SSC that has high potential to occur within the Alternative 6 RSA. In addition, this species was petitioned for protection as threatened or endangered under CESA in March 2024 (CBD et al., 2024); in August 2024, CDFW's evaluation report determined that there was sufficient evidence to indicate listing of burrowing owl may be warranted (CDFW, 2024e). On October 10, 2024, the Fish and Game Commission approved the petition and the western burrowing owl became a candidate for listing as threatened under CESA (CDFW, 2024e). As a candidate species, burrowing owl will receive protections under CESA while a full status review occurs over a 12 to 18 month long review period. It is a semi-colonial owl found in open grasslands, prairies, farmlands, deserts, scrubland, and other disturbed areas with low-growing vegetation. In coastal southern California, burrowing owl is found mainly in grassland and open scrub from the coast to the foothills and is strongly associated with California ground squirrel (*Otospermophilus beecheyi*) burrows. It has been nearly extirpated as a breeding species from coastal San Luis Obispo, Santa Barbara, Ventura, Los Angeles, and Orange counties (Shuford and Gardali, 2008). Isolated areas of suitable habitat are present within the Alternative 6 RSA. Burrowing owl has been recorded within 1 mile of the northern portion (2016) and 0.25 mile of the southern portion (2021) of the Alternative 6 RSA (iNaturalist, 2024z); however, observations were from the late fall and winter season, outside of the breeding season.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is listed as state threatened and has high potential to occur as a migrant within the Alternative 6 RSA. Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Swainson's hawk breed in stands with few trees within grasslands, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands in the Central Valley. This species requires suitable foraging areas adjacent to breeding habitat, which includes grasslands, grain or alfalfa fields, or livestock pastures that support rodent populations. Along with rodents, they feed on amphibians, reptiles, and large arthropods. Suitable breeding habitat for this species is not present within the Alternative 6 RSA as it falls outside of the breeding range typical for Swainson's hawk. However, this species may transit through during migration and migrating individuals have been recently observed over 1 mile from the Alternative 6 (iNaturalist, 2024aa; eBird, 2024d).

Northern Harrier

Northern harrier (*Circus hudsonius*) is a CDFW SSC (when nesting) that has high potential to occur as a migrant within the Alternative 6 RSA. Los Angeles lies at the southwestern vicinity of the species breeding range in the United States. This species is low-flying and typically prefers grasslands, weedy agricultural fields, marshes, and other flat areas with large tracts of dense, low-growing vegetation, preferably undisturbed. As a ground-nesting species, northern harriers prefer to nest in tall, dense vegetation along the coastal slope and in inland valleys. In Los Angeles County, this species is found year-round but is more common as a winter visitor than as a resident breeder per records research in CNDDB (CDFW, 2023a), eBird (eBird, 2024e), and iNaturalist (iNaturalist, 2024h). There is no suitable breeding habitat within the Alternative 6 RSA, but the species has potential to transit through during migration and forage over grasslands and lightly vegetated hillsides. Individuals have been observed within 0.25 mile of the Alternative 6 RSA near Stone Canyon Reservoir in 2015 and UCLA campus in 2023 (iNaturalist, 2024h; eBird, 2024e).

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is a CDFW SSC with high potential to occur as a migrant within the Alternative 6 RSA. Olive-sided flycatcher is found in coniferous forests throughout California from sea level to high mountain elevations. This species breeds in coniferous forests and uses meadows and open areas adjacent to forests to forage. Olive-sided flycatchers feed on a variety of insects, most of which are caught in flight. Suitable breeding habitat for this species is not present within the Alternative 6 RSA; however, this species may briefly use areas in the Alternative 6 RSA as stopover habitat during migration. Individuals have been observed within 0.25 mile of the Alternative 6 RSA in the northern and southern portions of the Alternative 6 RSA from south of the MSF in 2007 to the Mildred W. Mathias Botanical Garden on UCLA's campus in 2021 (iNaturalist, 2024i).

Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is state endangered and CDFW Fully Protected (CFP) species that has moderate potential to occur within the Alternative 6 RSA. It ranges throughout North America and inhabits forests and open grasslands nearby to a water source to forage. The eagle's main source of prey is fish, although they will forage on a variety of prey that may include reptiles, mammals, amphibians and carrion. The population was once in serious decline due to hunting and pesticides; however, with protections put in place, this species has successfully rebounded with a continually increasing population evidenced in databases searches. This species is known to occur recently 1.25 miles west of the Alternative 6 RSA at Woodley Park in the Sepulveda Basin Wildlife Reserve (eBird, 2024g). However bald eagles do not breed within the vicinity of the Alternative 6 RSA; the closest breeding pair is in Orange County, over 25 miles to the south (CDFW, 2024b).

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC (when nesting) that has moderate potential to occur within the Alternative 6 RSA. This songbird ranges throughout North America, inhabiting open country with short vegetation and lower sized shrubs and trees sparsely spaced throughout the landscape. Loggerhead shrikes are found throughout deserts, agriculture lands, grasslands, cemeteries, and golf courses. While they eat a variety of prey items similar to a raptor including insects, amphibians, reptiles, small mammals, and other songbirds, they lack the talons of a raptor. Instead, shrikes impale and/or wedge prey items on shrubs, trees, cacti, barbed wire fencing, and other similar features for caching and consumption. Suitable habitat is present within the Alternative 6 RSA. This species is known to occur as recently 2022 approximately 1.25 miles from the Alternative 6 RSA (eBird, 2024h).

Vermilion Flycatcher

Vermilion flycatcher (*Pyrocephalus obscurus*) is a CDFW SSC (when nesting) that has high potential to occur within the Alternative 6 RSA. The species is a small songbird in the tyrant flycatcher family, named for the adult males' bright vermilion red and contrasting black coloration. The southwestern United States is the northern extent of its typical range, which extends up from Central and South America. Vermilion flycatchers are found within a variety of habitats associated with open country and stream systems including deserts, farmlands, scrublands, golf courses, parks, and cemeteries. Suitable habitat is present within the Alternative 6 RSA; this species is known to occur within 0.50 mile south of the Alternative 6 RSA as recently as 2024 at Los Angeles National Cemetery (eBird, 2024j).

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a WBWG Medium Priority Species that is known to occur within the Alternative 6 RSA. This species occurs throughout much of North America into northern Mexico primarily in coastal and montane forests, especially within old growth forests. Roosts are located in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. While preferring to roost in old growth forest, they forage over disturbed areas, clearings, roadways, forested riparian areas along rivers and streams, and various other water sources. Suitable foraging and roosting habitat are present in the Alternative 6 RSA. Two observations from 1985 are within or adjacent to the Alternative 6 RSA (CDFW, 2023a).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a WBWG Medium Priority Species that is known to occur in the Alternative 6 RSA. This species is the most widespread bat species in the Americas, with a transcontinental range stretching from southeastern Canada to Hawaii. This species spends winter months in warmer winter habitats such as Southern California, Mexico, and Central America and summer is typically spent, in the northern portions of California and north into Canada (Bolster, 1998), concealed in the foliage of deciduous and coniferous trees, typically neat the edge of a clearing. Since this species roosts in dense foliage associated with medium to large trees situated in open or mosaic habitat many of which occur in the Alternative 6 RSA, specifically along the Sepulveda Pass and the Sepulveda Basin Wildlife Preserve, as well as other areas of the Alternative 6 RSA with large mature trees. Portions of the Alternative 6 RSA provide both suitable, foraging, and roosting habitat in the form of trees, vegetation, and human-made structures. There is a CNDDB occurrence from 1986 (CDFW, 2023a), where a female hoary bat was collected in Van Nuys within the Alternative 6 RSA. The species has also been observed in the Santa Monica Mountains near Sherman Oaks approximately 0.6 mile west of the Alternative 6 RSA (iNaturalist, 2024n).

Mountain Lion

The mountain lion (*Puma concolor*) is a “specially protected” species in California following the passage of the California Wildlife Protection Act of 1990 (Proposition 117), which makes it illegal to possess transport, sell, and hunt the species (CDFW, 2023d). The mountain lion was also recently proposed for state listing under CESA within a proposed evolutionary significant unit (ESU) located in Southern California and the central coast (CDFW, 2023d). In April 2020, CDFW accepted this ESU as a candidate for state listing as threatened or endangered. Under CESA, species classified as a candidate species are afforded the same protection as listed species while they undergo a review process (CDFW, 2023d). Mountain lions are generally found throughout the state where suitable habitat, such as temperate coniferous/deciduous forest, coastal chaparral, foothills and mountains, occurs. They are often found where native or introduced ungulate prey such as mule deer, elk, bighorn sheep, or feral hogs are

present. Mountain lions are well documented in the Santa Monica Mountains by the National Park Service, and their population is estimated at around 10 to 15 adult individuals (NPS, 2023). Several GPS-collared mountain lions have been tracked to occur west of the I-405 freeway and the Alternative 6 RSA (NPS, 2023). Mountain lion mortalities have been documented on the freeway (NPS, 2023), as recently as July 2024 (Darling, 2024). However, successful crossings have occurred by one collared mountain lion (NPS, 2019b) and uncollared individuals are also present east of I-405 (NPS, 2022; NPS, 2019b).

Bats

There are 24 species of bats found in Los Angeles County, 18 of which are considered rare or sensitive by a variety of entities (NHMLA, 2023). In particular, the WBWG identifies several species as Medium or High Priority for consideration of conservation measures. Bat species found in Los Angeles County are known to have behavioral and ecological interactions with transportation structures, especially those involving bridges. Bat species responses to anthropogenic disturbances differ, with some responding positively and some negatively. Anthropogenic disturbances that can affect bats include the following (Caltrans, 2019):

- Habitat loss, fragmentation, and degradation
- Chemical pollution to drinking water from construction waste and to air from construction vehicle emissions
- Light pollution resulting from artificial lighting
- Noise pollution from construction activities
- Increased predation
- Introduced diseases, such as white-nose syndrome
- Climate change
- Vehicular collisions

The RSA provides habitat for day and night roosting for bats such as trees, bridges, culverts, buildings, and other structures. The tree-lined streets found throughout the Alternative 6 RSA could potentially support roosting bats, such as the hoary bat and western mastiff bat. Large bridges spanning the Los Angeles River may provide suitable bat roosting habitat and foraging habitat for species such as Mexican free-tailed bat and Myotis species. However, no signs of bats, including individuals, guano (i.e., scat), staining on walls from urine, or vocalizations, were detected during the spring 2023 reconnaissance-level field surveys.

Wildlife Corridors

Within the heavily urbanized areas that comprise the north and south portions of the Alternative 6 RSA, opportunities for wildlife movement are limited. No landscape habitat linkages were identified within the Alternative 6 RSA by the South Coast Wildlands; the City of Los Angeles has identified a regional wildlife movement pathway through the central portion of the RSA in the Santa Monica Mountains. Within this highly urbanized area, animal movement would be facilitated by remnant riparian habitat, underpasses, culverts and stretches of contiguous or semi-contiguous habitat. Ornamental vegetation may provide some opportunities for cover, resting, foraging, and nesting to localized bird wildlife populations; however, such areas do not provide function as major wildlife movement corridors. Evaluation of wildlife movement for species with large home size ranges, like the mountain lion, are more appropriate for a larger scale than the Alternative 6 RSA to better inform existing patterns for these species. Discussions at both the RSA and a larger scale are included herein.

The Santa Monica Mountains are located in the middle of the Alternative 6 RSA and serve as a wildlife movement corridor for local and regional populations. While they lack connection with other mountain ranges in the area, largely due to urbanization, the Santa Monica Mountains retain open areas and native habitats that provide east-west movement opportunities within the range and historically to adjacent ranges; to the west are large undeveloped areas of natural vegetation and to the east are the Verdugo Mountains and the San Gabriel Mountains. Wildlife movement within the Santa Monica Mountains is through a combination of natural, open spaces interspersed with development and human activity. While the majority of the Santa Monica Mountains within the Project Study Area contains scattered residential development, 44 percent of the Santa Monica Mountain range is considered non-developed (as defined by removing "urban" classified categories from the SMMNRA vegetation mapping, see Section 3.3.1 for details; Figure 10-20). Habitat fragmentation poses a threat to species due to lack of space and movement (i.e., habitat to travel between) and threatens wildlife survival from increased risk of inbreeding and loss of genetic diversity. Mammals such as mule deer (*Odocoileus hemionus*), mountain lions (*Puma concolor*), coyotes (*Canis latrans*), and bobcats (*Lynx rufous*) can have large territorial ranges that span many miles, and these species are documented in the Santa Monica Mountains. In their current state, major roads in the Alternative 6 RSA including I-405, US-101, and Santa Monica Boulevard are functional barriers to wildlife movement for most terrestrial wildlife. Within the Alternative 6 RSA, east-west wildlife movement is aided by native habitat in the Santa Monica Mountains, although development (i.e., housing) is interspersed. Limited opportunities exist for wildlife to move north-south due to the urban landscape surrounding the mountains in both directions.

Historically, mountain lions utilize the Santa Monica Mountains as a major linkage corridor between the surrounding mountain ranges in Southern California. Freeways, roads, buildings, and fencing have created barriers to mountain lion and wildlife movement, causing the remaining undeveloped land to become highly fragmented habitat (CLAW, 2023). The major causes of death among mountain lions are vehicle collisions, rodenticide poisoning, depredation permits, and mountain lions killing other mountain lions.

I-405 creates a major barrier to mountain lion movement. At present time, I-405 is generally considered impermeable to mountain lions inhabiting land east of I-405, preventing their movement to the western portion of the Santa Monica Mountains (NPS, 2023). The Alternative 6 RSA is located 1 to 2 miles east of I-405 through the Santa Monica Mountains. Compared to the freeway, roads in the mountains within the Alternative 6 RSA are predominantly two lanes with housing on both sides; they are not likely to limit mountain lion movement in the same manner as the freeway. The chance for a deadly collision is lower due to lower vehicle speed and less distance to travel. Mountain lions in the Santa Monica Mountains are experiencing exacerbated impacts of edge effects and limited habitat and are suffering from territorial fighting, low genetic diversity, and low prey populations. Furthermore, escape routes during wildfires may be blocked and migration into previously burned areas may be restricted due to roads and other urban development. A study conducted by University of California (UC) Davis and partners concluded the Santa Monica Mountains lion population is at risk of becoming locally extinct within the next 50 years. The study recommended increases in landscape connectivity to maintain healthy lion populations in the greater Los Angeles metropolitan area (Benson et al., 2019).

Within the Alternative 6 RSA, water is present in the Los Angeles River in a concrete-lined channel and at Stone Canyon Reservoir. Adjacent to the Alternative 6 RSA, water is present in a human-made stream within the Mathias Botanical Garden on UCLA's campus. Where present, waterbodies provide resting, foraging, and nesting opportunities for wildlife species. Collectively these waterbodies provide some habitat for wildlife species to move through the Los Angeles Basin and San Fernando Valley.

Furthermore, several species of warblers, sparrows, and raptors that breed in northern latitude, spend the winter months in the Alternative 6 RSA. This includes species protected by MBTA including the yellow-rumped warbler (*Setophaga coronata*), white-crowned (*Zonotrichia leucophrys*) and golden-crowned sparrows (*Zonotrichia atricapilla*), and several raptor species.

The RSA occurs along the Pacific Flyway, a major north-south flyway for migratory birds moving between breeding grounds and overwintering sites or following food sources. Within the Alternative 6 RSA, the potential stopover locations for migratory birds are often correlated with vegetation cover and near water, such as Stone Canyon Reservoir; these areas are particularly important for migrating waterfowl.

10.2.5.2 Plants

Vegetation Communities

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Alternative 6 RSA are generally absent and consist mainly of the land cover class developed. Developed, ruderal, and agricultural land use cover classes are generally considered to provide lower quality habitat due to absent or sparse vegetation, limited plant diversity, and regular disturbance associated with human activities. Special-status wildlife species may use these areas for activities such as foraging or while in transit. Special-status plants could also be present, but they are more likely to be found in vegetated habitats subject to less disturbance.

Vegetation communities in the Santa Monica Mountains, which run east-west through the middle of RSA, include California walnut woodland, black sage shrubland, ceanothus chaparral, and various other native vegetation communities. Within a mapped vegetation group, patches of differing communities may be present in smaller sizes than the minimum mapping unit (0.5 hectare) (NPS, 2004-2019). Where present, these areas would be refined in the future after a preferred alternative is selected.

Vegetation communities listed below are presented in descending order of abundance within the Alternative 6 RSA acreages per vegetation community within the Alternative 6 RSA are presented in Table 10-4 and spatial representation of their locations are shown on Figure 10-9 through Figure 10-18. A list of plant species observed during the field surveys is included in Appendix D, Wildlife and Plant Species Observed; the list is comprehensive for biological surveys across alternatives because general plant observations were collected for the combined Ground Disturbance Area of each alternative. Species lists per alternative are not available.

Table 10-4. Alternative 6: Vegetation Community Acreage within Ground Disturbance Area and 500-Foot Buffer

Vegetation Community/Land Cover Type[a]	Sensitive Natural Vegetation Community (Authority)	Acres[b]	Percent of Total Vegetation
Developed	Not applicable	802.4	81.7
California Walnut Woodland	Yes (CDFW)	53.3	5.4
Black Sage Shrubland	Potentially depending on codominant species (CDFW)	27.5	2.8
Ceanothus Chaparral	Not applicable	21.7	2.2
California Annual Grassland	Not applicable	15.1	1.5
Coast Live Oak Woodland	Not applicable	13.5	1.4
Undifferentiated Categories- Artificial Cuts/ Embankments, Exotic Vegetation, and Firebreaks	Not applicable	9.9	1.0
Chamise-Black Sage Shrubland	Not applicable	9.1	0.9

Vegetation Community/Land Cover Type[a]	Sensitive Natural Vegetation Community (Authority)	Acres[b]	Percent of Total Vegetation
Undifferentiated Chaparral Shrubland	Potentially depending on species composition (CDFW)	7.5	0.8
Open Water	Not applicable	5.1	0.5
Coyote Brush Shrubland	Potentially depending on codominant species (CDFW)	5.1	0.5
Bush Mallow Shrubland	Potentially depending on codominant species (CDFW)	4.6	0.5
California Encelia Shrubland	Potentially depending on codominant species (CDFW)	3.0	0.3
California Sagebrush-California Buckwheat Shrubland	Potentially depending on codominant species (CDFW)	2.4	0.2
Scrub Oak Shrubland	Potentially depending on codominant species (CDFW)	1.4	0.1
California Buckwheat Shrubland	Potentially depending on codominant species (CDFW)	0.9	0.1
Total		**982.4**	**100.0**

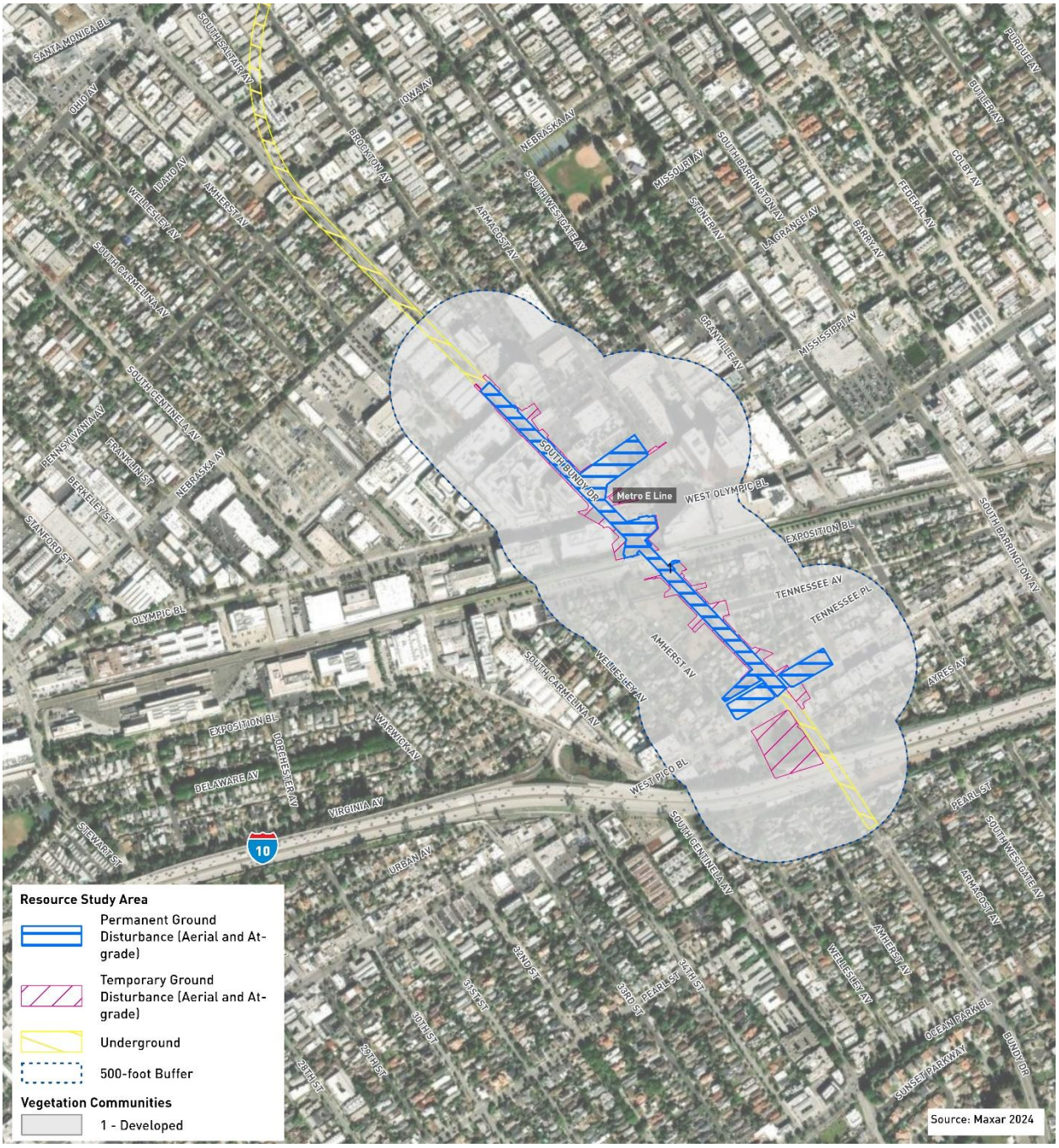
Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in total calculation due to rounding errors.

CDFW = California Department of Fish and Wildlife

Figure 10-9. Alternative 6: Vegetation Communities, Map 1 of 10

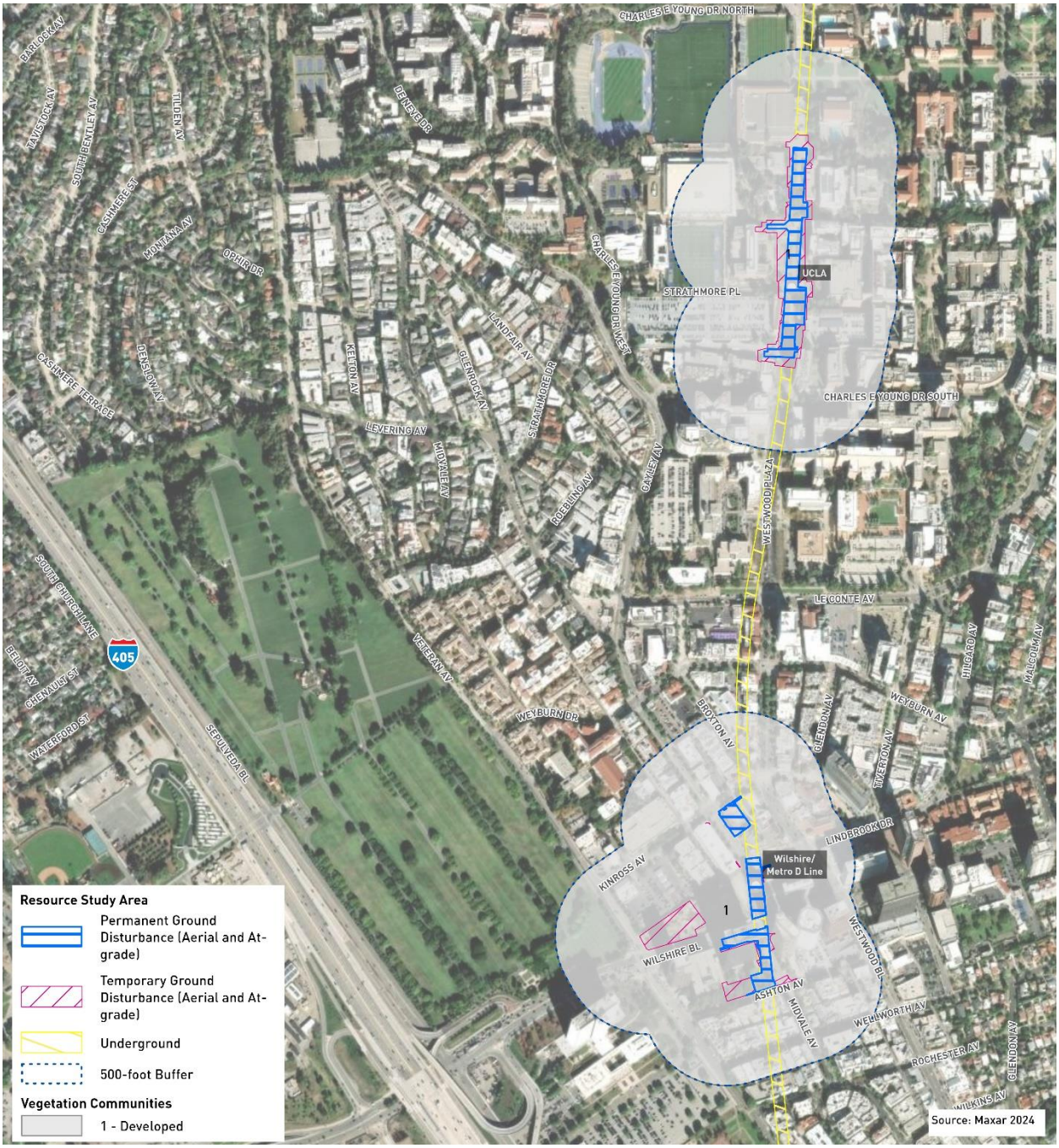


Source: HTA, 2024

Figure 10-10. Alternative 6: Vegetation Communities, Map 2 of 10

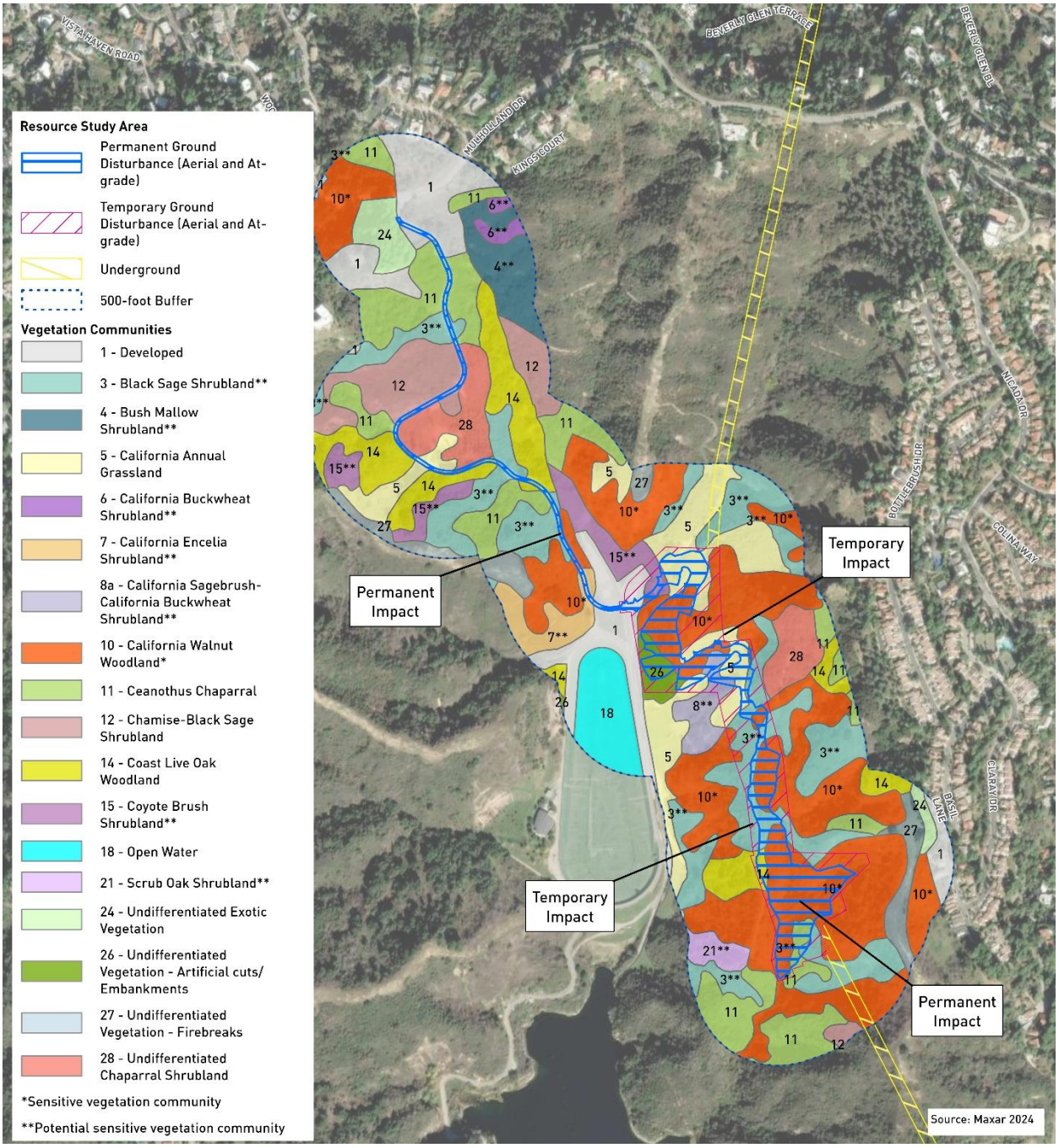
Source: HTA, 2024

Figure 10-11. Alternative 6: Vegetation Communities, Map 3 of 10



Source: HTA, 2024

Figure 10-12. Alternative 6: Vegetation Communities, Map 4 of 10



Source: HTA, 2024

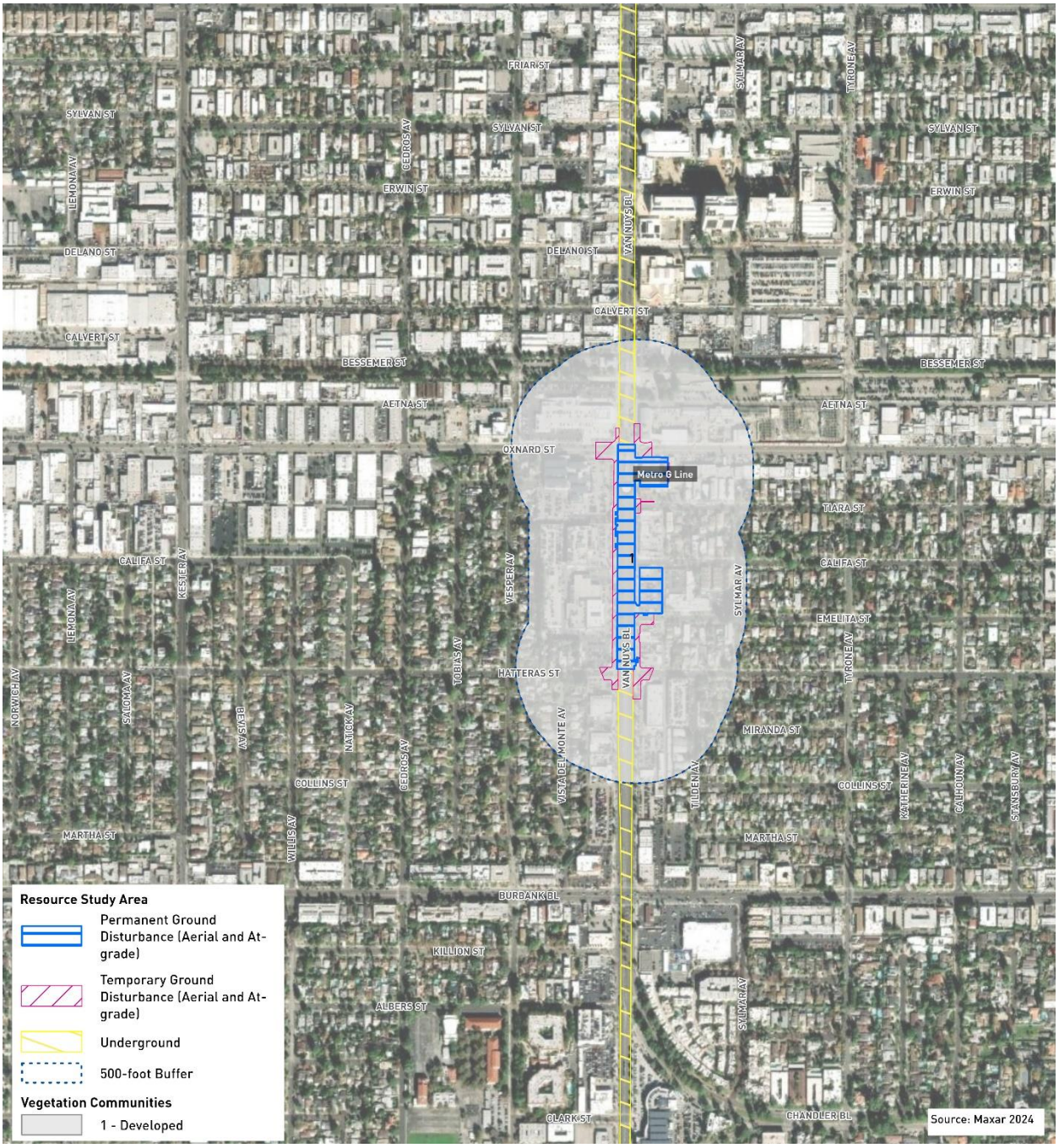
Figure 10-13. Alternative 6: Vegetation Communities, Map 5 of 10

Source: HTA, 2024

Figure 10-14. Alternative 6: Vegetation Communities, Map 6 of 10

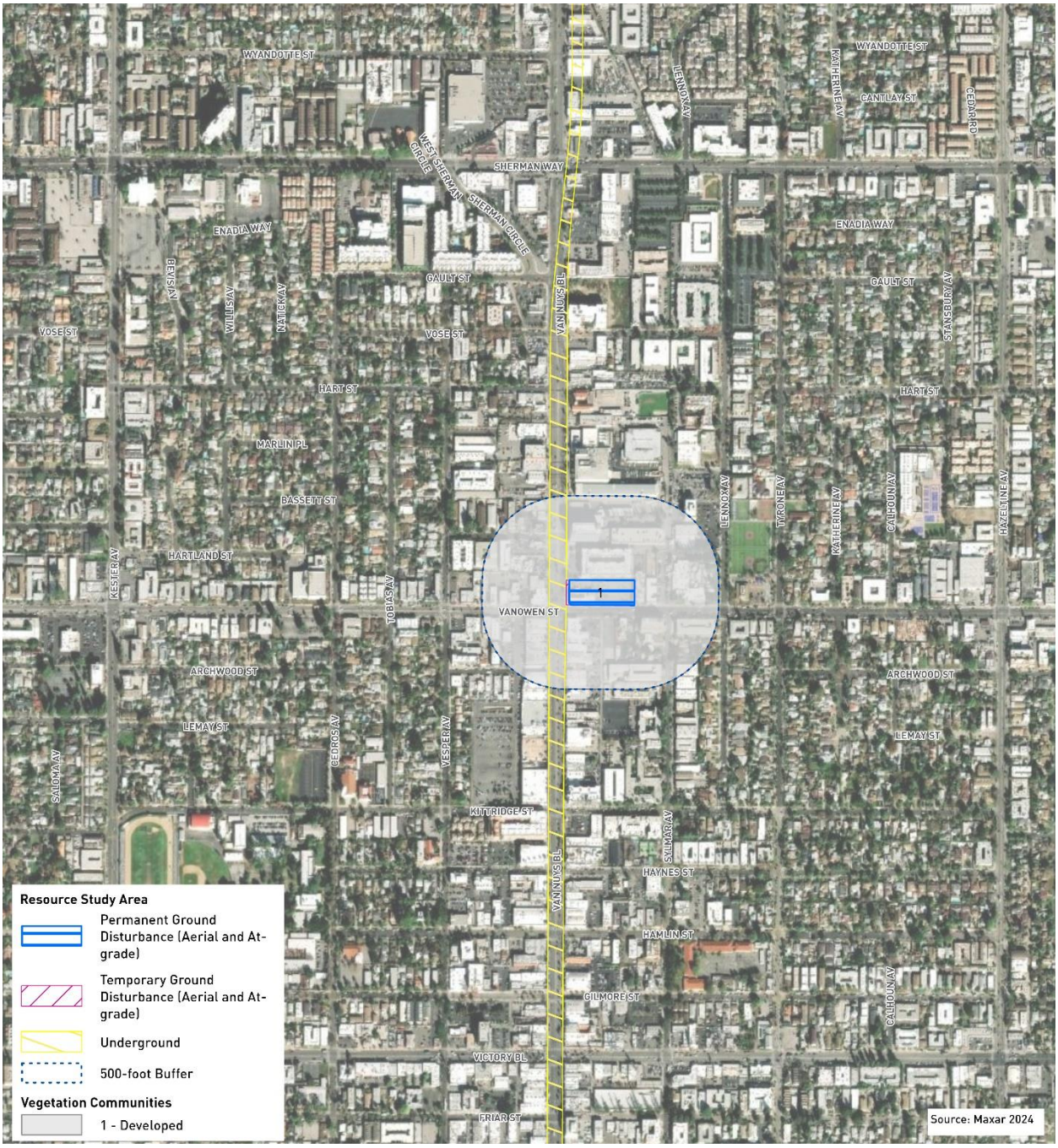
Source: HTA, 2024

Figure 10-15. Alternative 6: Vegetation Communities, Map 7 of 10



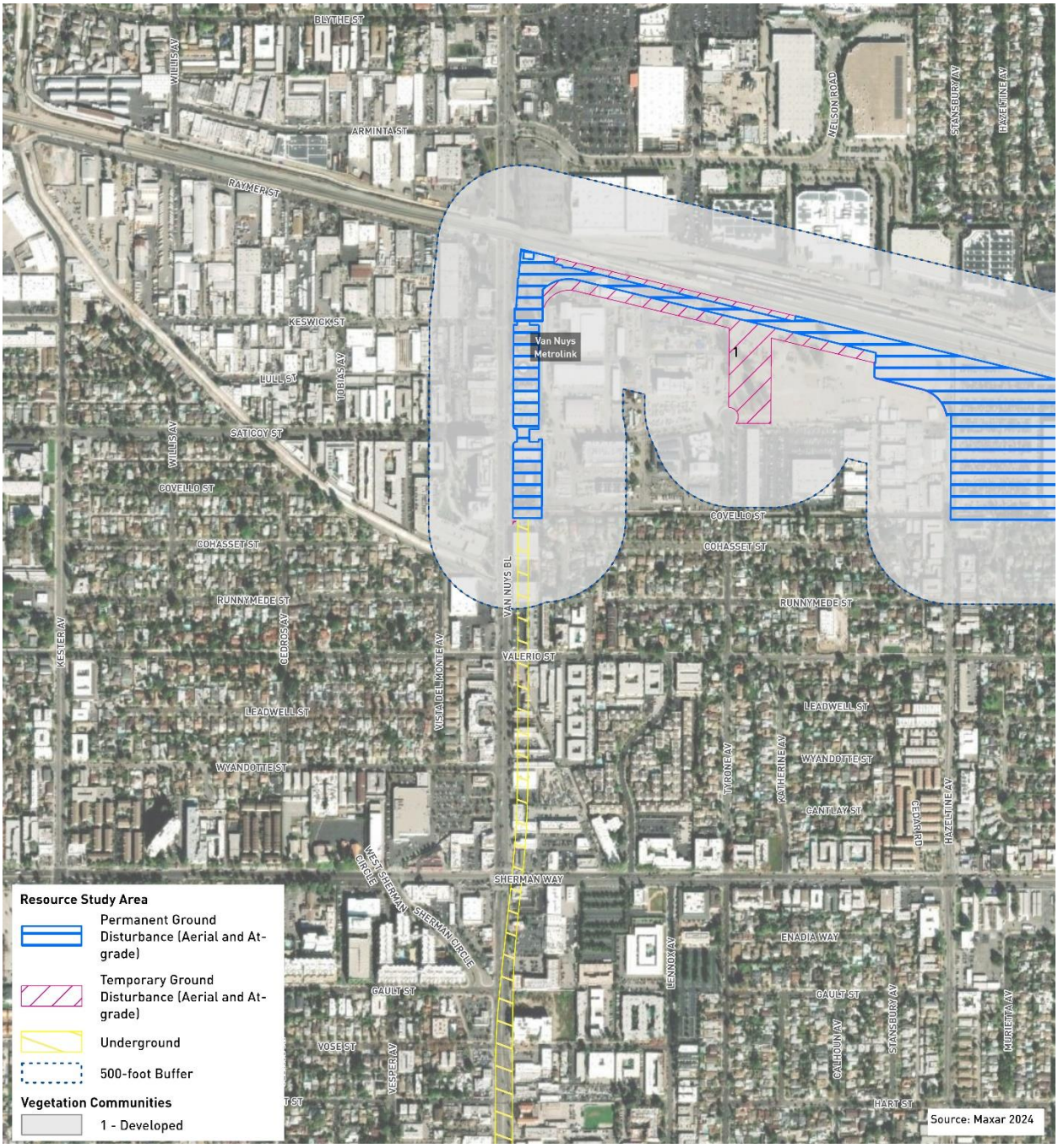
Source: HTA, 2024

Figure 10-16. Alternative 6: Vegetation Communities, Map 8 of 10



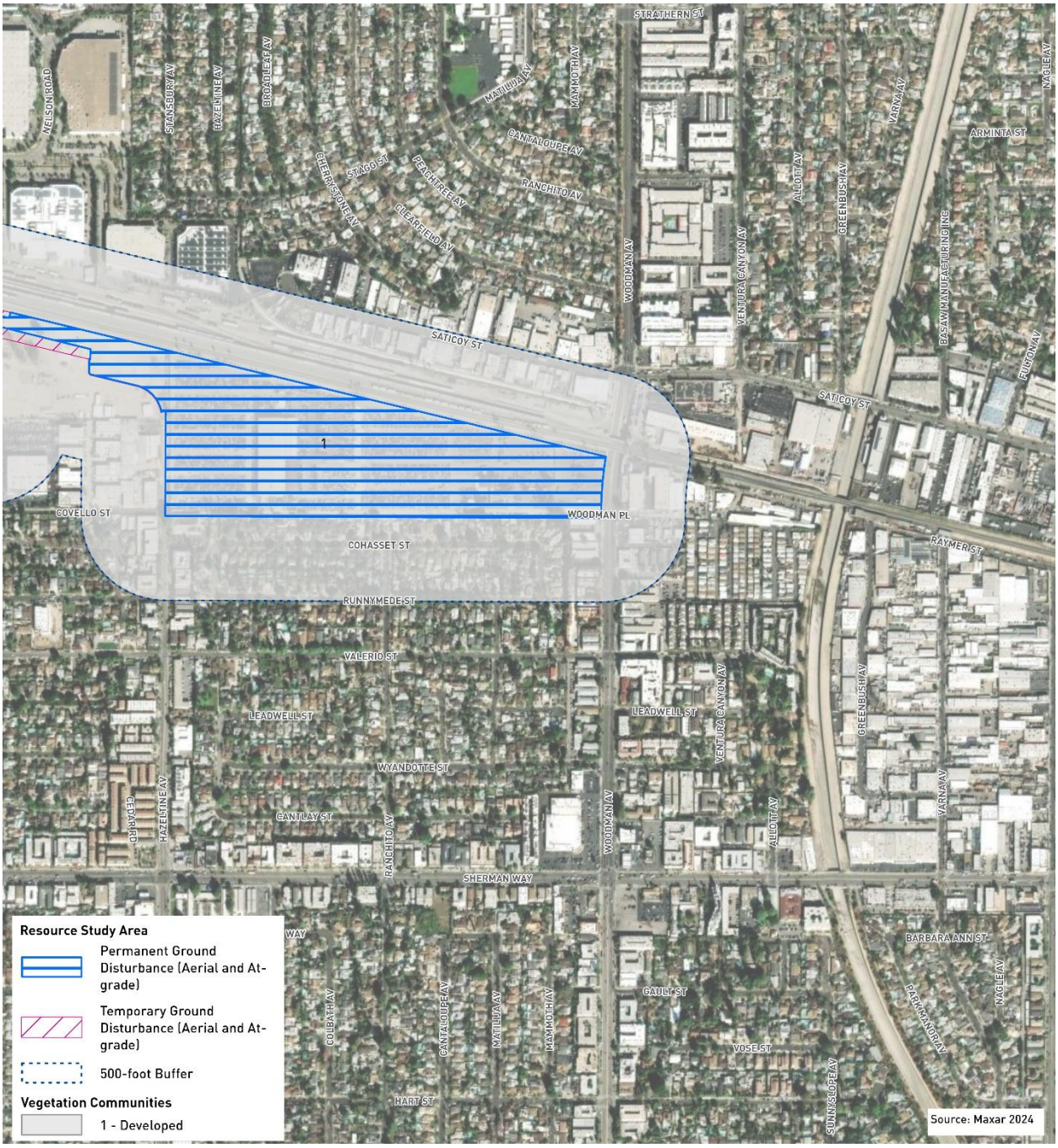
Source: HTA, 2024

Figure 10-17. Alternative 6: Vegetation Communities, Map 9 of 10



Source: HTA, 2024

Figure 10-18. Alternative 6: Vegetation Communities, Map 10 of 10



Source: HTA, 2024

Developed

The developed cover class consists of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or minimal ornamental landscaping. Ornamental landscaping was demarcated during the tree and shrub inventory as a subset of the developed cover class. The ornamental landscaping subcategory is characterized by developed areas dominated by ornamental trees, shrubs, grasses, and herbs, with some areas including native species. The dominant ornamental trees include carob tree (*Ceratonia siliqua*), Chinese banyan (*Ficus microcarpa*), shamel ash (*Fraxinus uhdei*), Chinese elm (*Ulmus parvifolia*), jacaranda (*Jacaranda mimisifolia*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Mexican fan palm (*Washingtonia robusta*), and several species of eucalyptus trees (*Eucalyptus* spp.). Dominant native trees found in this subcategory include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and southern California black walnut (*Juglans californica*). This cover class represents 81.7 percent of the Alternative 6 RSA and occurs throughout it.

California Walnut Woodland

California walnut woodland is characterized by the dominance of California black walnut. Other species that can be co-dominate within the tree layer include white alder (*Alnus rhombifolia*), two-petaled ash (*Fraxinus dipetala*), toyon, coast live oak, valley oak (*Quercus lobata*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Mexican elderberry, and California bay (Sawyer et al., 2009). The shrub layer is sparse to intermittent, and the herbaceous layer is sparse or grassy (Sawyer et al., 2009). California walnut woodland represents 5.4 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Black Sage Shrubland

Black sage shrubland occurs on moderate to very steep southeast- and southwest-facing slopes at low elevations between approximately 50 to 2,550 feet (NPS, 2006). Black sage is the dominant shrub within this community (NPS, 2006). Other species often included in the shrub layer include chaparral yucca (*Yucca whipplei*), chamise, and California sagebrush (*Artemisia californica*) (NPS, 2006). Trees often found within this community include California black walnut, coast live oak, and Peruvian pepper tree (*Schinus molle*) (NPS, 2006). The herbaceous layer is diverse and sometimes includes foxtail brome, tocalote, and black mustard (NPS, 2006). Other herbs present may include mustard (*Hirschfeldia incana*), giant wild rye, coast range melic, and foothill needle grass (*Stipa lepida*) (NPS, 2006). Black sage shrubland represents 2.8 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Ceanothus Chaparral

Ceanothus chaparral is characterized by a dominance of ceanothus (*Ceanothus* sp.). Laurel sumac (*Malosma laurina*) and toyon (*Heteromeles arbutifolia*) can also be present but at much lower cover. Other species typically found in the shrub layer of this community include chamise (*Adenostoma fasciculatum*), sugar bush (*Rhus ovata*), and black sage (*Salvia mellifera*) (NPS, 2006). The tree layer is emergent and open and may include coast live oak, California black walnut and/or California bay (*Umbellularia californica*) with low levels of canopy cover (NPS, 2006). The herbaceous layer is diverse and sometimes includes chilicothe (*Marah macrocarpa*), foxtail brome (*Bromus madritensis*), coast range melic (*Melica imperfecta*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), giant wild rye (*Elymus condensatus*) and black mustard (*Brassica nigra*) (NPS, 2006). Ceanothus chaparral represents 2.2 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

California Annual Grassland

California annual grassland includes wild oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut brome, prickly lettuce (*Lactuca seriola*), black mustard, and the occasional mulefat (*Baccharis salicifolia*) and/or coyote brush. California annual grassland represents 1.5 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Coast Live Oak Woodland

Coast live oak woodland is an open to dense tree community with coast live oak as the dominant overstory species and Engelmann oak (*Quercus engelmannii*) as an occasional associate. The shrub understory of this community is well developed in undisturbed sites and may include Mexican elderberry, gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), and toyon (Beauchamp, 1986; Holland, 1986). An herbaceous stratum is usually present including miner's lettuce (*Claytonia perfoliata* var. *perfoliata*), chickweed (*Stellaria media*), and non-native grasses. Coast live oak woodland represents 1.4 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Undifferentiated Categories- Artificial cuts/Embankments, Exotic Vegetation, and Firebreaks

These designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Areas of undifferentiated vegetation would be further refined upon future analysis and field surveys prior to initiation of construction. The post fire shrub regeneration classification refers to areas that have experienced wildlife where shrub root bases survived the fire and resprouting has begun. Undifferentiated areas categorized as artificial cuts/embankments and firebreaks are subject to anthropogenic disturbance where vegetation is periodically altered through removal along roadways or firebreaks. Within these classifications, approximately 52 percent is within firebreaks, 31 percent is exotic vegetation, and the final 16 percent is within artificial cuts/embankments. These three undifferentiated communities represent a combined 1 percent of the Alternative 6 RSA. They all occur in the central portion of the Alternative 6 RSA where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Chamise-Black Sage Shrubland

Chamise-black sage shrubland occurs on somewhat steep to steep southeast- and northwest-facing slopes at low elevations between approximately 350 to 1,650 feet (NPS, 2006). Chamise and black sage are dominant in the shrub layer. Other species often included in the shrub layer include chaparral yucca, California sagebrush, California buckwheat, and deerweed (*Acmispon glaber*) (NPS, 2006). The tree layer is emergent and open and may infrequently include coast live oak at low canopy cover (NPS, 2006). The herbaceous layer may sometimes include foothill needle grass, woolly bluecurls (*Trichostema lanatum*), tocalote, ripgut brome, island morning glory (*Calystegia macrostegia*), California dodder (*Cuscuta californica*), foxtail brome, and coast range melic (NPS, 2006). Chamise-black sage shrubland represents 0.9 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Undifferentiated Chaparral Shrubland

Undifferentiated designations appear in the SMMNRA mapping for locations where further classification was not conducted and no finer detail was provided. Undifferentiated chaparral shrubland has potential to be sensitive depending on species present within the community; these will be further refined during field surveys prior to initiation of construction. Undifferentiated chaparral shrubland represents less than 1 percent (7.5 acres) of the Alternative 6 RSA and is centrally located, adjacent to Stone Canyon

Reservoir. For this analysis, Metro is conservatively considering this community to be sensitive pending further analysis and refinement of vegetation mapping.

Open Water

This community consists of any open body including lakes, reservoirs, bays, flowing water within a river channel, and small ponds along stream courses. Open water represents 0.5 percent of the Alternative 6 RSA and occurs in the Upper Stone Canyon Reservoir located in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Coyote Brush Shrubland

This community is dominated by coyote brush with a codominant of mulefat. Coyote brush shrubland is found in native shrubland areas with a history of anthropogenic disturbance. This community represntes 0.5 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Bush Mallow Shrubland

Bush mallow shrubland occurs on gentle to steep southwest- and southeast-facing slopes at low elevations between approximately 0 to 1,575 feet (NPS, 2006). Bush mallow (*Malacothamnus fasciculatus*) is dominant in the shrub layer with black sage often present (NPS, 2006). Other species that occur within the shrub layer of this community include California sagebrush, laurel sumac, California encelia (*Encelia californica*), and big pod ceanothus (*Ceanothus megacarpus*) (NPS, 2006). The tree layer is emergent and open and infrequently includes coast live oak, California black walnut, and western sycamore at low canopy cover (NPS, 2006). The herbaceous layer may include tocalote, black mustard, ripgut brome, mustard, and clustered tarweed (NPS, 2006). Bush mallow shrubland represents 0.5 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

California Encelia Shrubland

California encelia shrubland occurs on gentle to steep southwest- and southeast-facing slopes at low elevations between approximately 0 to 1,650 feet (NPS, 2006). California encelia is dominant in the shrub layer (NPS, 2006). Other species that can be found in the shrub layer of this community include California sagebrush, laurel sumac, black sage, and chaparral yucca (NPS, 2006). The tree layer is emergent and open and may infrequently include coast live oak and California black walnut (SMMNRA 2006). The herbaceous layer is diverse and often includes black mustard (NPS, 2006). Other species sometimes present include foxtail brome, giant wild rye, and tocalote (NPS, 2006). California encelia shrubland represents 0.3 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

California Sagebrush-California Buckwheat Shrubland

California sagebrush-California buckwheat shrubland is characterized by the co-dominance of California sagebrush and California buckwheat. Other species that may be codominant within this community include purple sage, black sage, and annual grasses (NPS, 2006). California sagebrush-California buckwheat shrubland represents 0.2 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

Scrub Oak Shrubland

Scrub oak shrubland occurs on gentle to very steep northwest- and northeast-facing slopes at low to middle elevations between approximately 400 to 2,550 feet (NPS, 2006). Scrub oak is dominant in the

shrub layer with toyon often occurring as well. Other species that occasionally occur within the shrub layer of this community include chamise, sugar bush, purple sage (*Salvia leucophylla*), greenbark ceanothus, poison oak, and laurel sumac (NPS, 2006). The tree layer is open and emergent and sometimes includes coast live oak, California black walnut, and valley oak (NPS, 2006). The herbaceous layer is diverse and sometimes includes tocalote, foxtail brome, black mustard, ripgut brome, chilicothe, clustered tarweed (*Hemizonia fasciculata*), coast range melic, and mustard (NPS, 2006). Scrub oak shrubland represents 0.1 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

California Buckwheat Shrubland

California buckwheat shrubland occurs on gentle to very steep slopes of variable aspect at low elevations between approximately 15 to 1,850 feet (NPS, 2006). California buckwheat is dominant in the shrub layer. Other species found in the shrub layer include deerweed, California sagebrush, and laurel sumac (NPS, 2006). The herbaceous layer is largely a sparse mix of non-native species and can include foxtail brome, ripgut brome, black mustard, and tocalote (NPS, 2006). The emergent tree layer is largely absent (NPS, 2006). California buckwheat shrubland represents 0.1 percent of the Alternative 6 RSA and occurs in the central portion where the Santa Monica Mountains intersect the RSA at the mid-mountain ventilation shaft facility.

10.2.5.3 Trees Within Proposed Construction Areas

Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. Numerous trees occur within the Alternative 6 RSA. The northern and southern portions of the Alternative 6 RSA are highly urbanized and dominated by non-native, ornamental trees planted within residential, commercial, and roadside ornamental landscapes. Native trees, such as coast live, western sycamore, and southern California black, occur in smaller numbers in various locations throughout the northern and southern portions of the Alternative 6 RSA. In the central portion of the Alternative 6 RSA which is less developed, native trees are more frequent and are dominant within the Stone Canyon Reservoir. Due to the Alternative 6 alignment running underground from its southern terminus at the Metro E Line Expo/Bundy Station through the Westside communities of Los Angeles, the Santa Monica Mountains, and the Valley to the northern terminus station adjacent to the Van Nuys Metrolink Station, direct impacts to trees would be largely avoided. Locations of direct impacts would be at staging and laydown locations, the at-grade continuation into the proposed MSF site east of the Van Nuys Metrolink Station and associated with the installation of the ventilation shaft installed on Stone Canyon Reservoir east of the reservoir. Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, contains information about the protected trees and shrubs that were mapped within the Alternative 6 RSA.

Of the six local ordinances, plans, or policies with potential to protect trees or shrubs within combined Tree Survey Area (detailed in Section 2.3), the Los Angeles County Oak Woodlands Conservation Management Plan does not have jurisdiction, since inventoried trees did not meet the requirements (i.e., there were no native oak tree stands on unincorporated County land with current or historical canopy cover greater than 10 percent). Therefore, the County Plan will not be discussed further in this report.

Within SMMNRA, trees within the Tree Survey Area were located on lands owned or managed by the County of Los Angeles and the MRCA within the Sepulveda Pass Open Space, Mission Canyon Open Space, and the MRCA Mountaingate Conservation Easement.

10.2.5.4 Sensitive Natural Vegetation Communities

One identified vegetation community, California walnut woodland (S3), is present within the Alternative 6 RSA. An additional four identified communities have the potential to be considered sensitive depending on the associated plants present, i.e., associations (see Section 3.2.2 for additional details). For this community, classification of vegetation associations is required to determine sensitivity, since not all associations within the community are sensitive. Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping. These communities include black sage shrubland, coyote brush shrubland, California sagebrush-California buckwheat shrubland, and California encelia shrubland. Additional sensitive vegetation communities may be present within the Alternative 6 RSA that were not captured in the vegetation mapping effort, if their extent is smaller than the minimum mapping unit for SMMNRA mapping (0.5 hectare).

10.2.5.5 Special-Status Plant Species

Of the 49 special-status plant species with potential to occur within the Project Study Area, 13 were identified as having a potential to occur within the Alternative 6 RSA from CNDDB, California Native Plant Society (CNPS), IPaC, and iNaturalist database searches (CDFW, 2023a; CNPS, 2024; USFWS, 2023a; iNaturalist, 2024p through 2024x). These species are listed in with an assessment of their potential to occur within the Alternative 6 RSA.

Eleven of the special-status plant species were concluded to be known or have potential to occur within the Alternative 6 RSA (Table 10-5); the remaining two were determined to have no potential to occur and is not discussed further for Alternative 6. The five species with low potential are considered unlikely to be detected within the Alternative 6 RSA or impacted by Alternative 6 due to the lack of known recent occurrences and suitable habitat within the Alternative 6 RSA; therefore, they are not described in detail. Species known to occur or with moderate or high potential to occur are discussed in detail in Table 10-5. Within Table 10-5, rows discussing species that were determined to be present or to have a high potential to occur within the Project Study Area are highlighted blue.

Table 10-5. Alternative 6: Special-Status Plant Species with Potential to Occur within Resource Study Area

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Astragalus brauntonii	Braunton's milk-vetch	FE 1B.1	Fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum*), yucca (*Yucca whipplei*), and the rare Tecate cypress (*Cupressus forbesii*).	**High**. Suitable habitat occurs within the Alternative 6 RSA and recent observations of the species have been observed in Fossil Ridge Park approximately 0.35 mile west of the Alternative 6 RSA in 2019 (and about 1 mile south of US-101) and in Bel Air Crest approximately 1.5 mile west of the Alternative 6 RSA in 2022 (iNaturalist, 2024o).
Atriplex coulteri	Coulter's saltbush	1B.2	Associated with areas of saline and alkaline soils, such as ocean bluffs.	**No Potential.** No suitable habitat is present in the Alternative 6 RSA.
Calochortus clavatus var. *gracilis*	Slender mariposa lily	1B.2	Chaparral, coastal scrub, and valley and foothill grasslands, on shaded foothill canyons within the Transverse Ranges and the San Gabriel Mountains. Occurs between 1,050 and 3,280 feet.	**Moderate.** Suitable habitat is present within the Alternative 6 RSA and the species was observed in 2023 at the Hansen Dam Golf Course 4.25 miles northeast of the Alternative 6 MSF (iNaturalist, 2024q).
Centromadia parryi ssp. *australis*	Southern tarplant	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Blooms from May to November at elevations ranging from 0 to 1,575 feet.	**Low.** Suitable habitat is present in the Alternative 6 RSA. One recent record from 2022 is located in Kenneth Hahn State Recreation Area, approximately 5 miles southeast of the southern terminus of the Alternative 6 RSA (iNaturalist, 2024r). One historical record from 1957 located on a brushy hill east of The Getty is within the Alternative 6 RSA (CDFW, 2023a).
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	SE 1B.1	Sandy portions of coastal scrub, valley and foothill grassland, between 490 and 4,005 feet. Blooms April to July.	**Low.** Suitable habitat is present within the Alternative 6 RSA although only historical occurrences from the early 1900s are within 7 miles of the Alternative 6 RSA (CDFW, 2023a).
Dodecahema leptoceras	Slender-horned spineflower	FE/SE 1B.1	Found in sandy sites within chaparral, cismontane woodland, or alluvial fans within coastal scrub. Occurs between 655 and 2,495 feet.	**Low.** Suitable habitat is present within the Alternative 6 RSA. Two recent sightings in 2022 (iNaturalist, 2024t) and one historical observation (1906) (CDFW, 2023a) are located approximately 3 miles east of the Alternative 6 RSA.

Scientific Name[a]	Common Name	Status	Habitat	Potential for Occurrence in Resource Study Area
Horkelia cuneata var. *puberula*	Mesa horkelia	1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Blooms from February to July at elevations ranging from 225 to 2,655 feet.	**Low.** Suitable habitat is present in the Alternative 6 RSA but observations within 10 miles of the Alternative 6 RSA are all historical (1895, 1929, 1956) (CDFW, 2023a).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Blooms from February to June at elevations ranging from 0 to 4,005 feet.	**Low.** Suitable habitat is present in the Alternative 6 RSA; two historical records from 1934 are within 3 miles of the Alternative 6 RSA (CDFW, 2023a).
Malacothamnus davidsonii	Davidson's bushmallow	1B.2	On slopes of chaparral, oak woodland, and other habitats.	**Moderate**. Suitable habitat is present in the Alternative 6 RSA. An observation from 2021 is located 1.5 miles west of the Alternative 6 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021).
Nolina cismontana	Chaparral nolina	1B.2	Coastal mountain ranges in dry chaparral and coastal sage scrub habitat on rocky sandstone substrates.	**High.** Suitable habitat is present, and the species was detected in 2020 approximately 0.50 mile west of the Alternative 6 RSA in Deervale-Stone Canyon Park (iNaturalist, 2024u).
Quercus dumosa	Nuttall's scrub oak	1B.1	Generally found on sandy soils near the coast, often found in chaparral and coastal sage scrub communities between 50 and 1,300 feet.	**High**. Suitable habitat is present in the Alternative 6 RSA. An individual was observed in 2024 approximately 0.35 mile outside the Alternative 6 RSA, east of the UCLA Gateway Plaza (iNaturalist, 2024v).
Sagittaria sanfordii	Sanford's arrowhead	1B.2	Freshwater wetlands. Occurs between 0 and 2,135 feet. Blooms May to October (November).	**No Potential**. No suitable habitat is present in the Alternative 6 RSA.
Symphyotrichum greatae	Greata's aster	1B.3	Within mesic microhabitats in chaparral, cismontane woodland, broadleaved upland forest, lower montane coniferous forest, riparian woodland. Occurs between 985 to 6,595 feet. Blooms June to October.	**Low**. Suitable habitat is present in the Alternative 6 RSA. One historical, undated sample from Benedict Canyon in the Santa Monica Mountains is as close as 0.25 mile east of the Alternative 6 RSA (CDFW, 2023a). No recent observations are present.

Source: HTA, 2024

[c]Special-status plant species identified during reviews of the CNDDB (CDFW, 2023a), CNPS database (CNPS, 2024), and iNaturalist (iNaturalist, 2024p through 2024x) for the Beverly Hills, Canoga Park, Topanga, Van Nuys, Calabasas, Malibu Beach, Santa Susana, Oat Mountain, San Fernando, Sunland, Burbank, Hollywood, Venice, and Inglewood quadrangles; and a review of IPaC (USFWS, 2024a) for the Alternative 6 RSA.

Notes:

Federal Status Designations
FC = Federal Candidate for Listing
FE = Federally Endangered
FT = Federally Threatened

State Status Designations:
SC = State Candidate Species for Listing
SE = State Endangered
SR = State Rare
ST = State Threatened

California Native Plant Society Ranks:
1A. — Presumed Extirpated in California and either rare or extinct elsewhere.
1B. – Rare or Endangered in California and elsewhere.
1B.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) and elsewhere.
1B.2 – Fairly endangered in California (20-80 percent occurrences threatened) but more common elsewhere.
2A. – Presumed extirpated in California but common elsewhere.
2B. – Rare, Threatened, or Endangered in California but more common elsewhere.

Potential to Occur Guidelines:

Present = Species is documented by CNDDB, CDFW, iNaturalist, or another database as occurring in the Alternative 6 RSA. Rows discussing these species have been highlighted blue.

High = High-quality habitat is present within the Alternative 6 RSA; however, no records occur directly with the Alternative 6 RSA. Species has been detected within 1 mile of the Alternative 6 RSA. Rows discussing these species have been highlighted blue.

Moderate = Suitable habitat present within the Alternative 6 RSA is of marginal quality. No records occur in RSA, but the species has been documented over 1 mile from the Alternative 6 RSA.

Low = Suitable habitat within the Alternative 6 RSA is of low quality. There are no known recent occurrences within or near the Alternative 6 RSA.

No Potential = Suitable habitat is not present for the species.

Braunton's Milk-Vetch

Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb that is native to California and has high potential to occur within the Alternative 6 RSA. The species has the California Rare Plant Rank (CRPR) of 1B.1 (rare, threatened, or endangered in California and elsewhere) and is federally listed as endangered. Braunton's milk-vetch occurs in valleys and foothill grasslands, limestone, coastal scrub and chaparral habitats. It is often found in recent burns or disturbed areas, usually sandstone with carbonate layers. Braunton's milk-vetch typically blooms from January to August at elevations from 15 to 2,100 feet. Suitable habitat occurs within the Alternative 6 RSA and records of the species have been observed in Fossil Ridge Park approximately 0.35 mile west of the Alternative 6 RSA in 2019 (and about 1 mile south of US-101) and in Bel Air Crest approximately 1.5 mile west of the Alternative 6 RSA in 2022 (iNaturalist, 2024o).

Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) is a perennial herb that is native and endemic to California and is a CRPR 1B.2 rare species in California. This species has moderate potential to occur within the Alternative 6 RSA and grows in shaded, foothill canyons in Southern California, primarily in the Transverse Range region. Slender mariposa lily tends to grow on rocky slopes and open areas at elevations from 0 to 5,900 feet and typically blooms from March to June. Suitable habitat is present within the Alternative 6 RSA and observations from 2023 is approximately 4 miles to the west of the MSF at the northeastern terminus of the Alternative 6 RSA (iNaturalist, 2024q).

Davidson's Bushmallow

Davidson's bushmallow (*Malacothamnus davidsonii*) is a shrub that is native and endemic to California and is a CRPR 1B.2 rare species in California. This species has moderate potential to occur within the Alternative 6 RSA; it has been recently observed 1.5 miles west of the Alternative 6 RSA in the Sepulveda Basin Wildlife Reserve (Calflora, 2021). This species typically grows in chaparral, oak woodland, and other habitats on slope. It is known from three California regions, the southern San Francisco Bay Area, the Santa Lucia Mountains in Monterey County, and the Transverse Ranges including the San Gabriel Mountains, and the eastern San Fernando Valley, in Los Angeles County. Suitable habitat for this species is present in the Alternative 6 RSA particularly along I-405 on the Sepulveda Pass in the Santa Monica Mountains.

Chaparral Nolina

Chaparral nolina (*Nolina cismontana*) is a CRPR 1B.2 rare shrub species native to California. It has high potential to occur in the Alternative 6 RSA due to a 2020 occurrence in Deervale-Stone Canyon Park, approximately 0.5 mile west of the Alternative 6 RSA (iNaturalist, 2024u). This species occurs in coastal sage scrub and open chaparral habitats in foothills from Ventura County south to San Diego County. This species typically blooms from May to June. Suitable habitat for chaparral nolina is present within the Alternative 6 RSA, mainly in the central portion of the Alternative 6 RSA within the Santa Monica Mountains.

Nuttall's Scrub Oak

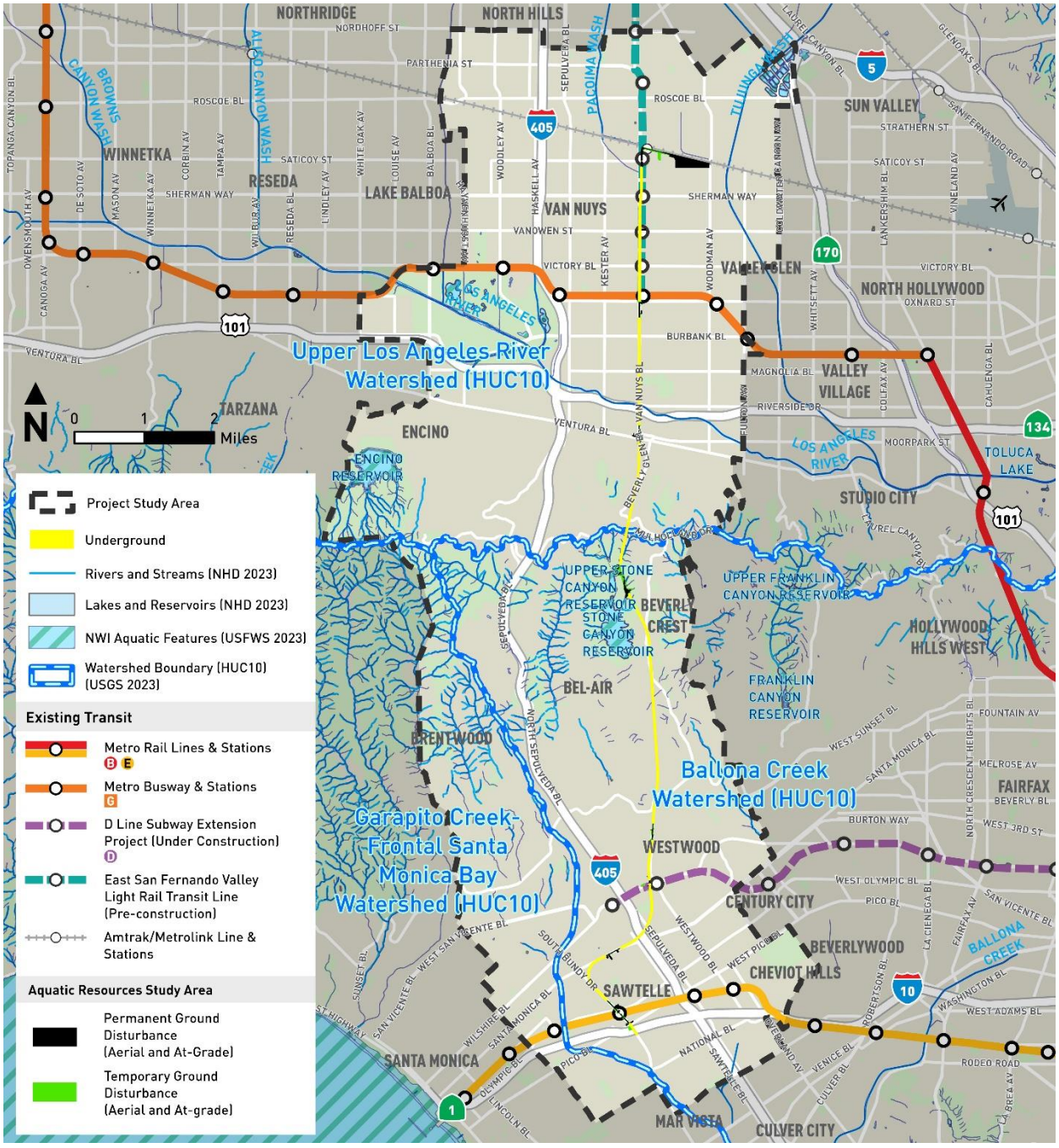
Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 perennial evergreen shrub species with high potential to occur that is native to the South Coast, Peninsular Ranges and San Jacinto Mountains of California. This species occurs in coastal sage scrub and chaparral habitats with sandy, clay or loam soils between 50 and 1,300 feet. One recent observation from 2024 is located 0.35 mile outside of the Alternative 6 RSA, east of the UCLA Gateway Plaza, (iNaturalist, 2024v). It is likely to a landscaped plant due to its location in a yard.

10.2.5.6 Jurisdictional Resources

The Project Study Area was used to assess for water resources and local conditions that affect hydrology and water availability for the region including watershed context and drainage. For the purposes of the jurisdictional resource evaluation for potential impacts, field surveys occurred within the Ground Disturbance Area portion of the Alternative 6 RSA where direct impacts would occur, and an associated 500-foot buffer on ground disturbance was assessed through desktop analysis of vegetation communities for indirect impacts to potential aquatic resources. The underground tunnel was not included as no impacts are anticipated to water resources.

An online review of the National Hydrography Dataset (NHD) (USGS, 2023) and National Wetlands Inventory (NWI) (USFWS, 2023a) indicates the presence of mapped aquatic features within the Project Study Area. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels exist in the vicinity of the Alternative 6 RSA (Figure 10-19). Named aquatic resources nearby the Alternative 6 RSA include the Los Angeles River, Pacoima Wash, and the Sepulveda Channel. However, only the Los Angeles River is located within the Alternative 6 RSA and would be traversed by Alternative 6. The remainder of the aquatic resources within the Alternative 6 RSA are either underground, or ephemeral and unnamed.

Figure 10-19. Alternative 6: National Hydrography Dataset and National Wetlands Inventory Aquatic Features



Source: USFWS, 2023a, 2023b

While the larger Project Study Area includes the Upper Los Angeles River, Ballona Creek, and the Garapito Creek Frontal Santa Monica Bay Watersheds (Figure 10-19), only the Upper Los Angeles River and Ballona Creek Watersheds receive waters within the Alternative 6 RSA. Therefore, discussion is limited to the two watersheds relative to the Alternative 6 RSA. The receiving waters from the Alternative 6 RSA include the Los Angeles River and Ballona Creek with their respective tributaries. The

Los Angeles River crosses the Alternative 6 RSA from west to east, roughly parallel, and adjacent to the US-101, while Ballona Creek is 3 miles south of the Alternative 6 RSA.

Upper Los Angeles River Watershed

The Upper Los Angeles River Watershed is located is the northwest portion of Los Angeles County and covers over 613 square miles. This watershed includes the San Fernando Valley and portions of the San Gabriel and Santa Susana Mountains. The six major tributaries along the river include Tujunga Wash, Burbank Western Storm Drain, Verdugo Wash, Arroyo Secco, Rio Hondo, and Compton Creek. The primary source of input into the Los Angeles River watershed is wet weather runoff originating from direct precipitation, and dry weather inputs from urban runoff and groundwater upwelling (LADPW, 2022).

The northern portion of the Alternative 6 RSA crosses the Los Angeles River in Reach 5, where the river flows west to east, at the base of the Santa Monica Mountains in the San Fernando Valley. Reach 5 of the Los Angeles River runs through low density residential neighborhoods, the Sepulveda Basin, other commercial developed areas, and under I-405, Sepulveda Boulevard, and Van Nuys Boulevard.

Topography throughout the coastal plain area of Upper Los Angeles River Watershed is generally defined by gradually sloping land from the foothills of the San Gabriel Mountains to the Pacific Ocean. Ground elevations range from 10,000 feet in the San Gabriel Mountains approximately 15 miles east of the Alternative 6 RSA, to mean sea level at the mouth of the Los Angeles River approximately 22 miles south of the Alternative 6 RSA. Most of the coastal plain is less than 1,000 feet in elevation (GLAC, 2014), while the upper portion of the watershed is covered by forest and open space. The majority of land in the Upper Los Angeles River Watershed is developed with urban uses, including the portion of the river that traverses the Alternative 6 RSA (LA County, 2023b).

Ballona Creek Watershed

Ballona Creek consists of a 9-mile-long flood protection channel that drains the Los Angeles Basin south of the Alternative 6 RSA. The Ballona Creek Watershed covers approximately 130 square miles located in the western portion of the Los Angeles Basin and is made up by the Culver City, Wilshire, and Hollywood sub-watersheds. The headwaters of the watershed are in the Santa Monica Mountains, including a portion in the Alternative 6 RSA, and Baldwin Hills to the southeast of the Alternative 6 RSA. Most of the Ballona Creek drainage network consists of storm drains, underground culverts, and open concrete channels. However, Ballona Creek does not traverse the Alternative 6 RSA. Ballona Creek is an open channel between Venice Boulevard and Pickford Street and its confluence with Santa Monica Bay (a length of approximately 9 miles); it is approximately 4 miles south of the Alternative 6 RSA. A few natural channels remain in the Santa Monica Mountains and Baldwin Hills. The Sepulveda Channel, which is mostly channelized and underground, runs along I-405 approximately 2.5 miles south of the Alternative 6 RSA and is a major tributary to the Ballona Creek Watershed.

Riparian Habitats

Although not mapped in the NWI, riparian habitats may be present along many of the jurisdictional features identified in the NWI database. Riparian habitats fall under CDFW jurisdiction, which generally extends to the outer limits of riparian habitats occurring around aquatic features. Such habitats provide valuable buffers around aquatic features and provide specific habitat requirements for many plant and wildlife species, including many of the regional special-status species identified above. Project vegetation mapping identified no riparian habitat in the 500-foot buffer of the Ground Disturbance Area.

The Alternative RSA traverses the Los Angeles River north of the US-101. Alternative 6 would cross under the river via underground tunnel, and under Van Nuys Boulevard, north of US-101. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 6 would traverse the river. The Los Angeles River is a Traditional Navigable Water throughout its entire reach. However, it is only considered a Navigable Water[8] from the river's outlet into the San Pedro Bay to San Pedro Highway Bridge and/or up to 2.5 feet amsl, which is not within the Alternative 6 RSA. (USACE, 2023). Because Alternative 6 proposes traversing below the river (underground tunnel), impacts to the Los Angeles River are not expected.

Access was not granted to the mid-mountain ventilation shaft facility work area in undeveloped area within Stone Canyon Reservoir open space area for Alternative 6. This area likely contains additional non-wetland ephemeral channels that drain into the Stone Canyon Reservoir to the west. As potentially jurisdictional drainages in this area could not be measured or photographed in the field, estimations of jurisdictional areas within the Ground Disturbance Area were made via aerial interpretation of digital imagery. Verification and refinement of these estimations would be conducted when a preferred alternative is selected, if required.

No potential wetlands or riparian areas were observed throughout the Ground Disturbance Area. Therefore, no wetland delineation forms were required.

Non-wetland jurisdictional features mapped within the Ground Disturbance Area for Alternative 6 are summarized below:

- 0.07 acre (3,092 square feet) of non-wetland Waters of the United States (WOTUS), CDFW streambed and Regional Water Quality Control Board (RWQCB) Waters of the State (WOTS) within Los Angeles River.
- 0.11 acre (4,698 square feet) RWQCB waters of the state within the mid-mountain ventilation shaft facility RSA in Stone Canyon Reservoir open space preserve for Alternative 6.
- 0.22 acre (9,415 square feet) of non-wetland CDFW streambed mid-mountain ventilation shaft facility RSA in Stone Canyon Reservoir open space preserve for Alternative 6.

Further details of existing jurisdictional aquatic resources can be found in Appendix A, Aquatic Resources Delineation.

10.2.5.7 Other Protected or Managed Biological Resources

This section provides an overview of other protected or managed biological resources that may occur within the Alternative 6 RSA and were considered in this analysis.

USFWS Critical Habitat

Critical habitat is designated by USFWS for threatened or endangered species listed under the ESA; these areas are considered essential for species conservation (USFWS, 2024b). Critical habitat provides protection to locations necessary for life processes and reproduction where individuals and populations can thrive in habitat that is protected from disturbances. Specifically, it provides cover, shelter, food, water, light, minerals, and other nutritional or physiological requirements for survival of the species,

[8] The term "Traditional Navigable Water" is used in reference to Section 404 of the Clean Water Act, while the term "Navigable Water" is used in reference to Section 10 of the Rivers and Harbors Act. The entire stretch of the Los Angeles River is considered a Traditional Navigable Water, but only the portion in proximity to its outlet into San Pedro Bay is considered a Navigable Water.

along with sites for breeding and rearing offspring (USFWS, 2024b). Areas currently unoccupied may be included in critical habitat boundaries if it would be needed for species recovery (USFWS, 2024b).

No USFWS-designated or USFWS-proposed critical habitat coincides with the Alternative 6 RSA. The nearest designated critical habitat for wildlife includes western snowy plover (*Charadrius nivosus nivosus*) located approximately 3 miles west of the Alternative 6 RSA, along the coastline in the City of Santa Monica.

Since no federally designated critical habitat occurs for any species within the Alternative 6 RSA, no impacts are anticipated; hence, critical habitat is not discussed in the impact evaluation section below.

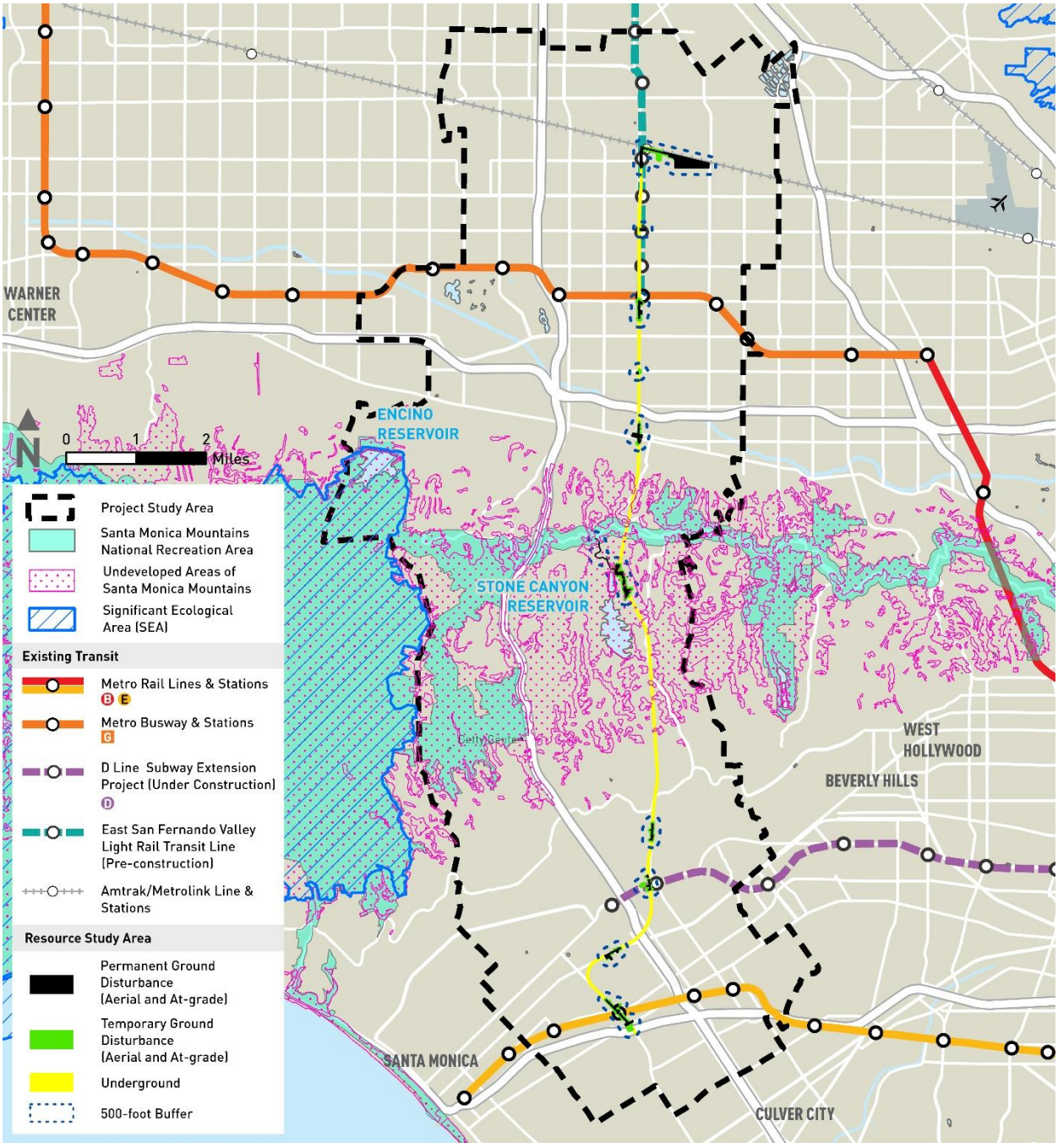
Santa Monica Mountains National Recreation Area

The SMMNRA extends from the Pacific coastline east across the middle of the Alternative 6 RSA (Figure 11-20). The Alternative 6 RSA is predominantly an underground tunnel where it intersects with the SMMNRA, although 0.28 acre of permanent impact is associated with the mid-mountain facility located by Stone Canyon Reservoir. In relation to Alternative 6, conserved lands exist along Mulholland Drive between I-405 to the west of the Alternative 6 RSA and Fossil Ridge Park to the east. The various parks and other conserved areas under the SMMNRA umbrella provide scenic vistas, nature viewing, and hiking, biking, and horseback riding opportunities, often through undisturbed native chaparral habitats.

Significant Ecological Areas

As introduced in Section 2 of this report, Los Angeles County-designated SEAs are ecologically important land and water systems that are valuable as plant or animal communities and are often important to the preservation of threatened or endangered species and conservation of biological diversity in the county. The Santa Monica Mountains SEA is outside the 500-foot buffer and does not intersect with the Alternative 6 RSA (Figure 10-20).

Figure 10-20. Alternative 6: Santa Monica Mountains National Recreation Area, Undeveloped Areas within the Santa Monica Mountains, and Los Angeles County Significant Ecological Areas



Source: LA County Planning, 2009; NPF, 2021

Natural Community Conservation Plan/Habitat Conservation Plan Areas

The RSA is not located within the boundary of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan (CDFW, 2023c; USFWS, 2023b).

10.3 Impact Evaluation

10.3.1 Impact BIO-1: Would the project 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 US Fish and Wildlife Service?

10.3.1.1 Operational Impacts

The potential for operational impacts such as injury or mortality due to collisions with vehicles, behavioral and habitat usage modifications due to exposure to noise and vibration from passing trains, habitat degradation due to edge effects, and impacts on movement due to infrastructure are limited for most wildlife species for Alternative 6 due to its underground alignment. Anticipated impacts are described below.

Special-Status Invertebrates and Reptiles

Special-status invertebrates, such as Crotch's bumble bee, and reptiles that may occur in surface habitats over the alignment are not anticipated to be subject to operation-associated direct impacts, as the depth of the tunnel is anticipated to be sufficient for buffer noise and vibration associated with train operation and maintenance from the surface. Maintenance activities similarly will occur in underground areas.

However, special-status invertebrates and reptiles may be subject to permanent habitat loss at the mid-mountain facility, as described below under construction-related impacts, and habitat degradation due to edge effects around the facility. Edge effects may include changes to the microclimate due to increase exposure to sun and wind, incursion by nonnative, weedy plant species that alter the vegetation structure, and changes in the distribution and diversity of foraging plant species (for bumble bees) and prey species (for reptiles). These habitat alteration impacts would persist through operation of the facility; however, due to the limited areal extent, this is anticipated to constitute a less than significant impact. Further, indirect habitat degradation would be mitigated through the habitat restoration measures related to construction of Alternative 6.

For these reason, operations-related impacts to special-status invertebrates and reptiles are anticipated to be less than significant.

Special-Status Birds and Bats

Special-status birds (including those protected by the MBTA and special-status bats listed in Table 10-3 have potential to be significantly impacted during operation and maintenance of Alternative 6 if nesting birds or roosting bats are present in trees and/or shrubs that require routine maintenance trimming. Adult birds and bats are highly mobile and are anticipated to be able to relocate away from maintenance trimming activities of their own volition; however, nests, eggs, and nestlings, and bat pups, could be injured, killed, or destroyed by maintenance activities if they are located in the vegetation slated for removal. Additionally, if breeding birds or bats are present in the adjacent areas, individuals may be subject to indirect impacts including exposure to noise, human presence, and dust, which could disrupt natural breeding behaviors such as incubation of eggs and feeding and care of young. In some cases, habitat changes due to vegetation removal could be sufficient to reduce protective cover, resulting in abandonment of nests and eggs.

Since Alternative 6 would be an underground alignment, only the mid-mountain facility and access road location have potential to impact special-status birds and bats during vegetation maintenance for

operation of Alternative 6. Due to the relatively low level of trimming anticipated and the limited areal scope of these activities, impacts to nesting birds and bats due to operations are expected to be less than significant. However, mitigation measures, as described below, will be implemented to further reduce these impacts, through implementation of pre-activity surveys to locate and avoid nesting birds and sensitive bats.

Special-Status Mammals

Impacts to special-status bats are addressed above with special-status birds.

Specifically for mountain lions, direct significant impacts from collisions are not anticipated for Alternative 6 since the alignment is underground through the Santa Monica Mountains where suitable habitat is present and they are known to occur. The depth of the tunnel (ranging from 120 feet to 730 feet below ground surface for the Santa Monica Mountains segment) is anticipated to be sufficient to reduce or prevent indirect impacts at the surface from operations noise and vibration. Within Alternative 6, 19 percent (24.7 acres) of the total impacts are within non-developed natural areas in the Santa Monica Mountains, (i.e., suitable habitat for mountain lion); the remaining acreage is either in urban areas within the mountain range or outside of the mountains. Within suitable mountain lion habitat in the Santa Monica Mountains, impacts that have potential to be significant are limited to the mid-mountain facility where they are fairly evenly split between temporary (44 percent of suitable mountain lion habitat impacts, 10.8 acres) and permanent impacts (56 percent of suitable mountain lion habitat impacts; 13.9 acres). Habitat reductions of this size adjacent to an impermeable highway are anticipated to be less than significant for mountain lions to survive or recover in the wild. Impacts to mountain lion habitat that could affect movement and connectivity within the Santa Monica Mountains is discussed in Section 10.3.4. However, the operation of Alternative 6, specifically permanent impacts associated with the mid-mountain ventilation shaft, has the potential to significantly impact mountain lion movement and usage of wildlife corridors through disruption of previously continuous habitat. This would constitute a significant impact.

Special-Status Plants

Impacts to special-status plants during operations, such as crushing or trampling of individual plants during normal maintenance or tree trimming for maintenance, are expected to be less than significant since the majority of the Alternative 6 alignment is underground. Potential significant impacts would be limited to maintenance operations at the mid-mountain facility, where maintenance work would occur predominantly within developed or paved areas where special-status plants are not likely to occur.

One special-status plant, Nuttall's scrub oak (*Quercus dumosa*), has potential to be present within the RSA in the Santa Monica Mountains and has potential to be significantly impacted by dust and/or routine maintenance trimming at the mid-mountain facility or along the access road at Stone Canyon Reservoir. If present, Nuttall's scrub oak could potentially be impacted by required routine maintenance trimming. Impacts are anticipated to be less than significant since vegetation maintenance at the mid-mountain facility, the only at-grade component within the Santa Monica Mountains, would be minimal for operations of Alternative 6, and is anticipated to include only minor trimming necessary for safety and security of the facility.

Mitigation Measures

MM BIO-1 and MM BIO-2, presented in Section 10.4, are included to reduce potentially significant operations-related impacts to nesting birds and roosting special-status bats from maintenance vegetation trimming to a less than significant level through through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro. MM BIO-3 would

reduce operational-related impacts to special-status trees from vegetation maintenance to less than significant through application of mitigation as determined in the applicable local ordinance or policy where the impact would occur. Therefore, with the implementation of MM BIO-1, MM BIO-2, and MM BIO-3, operational impacts of Alternative 6 on special-status species would be reduced to a less than significant level.

10.3.1.2 Construction Impacts

Construction of Alternative 6 has potential for localized, temporary impacts on special-status wildlife or plant species and sensitive vegetation communities both directly and through modifications to suitable habitat during construction of stations, staging areas, the mid-mountain facility, and the MSF. Construction activities for Alternative 6 could result in significant impacts to special-status wildlife including nesting birds, special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potentially significant impacts include injury to or mortality of individuals, habitat loss due to permanent vegetation removal, behavioral or health modifications from noise pollution or exposure to fugitive dust from prolonged heavy equipment operation, and behavioral modifications due to increased human presence within species habitats during construction.

Since Alternative 6 is an underground alignment, the Ground Disturbance Area is only present within the station footprints, staging areas, the MSF, and the mid-mountain facility and associated access road; therefore, it is anticipated that clearing and grading of native vegetation would be required for construction of these components. Construction of the three tunnel segments would be underground except for the launch and extraction sites within stations or staging areas that are included in the Ground Disturbance Area. Native vegetation is concentrated around the mid-mountain facility; vegetation elsewhere within the Ground Disturbance Area is predominantly non-native and/or ornamental landscaping within developed areas, although native vegetation could be present in remnant patches. If appropriate mitigation measures are not implemented, Alternative 6 could result in potentially significant impacts to special-status plant and wildlife species, including nesting birds, as a result of construction activities. Potential impacts include injury or mortality of individuals; destruction of nests or eggs; habitat loss due to permanent and temporary vegetation removal activities; temporary behavioral and habitat usage changes due to exposure to increased human presence, noise pollution, and vibration associated with heavy equipment operation.

Other anticipated construction impacts related to the construction of Alternative 6 include the possibility of increased noise, dust, and vibration during at-grade impacts such as “cut-and-cover” installation of the stations, clearing and grading at the mid-mountain facility and associated access road, and at the TBM launch and extraction locations for the tunnel excavation (launch sites at Metro E Line Station, Ventura Station, and Van Nuys Metrolink Station in the north, extraction sites at the UCLA Gateway Plaza Station and Ventura Station). While these areas are developed and, therefore, less likely for special-status species to be present, trees are present that provide potential habitat for special-status birds.

For construction of the underground tunnel, impacts of noise, dust, and vibration are not expected at surface levels for the majority of the alignment, due to the depth at which the tunnel will be buried. The exception to this is at the tunnel portal near the Metrolink ROW, which is a developed area already subject to disturbances. Excessive noise generated by heavy equipment operation could significantly disturb avian species and/or other special-status species who are dependent on auditory signals during essential daily activities. Vibration related disturbance from drilling could also disrupt their normal behavioral patterns near the TBM launch and extraction sites; impacts through the Santa Monica

Mountains are not anticipated due to tunnel depth. Construction-related dust (associated with construction of stations, vegetation clearing, grading, etc.) could significantly impact habitat quality by depositing on vegetation, which may reduce photosynthesis and increase leaf temperature, making vegetation more susceptible to drought (Farmer, 1993). Evaluation of the Project's impact on wildfire risk and occurrence is discussed in the wildfire chapter of the *Sepulveda Transit Corridor Project Safety and Security Technical Report* (Metro, 2025b).

Vegetation Communities/Land Cover Types and Sensitive Vegetation Communities

Direct impacts to vegetation communities would occur within the Ground Disturbance Area; acreages of temporary and permanent impacts to vegetation communities within Alternative 6 are detailed in Table 10-6. Due to the sparse vegetation, lack of diversity, and continued anthropogenic disturbance, special-status wildlife and plant species are less likely to be found in developed land. Approximately 81 percent (106.7 acres) of the acreage in Alternative 6 planned for ground disturbing activities consists of developed or undifferentiated artificial cuts/embankments. Excluding these areas, construction of Alternative 6 is anticipated to result in 10.2 acres temporary impacts and 23.4 acres of permanent impacts. Within the vegetated areas subject to impacts, approximately 3 percent (4.1 acres of temporary impacts) is California annual grassland. The remaining vegetation communities are native vegetation in nine communities that represent approximately 15 percent (19.3 acres) of the impacts, of which 11.3 acres are anticipated to be permanently impacted and 8.0 acres are anticipated to be temporarily impacted from construction of Alternative 6. Indirect impacts to vegetation communities may also occur during construction activities. For example, fugitive dust deposition on foliage may reduce photosynthesis and increase plant vulnerability to drought. Additionally, vegetation removals may increase edge effects, including incursion of nonnative, weedy plants that compete with natives for space and resources.

One sensitive vegetation community, California walnut woodland, represents 12.0 acres that would be permanently and temporarily impacted from clearing and grading of native vegetation at the mid-mountain facility by Stone Canyon Reservoir (Figure 10-15). An additional five vegetation communities in the Alternative 6 RSA have potential to be considered sensitive (** in Table 10-6) depending upon the associated codominant plants present (Sections 3.2.2 and 10.2.5.4). Up to an additional 5.6 acres of potentially sensitive communities would be impacted at the mid-mountain facility. For this analysis, Metro is conservatively considering impacts to these communities to be significant pending further analysis and refinement of vegetation mapping.

The removal and degradation of native and sensitive vegetation communities would constitute potentially significant impacts.

Table 10-6. Alternative 6: Impacts on Vegetation Communities within Resource Study Area

Vegetation Community/Land Cover Type[a]	Permanent Impacts (acres)	Temporary Impacts (acres)	Total Impacts (acres)[b]	Percent of Total Project Impacts
Developed	83.8	22.9	106.7	81.0
Developed Total	**83.8**	**22.9**	**2106.7**	**81.0**
California Walnut Woodland*	7.6	4.4	12.0	9.2
California Annual Grassland	1.9	2.2	4.1	3.2
Black Sage Shrubland**	1.5	2.6	4.1	3.1
Undifferentiated Vegetation - Artificial cuts/Embankments	0.7	0.7	1.4	1.0

Vegetation Community/Land Cover Type[a]	Permanent Impacts (acres)	Temporary Impacts (acres)	Total Impacts (acres)[b]	Percent of Total Project Impacts
Ceanothus Chaparral	0.7	0.1	0.8	0.6
California Sagebrush-California Buckwheat Shrubland**	0.4	0.3	0.7	0.6
Coast Live Oak Woodland	0.5	0.1	0.6	0.4
Coyote Brush Shrubland**	0.2	0.4	0.5	0.4
Chamise-Black Sage Shrubland	0.2	0	0.2	0.2
Undifferentiated Chaparral Shrubland**	0.2	0	0.2	0.1
California Encelia Shrubland**	0.1	0	0.1	0.1
Vegetation Total	**13.9**	**10.8**	**24.7**	**19.0**
GRAND TOTAL	**97.7**	**33.7**	**131.4**	**100.0**

Source: HTA, 2024

[a]Vegetation communities based on the classifications provided in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al., 2009).

[b]Inconsistencies in calculations due to rounding errors.

* Sensitive vegetation community
**Potential sensitive vegetation community based on codominant species on-site.

Special-Status Invertebrates

One special-status invertebrate, Crotch's bumble bee, has potential to be present within the Alternative 6 RSA during construction activities. Despite having a relatively narrow range, this species is known to use a wide variety of natural and disturbed habitat for nesting and foraging and could be present throughout the RSA in undeveloped areas where pavement is not present and the earth is not regularly maintained through grading, tilling or planting. Based on their broad range of suitable habitat and generalist foraging behavior, Crotch's bumble bee are likely to forage throughout the RSA where preferred flowering plants are present (e.g., native sage species [*Salvia* spp.], milkweeds [*Asclepias* spp.], and plants within the pea family [*Fabaceae*]) and may nest where abandoned rodent burrows are present.

Individuals in occupied burrow nests or overwintering queens in surface soils could be crushed or trapped during construction if present within the Ground Disturbance Area. Additionally, individuals also could be injured or killed if they are foraging during vegetation clearing activities. This species could also be impacted by the removal of nectar sources and nests in the Ground Disturbance Area resulting from construction of Alternative 6 features, including the mid-mountain facility and access road (Stone Canyon Reservoir) and TPSS site 5. Ground-disturbing impacts from grading and vegetation clearing throughout the RSA could impact individuals and would likely result in loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for Crotch's bumble bee.

The loss of individual Crotch's bumble bees and suitable habitat for this species suitable habitat for Crotch's bumble bee would constitute a significant impact.

Special-Status Reptiles

Three special-status reptiles are known to occur and two have a high or moderate potential to occur within the Alternative 6 RSA; individuals of these species may be present during construction activities. Reptiles present during construction activities could be directly injured or killed due to collisions with vehicles and equipment or during vegetation clearing activities. Species that shelter in burrows or under

debris could be entrapped and suffocate or be crushed during grading activities; buried nests could be similar crushed or destroyed. Additionally, if individuals become entrapped in open trenches or excavations during construction activities, they could be subject to injury or mortality due to dehydration, opportunistic predation, inability to properly thermoregulate, starvation, or other causes associated with constrained movement. Indirect impacts could include disruption of normal feeding, basking, sheltering, and breeding behaviors due to avoidance of excessive noise and vibration, fugitive dust, and increased human presence. Normal movement patterns throughout a home range also may be disrupted temporarily by avoidance of areas adjacent to construction activities, or permanently by habitat structure modifications. During construction, special-status reptiles also may be subject to higher predation rates by opportunistic predators such as common ravens (*Corvus corax*), coyote, or skunk, that could be attracted to work areas if food debris is present.

Two of the species, southwestern pond turtle and two-striped garter snake, are most likely to occur near aquatic resources such as the Stone Canyon Reservoir. Based on habitat requirements, the remaining three are most likely to be found in the Santa Monica Mountains. Individuals could be found in or proximate to the mid-mountain facility in the Santa Monica Mountains. Construction of the facility would involve clearing and grading of native vegetation adjacent to the reservoir. The clearing of vegetation in the Santa Monica Mountains could result in injury or mortality of individuals, disruptions of natural behaviors, and loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for the following five special-status reptiles:

- Southern California legless lizard (*Anniella stebbinsi*, SSC) has moderate potential to occur along the Santa Monica Mountains and in remnant patches of native vegetation. This species could be impacted by ground-disturbance activities, such as drilling, grading, pile driving, and excavating for the construction of Alternative 6.
- Coastal whiptail lizard (*Aspidoscelis tigris stejnegeri,* SSC) is present in the southern portion of the Alternative 6 RSA and has potential to occur throughout. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring along the Ground Disturbance Area for Alternative 6 features such as mid-mountain facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, MSF, and at-grade TPSS sites particularly TPSSs 9 and 10.
- Southwestern pond turtle (*Actinemys pallida, FP, SSC*) is present in the center and southern portions of the Alternative 6 RSA and has potential to occur intermittently throughout the Alternative 6 RSA where aquatic resources are present. This species could be impacted by vegetation removal and ground-disturbance activities for Alternative 6 features including the mid-mountain facility and access road (Stone Canyon Reservoir) since it has potential to use upland habitat for nesting.
- Coast horned lizard (*Phrynosoma blainvillii*, SSC) is present in the central and southern portions of the Alternative 6 RSA and has potential to be present throughout. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring during construction of Alternative 6 features including the mid-mountain facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, the MSF, and at-grade TPSS sites, particularly TPSSs 9 and 10. Coast horned lizards are particularly vulnerable to injury or mortality due to vehicle collisions since their defensive strategy is to rely on natural camouflage and remain still when approached by potential predators.
- Two-striped garter snake (*Thamnophis hammondii*, SSC) has high potential to occur along the Santa Monica Mountains and elsewhere in or near riparian habitat. This species could be impacted by the

removal of vegetation and ground-disturbance activities occurring along the Ground Disturbance Area for Alternative 6 features such as mid-mountain facility and access road (Stone Canyon Reservoir) and TPSS site 5.

The loss of individuals and suitable habitat for these special-status species would constitute a significant impact.

Special-Status Birds

Eight special-status bird species have a high or moderate potential to occur within the Alternative 6 RSA; none were present. Based on habitat requirements for these eight species, they are likely to be found throughout the RSA in transit, resting and/or foraging from the UCLA campus in the south to the centrally located Stone Canyon Reservoir. Birds in transit are unlikely to be affected by construction activities; adults are highly mobile and can be expected to relocate away from construction activities of their own volition. However, migratory individuals may experience temporary or permanent loss of transitory habitat. If overwintering burrowing owls are present, individuals could be entrapped and suffocate or be crushed if burrows are present in the work areas during grading and vegetation removal. Additionally, grading could result in loss of suitable wintering burrows for migratory burrowing owls. If native birds breeding within or adjacent to work areas, nests, eggs, and nestlings would be vulnerable to destruction, injury, or mortality if they are present during vegetation clearing and other construction activities. Ground nests may be vulnerable to crushing, trampling, or destruction by pedestrians and vehicles. Nests in adjacent areas also may be exposed to noise, fugitive dust, human presence, and vibration that could disrupt natural breeding behaviors including incubation of eggs and care and feeding of young; these disruptions could result in failure of a nest to successful produce young. Excessive disruption, or substantial changes in habitat during the nesting period, could also result in abandonment of nest sites, eggs, or young. Further, impacts associated with clearing and grading of vegetation for the mid-mountain facility would likely result in loss of suitable habitat that could be used for nesting, breeding, shelter, and/or foraging for the following eight special-status avian species and nesting birds protected under the MBTA:

- Tricolored blackbird (*Agelaius tricolor*, state threatened and SSC) has moderate potential to occur while flying over in transit to foraging grounds in freshwater marshes, freshwater lakes, and agricultural fields in the Sepulveda Basin Wildlife Preserve west of the Alternative 6 RSA. This species is unlikely to be impacted by construction since Alternative 6 is more than 1 mile east of the Sepulveda Basin through developed land where construction noise is unlikely to be louder than the existing ambient noise. Breeding habitat is not expected to be impacted due to its absence.
- Burrowing owl (*Athene cunicularia*, state candidate and SSC) has high potential to occur in grassland and open scrub at the mid-mountain ventilation shaft in the central portion of the Alternative 6 RSA. This species could be impacted from construction noise and activity, removal of burrows, and ground-disturbance activities during construction of Alternative 6 at this location and TPSS site 5. Impacts to nests and nestlings are not anticipated as the RSA is outside the breeding range for this species; only overwintering adult burrowing owls are anticipated to occur. If burrowing owls are present in burrows during construction, individuals could be trapped and suffocate or be crushed during vegetation clearing, grading, and other initial ground disturbance.
- Swainson's hawk (*Buteo swainsoni*, state threatened) has high potential to occur throughout the Alternative 6 RSA during migration, particularly in grasslands. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during

construction of Alternative 6 features, particularly the mid-mountain facility and access road (Stone Canyon Reservoir) and TPSSs 9 and 10.

- Northern harrier (*Circus hudsonius*, SSC) has high potential to occur throughout the Alternative 6 RSA during migration, particularly in grasslands. This species could be impacted by the removal of vegetation and ground-disturbance activities occurring during construction of Alternative 6 features, particularly the mid-mountain facility and access road (Stone Canyon Reservoir) and TPSSs 9 and 10.
- Olive-sided flycatcher (*Contopus cooperi*, SSC) has high potential to occur throughout the Alternative 6 RSA during migration. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 6 features including the mid-mountain facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, the MSF, and at-grade TPSS sites, particularly TPSSs 9 and 10. Breeding habitat is not expected to be impacted due to its absence.
- Bald eagle (*Haliaeetus leucocephalus*, state endangered and Fully Protected) has moderate potential to occur near bodies of water, particularly in the Sepulveda Basin Wildlife Preserve and Stone Canyon Reservoir. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 6 features including the mid-mountain facility and access road near Stone Canyon Reservoir and TPSS site 5. Breeding habitat is not expected to be impacted due to its absence.
- Loggerhead shrike (*Lanius ludovicianus*, SSC) has moderate potential to occur in and breed in grasslands or chaparral, particularly in the Santa Monica Mountains. This species could be impacted by construction noise and activity, removal of vegetation, and ground-disturbance activities during construction of Alternative 6 features including the mid-mountain ventilation shaft facility and access road near Stone Canyon Reservoir and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Vermilion flycatcher (*Pyrocephalus obscurus*, SSC) has high potential to occur and breed throughout the Alternative 6 RSA, adjacent to open habitats. This species could be impacted from vegetation removal during construction for Alternative 6 features such as the mid-mountain ventilation shaft facility and access road at Stone Canyon Reservoir, stations, staging areas and at-grade TPSS sites, particularly TPSSs 9 and 10.

The loss of nests, eggs, or nestlings, impacts to natural breeding behaviors, eviction from wintering burrows, and loss of suitable habitat for these special-status species would constitute a significant impact.

Special-Status Mammals

Three special-status mammals were identified as present within the Alternative 6 RSA. Mountain lions are known to occur within the Santa Monica Mountains, while the silver-haired and hoary bat have broader habitat requirements and have potential to forage in both natural and developed habitats. Within the Santa Monica Mountains, special-status mammals could occur in or proximate to work areas with ground disturbing activities. Impacts from installation of the mid-mountain facility would include clearing and grading of native vegetation.

Within the developed northern and southern ends of the projects, special-status bats could be present in ornamental street trees or on existing infrastructure, such as bridges and buildings. Individuals may be subject to injury or mortality if they are present as roosting adults during vegetation clearing activities. Roosting adults also may be disturbed by construction-related noise and vibration, causing

them to flee roosts during daylight hours. Maternal roosts would also be vulnerable to injury or mortality if present, as pups are unable to take flight and would be likely to be killed if present. Suitable foraging, sheltering, and roosting habitats have potential to be removed during vegetation clearing and grading, or temporarily impacts by construction noise, fugitive dust, and increased human presence. Nighttime construction lighting also may impact foraging habitat by attracting prey species, which may attract some bat species and repel others.

Individual larger mammals, including mountain lions, are unlikely to be directly impacted by construction activities as they are highly mobile and can be anticipated to relocate away from work areas of their own volition. Individuals are not likely to be vulnerable to collisions with slower moving construction equipment and vehicles. However, natural foraging, sheltering, and breeding behaviors may be disrupted by construction activities, both temporarily through avoidance of areas with construction-related noise, human presence, vibration, and fugitive dust, and permanently through changes in habitat due to vegetation clearing and grading.

The clearing of vegetation in the Santa Monica Mountains and along city streets, and the demolition of structures with suitable roosts would also likely result in loss of suitable habitat that could be used for roosting, breeding, sheltering, and/or foraging for the following 3 special-status mammals:

- Silver-haired bat (*Lasionycteris noctivagans*, WBWG medium priority) is present in the northern and southern portions of the Alternative 6 RSA. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 6 features such as stations, staging areas, the mid-mountain ventilation shaft facility and access road at Stone Canyon Reservoir, the MSF, and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Hoary bat (*Lasiurus cinereus*, WBWG medium priority) is present in the northern portion of the RSA and has potential to occur along the Santa Monica Mountains and in portions of the Alternative 6 RSA with large mature trees. This species could be impacted by construction noise and activity and removal of roosting habitat from vegetation removal activities during construction of Alternative 6 features such as stations, staging areas, the mid-mountain ventilation shaft facility and access road at Stone Canyon Reservoir, the MSF, and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Mountain lion (*Puma concolor*, state candidate for listing) is present in the Alternative 6 RSA in the Santa Monica Mountains. This species could be impacted by the removal of vegetation and ground-disturbance activities during construction of Alternative 6 features such as mid-mountain ventilation shaft facility and access road at Stone Canyon Reservoir and at-grade TPSS sites, particularly TPSSs 9 and 10. However, Alternative 6 is unlikely to result in a significant impact to suitable habitat for mountain lions due to the small size and linear nature of the clearing and grading activities in comparison to the species' large home range size. However, the operation of Alternative 6, specifically temporary and permanent impacts associated with the mid-mountain facility, has the potential to result in a significant impact to mountain lion movement and usage of wildlife corridors in the short-term post-construction. Significant long term impacts are not anticipated once vegetation recovers, since permanent features at the mid-mountain facility will only consist of a safety gate, lighting and fencing around the footprint of the vent shaft and perimeter (discussed in Section 10.3.4).

The loss of individuals and suitable habitat for silver-haired bats and hoary bats would constitute a significant impact.

Special-Status Plants

Five special-status plant species were identified with medium or high potential to occur within the Alternative 6 RSA; none were present. Based on habitat requirements, these five species are most likely to occur in chaparral and/or coastal sage scrub which occurs on the Project in the Sepulveda Pass and could be in or proximate to work areas along I-405 in the Santa Monica Mountains. Impacts from roadway realignment along I-405 into existing hillsides between Sunset Boulevard and Mulholland Drive would include clearing and grading of native vegetation adjacent to the freeway. Clearing and grading of vegetation would also be required for construction of the structural support beams for the guideway track, staging yards, TPSSs, and aerial MRT stations; although vegetation to be impacted is largely non-native and/or ornamental landscaping, native vegetation is also present. If individuals are present during clearing and grading activities, they could be subject to trampling, crushing, and removal. Individuals present in adjacent areas may be exposed to fugitive dust, which can settle on vegetation and interrupt natural photosynthesis and make plants more susceptible to drought. Following vegetation clearing, adjacent areas also may be subject to edge effects, including higher exposure to sun, dust, and wind, and incursion by nonnative, weedy species, which can increase competition for space and resources and decrease habitat value for special-status plants.

The clearing of vegetation in the Sepulveda Pass could result in loss of suitable habitat for the following special-status plant species:

- Braunton's milk-vetch (*Astragalus brauntonii*, FE, CRPR 1B.1) has high potential to occur in the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation along the Ground Disturbance Area for Alternative 6 features such as mid-mountain facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*, CRPR 1B.2) has moderate potential to occur in the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation along the Ground Disturbance Area for Alternative 6 features such as mid-mountain facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Davidson's bushmallow (*Malacothamnus davidsonii*, CRPR 1B.2) has moderate potential to occur in the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation along the Ground Disturbance Area for Alternative 6 features such as mid-mountain ventilation shaft facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Chaparral nolina (*Nolina cismontana*, CRPR 1B.2) has high potential to occur along the Santa Monica Mountains and within pockets of native vegetation in developed areas. This species could be impacted by the removal of vegetation along the Ground Disturbance Area for Alternative 6 features such as mid-mountain ventilation shaft facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, and at-grade TPSS sites, particularly TPSSs 9 and 10.
- Nuttall's scrub oak (*Quercus dumosa*, CRPR 1B.1) has high potential to occur along the Santa Monica Mountains, in landscaping, and within pockets of native vegetation in developed areas. This species

could be impacted by the removal of vegetation along the Ground Disturbance Area for Alternative 6 features such as mid-mountain ventilation shaft facility and access road (Stone Canyon Reservoir), construction staging and laydown areas, stations, and at-grade TPSS sites, particularly TPSSs 9 and 10.

The loss of individuals or suitable habitat for these special-status plants would constitute a significant impact.

Mitigation Measures

As described in Section 10.4, mitigation measures would be implemented to reduce construction-related impacts to special-status plant and wildlife species and their habitats to a less than significant level through establishment of survey and monitoring requirements (MM BIO-4, MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, MM BIO-17, and MM BIO-29); monitoring of bird nests and determination if no-disturbance buffers require adjustments (such as due to noise from construction activities) (MM BIO-4); education and training of personnel about Project 's biological concerns and requirements (MM BIO-18); and creation of a habitat restoration plan (MM BIO-9).

10.3.1.3 Maintenance and Storage Facility

Maintenance of the Alternative 6 HRT vehicles and equipment would occur at the MSF and may occasionally require maintenance trimming of ornamental trees and shrubs located within the MSF. Suitable habitat for special-status plant species and most special-status wildlife species is not present; therefore, no operational impacts are anticipated. However, the Project has potential to result in significant impacts to bats and MBTA-protected nesting birds from operations-related activities through disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites due to noise, vibration, and human presence during maintenance activities. MM BIO-1 and MM BIO-2, presented in Section 10.4, are included to reduce operations-related impacts to nesting birds and special-status bats from vegetation trimming to a less than significant level through compliance with the existing Metro Tree Policy and implementation of pre-activity surveys on facilities owned by Metro.

The MSF for Alternative 6 would be located would be on developed property located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east; no habitat modifications or removal would be required for the construction of the MSF. No impacts on special-status plant species would result from the construction of the MSF since suitable habitat is not present. Roosting bats and MBTA-protected nesting birds have potential to be impacted during construction of the MSF if ornamental trees and/or shrubs located within the Ground Disturbance Area of the MSF are trimmed or removed. Impacts may include disruption of natural breeding and sheltering behaviors; injury or morality to bat pups; destruction, injury, or mortality of nests, eggs, nestlings, and individuals; loss of roosting and breeding habitat; and temporary impacts to roosting sites and nesting sites in adjacent areas due to noise, vibration, and human presence. MM BIO-4 and MM BIO-5, included in Section 10.4, are included to reduce construction-related impacts to special-status bats and nesting birds from vegetation trimming or removal to a less than significant level.

10.3.2 Impact BIO-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,

regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

There is no riparian habitat within the Alternative 6 Ground Disturbance Area or in the 500-foot buffer. Sensitive natural vegetation communities present within the Ground Disturbance Area and 500-foot buffer for Alternative 6 include 12.0 acres of California walnut woodland. Four additional vegetation communities encompassing 5.4 acres within the Alternative 6 Ground Disturbance Area have potential to be sensitive with further refinement, including the following: black sage shrubland, California sagebrush-California buckwheat shrubland, coyote brush shrubland, and California encelia shrubland. Potentially sensitive communities are assumed to be as such for discussion of impact analysis.

10.3.2.1 Operational Impacts

No riparian habitat occurs within the Ground Disturbance Area, therefore, there are no operational impacts to riparian habitats from maintenance vegetation trimming.

Minor vegetation trimming of sensitive communities may occur along access roads to the mid-mountain ventilation shaft facility area near Stone Canyon Reservoir during operation of Alternative 6. Vegetation trimming would likely remove overhanging branches (if any) and is not likely to result in the removal of entire trees, shrubs, or root bases. No impacts to sensitive natural communities are anticipated from operation of Alternative 6 since vegetation that may require operational maintenance trimming will have been mitigated under impacts for construction of the Project. An additional potential impact to sensitive communities is introduction of invasive plant seeds into native habitat through vehicle tires used to bring equipment used for operational maintenance activities onto Alternative 6, such as work trucks carrying pressure washing or painting equipment. Maintenance activities with potential to introduce or spread invasive plant species would primarily occur within developed or paved areas where tires would not be touching bare ground.

10.3.2.2 Construction Impacts

One sensitive natural vegetation community (California walnut woodland) is known to occur within the Ground Disturbance Area for Alternative 6, specifically in the Santa Monica Mountains near Stone Canyon Reservoir; 12.0 acres of the sensitive community are mapped within the Alternative 6 Ground Disturbance Area. Potentially sensitive vegetation communities also occur near the Stone Canyon Reservoir, with 5.6 acres present within the Alternative 6 Ground Disturbance Area. Clearing of vegetation for Alternative 6 at the mid-mountain facility, access roads, and TPSS site at Stone Canyon Reservoir would likely result in loss of California walnut woodland, a sensitive natural community, and five potentially sensitive communities. Vehicle tires on equipment used for construction of Alternative 6 have potential to transport invasive plant seeds into native habitat during clearing and grading. Also, elevated levels of dust from active construction can disrupt photosynthesis and other processes critical for plant survival when it settles on foliage.

Construction of Alternative 6 could result in significant impacts to sensitive natural communities, including permanent vegetation removal. MM BIO-10, MM-BIO 16 through MM BIO-18, and MM BIO-23 through MM BIO-25, described in Section 10.4, are included to reduce construction-related impacts to sensitive natural communities to a less than significant level through establishment of Environmentally Sensitive Areas, biological monitoring of work within these communities, environmental training to Project workers, protection from invasive weeds, and protection from dust from speeding or other sources.

10.3.2.3 Maintenance and Storage Facility

The MSF for Alternative 6 would be on developed property located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. No riparian habitats or sensitive natural communities are present within the Ground Disturbance Area or the 500-foot buffer of the MSF. No impacts to riparian habitat or sensitive natural communities are expected from the operation or construction of the MSF.

10.3.3 Impact BIO-3: Would the project 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?

The analysis below addresses potential impacts on protected wetlands anticipated during operational activities and construction activities of the Alternative 6 design.

10.3.3.1 Operational Impacts

There are no state or federally protected wetlands within the Ground Disturbance Area for Alternative 6; therefore, there would be no impacts related to the operation of Alternative 6.

However, non-wetland waters do occur in the Alternative 6 Ground Disturbance Area. The Los Angeles River occurs along the Alternative 6 alignment and is a WOTUS under the jurisdiction of the USACE, RWQCB and CDFW. Alternative 6 will traverse the Los Angeles River north of US-101 and includes an underground alignment that will cross under the river via tunnel, and under Van Nuys Boulevard north of US-101. However, because Alternative 6 is underground at the crossing, operations-related impacts to this aquatic feature are not anticipated.

One unnamed ephemeral drainage also occurs, portions of which are under the jurisdiction of the RWQCB and CDFW. This feature is located within the work area of the mid-mountain facility and may be permanently impacted by construction (see Section 10.3.3.2). However, impacts during operations of Alternative 6 are not anticipated as this feature would have been altered during construction to avoid the mid-mountain facility.

10.3.3.2 Construction Impacts

The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where Alternative 6 traverses the river; no wetlands are associated with the river at this location. There are no state or federally protected wetlands that occur within the Ground Disturbance Area for Alternative 6; consequently, no construction-related impacts to protected wetlands are anticipated from construction of Alternative 6.

The Los Angeles River is within the Alternative 6 Ground Disturbance Area. A total of 0.07 acre of non-wetland waters under the jurisdiction of the USACE, RWQCB, and CDFW is associated with the Los Angeles River at this crossing. However, because Alternative 6 is underground at this crossing, construction activities for Alternative 6 are not anticipated to have any impact on this aquatic resource.

Additionally, one unnamed ephemeral channel occurs along the Alternative 6 alignment within the mid-mountain facility work area, including an estimated 0.11 acre of waters of the State under the jurisdiction of the RWQCB, and 0.22 acre of CDFW-jurisdictional streambed. Permanent impacts to this feature are anticipated to be required to facilitate construction of Alternative 6; these impacts may include permanent filling of the channel, sedimentation and erosion into the channel, and disturbance to the banks and bed to facilitate the mid-mountain ventilation shaft construction; this is a significant

impact to aquatic features. These permanent impacts to CDFW-jurisdictional streambed and RWQCB-jurisdictional waters of the State will trigger permitting requirements, which will likely include mitigation for impacts to this feature. Prior to the start of construction, Metro will engage with the relevant agencies and secure all necessary waters-related permits.

Impacts to aquatic resources will be avoided, minimized, and mitigated for through implementation of MM BIO-15, MM BIO-18, and MM BIO-21, which require aquatics monitoring during work near jurisdictional waters, work area delineation, best management practice (BMP) implementation to protect against sedimentation, worker education on sensitive aquatic resources, and avoidance of work near jurisdictional waters during and following rain events.

10.3.3.3 Maintenance and Storage Facility

The MSF for Alternative 6 would be located on developed property located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Since there are no wetlands or non-wetland waters present within the Ground Disturbance Area of the MSF, no impacts to protected wetlands or jurisdictional waters are expected from the operation and construction of the MSF.

10.3.4 Impact BIO-4: Would the project 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?

The SMMNRA and the Santa Monica Mountains represent a regional connectivity corridor with respect to habitat patches. The SMMC habitat linkage planning map (SMMC, 2021) has identified several potential wildlife corridors within the Santa Monica Mountains in the vicinity of the Alternative 6 RSA; none are located within the Alternative 6 RSA. While Alternative 6 would be an underground configuration in the mountains between the UCLA Gateway Plaza Station and Ventura Boulevard/Sepulveda Boulevard Station, permanent and temporary ground disturbance for grading of the hillside and access road installation would occur at the mid-mountain ventilation shaft facility work area adjacent to Stone Canyon Reservoir and could significantly impact wildlife movement.

10.3.4.1 Operational Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 6 RSA. Thus, no operations-related impacts to the movement of resident or migratory fish are anticipated for Alternative 6.

Native Resident or Migratory Wildlife

The Alternative 6 RSA runs north to south and bisects the Santa Monica Mountains. The intersection of I-405 and the Santa Monica Mountains west of the RSA act as a restrictive barrier to mountain lions and other vertebrates for east - west movement. However, roads in the vicinity of Alternative 6 are two lanes and pose less of a risk for wildlife collision and death.

The majority of the alignment for Alternative 6 is underground, with depths between 50 and 130 feet as it passes under the Westside of Los Angeles, 120 to 730 feet under the Santa Monica Mountains, and 40 and 50 feet under the San Fernando Valley. Given these depths, noise and vibration associated with operations are not anticipated to be detectable at the surface, and no impacts are anticipated to wildlife movement on the surface is anticipated for the underground tunnel. However, movement of mountain

lions and other vertebrates within the Santa Monica Mountains could be impacted by the presence of the mid-mountain facility adjacent to the Stone Canyon Reservoir and operation of Alternative 6, since permanent changes to habitat is likely to impact local wildlife movement (Suvarna, 2020). Operation of Alternative 6 could impact local wildlife movement corridors due to loss of native habitat, introduction of development, exposure to artificial light source from security lighting on the facility, and anthropogenic disturbance for ongoing maintenance associated with the ventilation shaft footprint and access road, such as routine repairs or vegetation clearing. Alternative 6 operation could potentially decrease successful wildlife movement and increase barriers, due to the presence of the mid-mountain facility within continuous habitat, particularly in the short-term following construction completion, when disturbed areas are not yet revegetated. Based on the minimal infrastructure and intermittent required maintenance at the facility, impacts to wildlife movement are expected to be less than significant.

One special-status migratory bat species, the hoary bat, has moderate potential to occur within the Alternative 6 RSA during migratory flyover events. Since Alternative 6 is an underground configuration, impacts to migratory bats are anticipated to be less than significant for operation. However, artificial lighting that may be present at the mid-mountain ventilation shaft during operation could negatively affect adjacent bat roosting locations. If roosts are present and natural breeding or overwintering behaviors are altered by exposure to artificial lighting, this could constitute a significant impact.

Special-status birds and MBTA-protected birds also have the potential to occur in the Alternative 6 RSA during operation of Alternative 6. Operations-related activities associated with Alternative 6, such as vegetation removal or trimming, could result in a significant impact to migratory bat and avian species by removing potential nesting, roosting, and foraging habitat. This would constitute a significant impact.

MM BIO-1 and MM BIO-2, described in Section 10.4, are included to reduce operations-related impacts to migratory wildlife species from aerial train presence to a less than significant level through limiting of vegetation trimming to outside of nesting bird and roosting season where feasible and installation of appropriate anti-collision devices to aerial vehicles and support structures where an aerial alignment is present.

10.3.4.2 Construction Impacts

Native Resident or Migratory Fish

There are no native resident or migratory fish with established native resident corridors or migration routes present within the Alternative 6 RSA. Therefore, there are no impacts anticipated to resident or migratory fish movement for Alternative 6.

Native Resident or Migratory Wildlife

Construction of Alternative 6 could have localized, temporary impacts on wildlife during construction of stations, staging areas, and the MSF. Construction of the three tunnel segments would be underground, except for launch and extraction sites within stations or staging areas. The Ground Disturbance Area associated with construction of Alternative 6 would consist of cut-and-cover construction of the seven underground stations; construction of the MSF site; clearing and grading for the construction staging areas; and clearing and grading for the mid-mountain facility and associated access road. Ground-disturbance activities including removal of vegetation/habitat, topsoil removal, and grading could result in a potential impact to vertebrate movement including large mammals, bat and avian species. Special-status birds and bats and MBTA-protected birds have potential to occur during construction of Alternative 6 and could be impacted from vegetation clearing and habitat removal. One special-status

migratory bat species, the hoary bat, and special-status birds have the potential to occur in the Alternative 6 RSA during construction of Alternative 6. The Santa Monica Mountains provides roosting habitat for the hoary bat and foraging resources during their migration from south to north, and vice-versa.

Mountain lion movement is already dramatically impacted within the Santa Monica Mountains due to I-405; construction activity associated with Alternative 6 has potential to temporarily further hinder movement of mountain lions and other vertebrates in the Santa Monica Mountains as a result of construction activities at the mid-mountain facility. Disturbance can be associated with equipment present and activity lighting, and prolonged human presence. This would be a significant impact to wildlife movement and habitat connectivity. The TBM launch and extraction sites are outside of the Santa Monica Mountains where mountain lion corridors are located; thus, no impacts are associated with these Alternative 6 features.

MM BIO-4, MM BIO-5, MM BIO-7, and MM BIO-14, described in Section 10.4, are included to reduce construction-related impacts to migratory species to a less than significant level through protection to nesting birds and special-status bats, and protection of least Bell's vireo. MM BIO-14, described in Section 10.4, is included to reduce construction-related impacts to the movement of native wildlife species, specifically mountain lions and other vertebrates, to less than significant through implementation of preconstruction surveys, protection of natal dens if located, limiting vegetation removal, vegetation restoration, and creation of a 5-year monitoring plan to document wildlife movement over time and inform the need for additional measures.

10.3.4.3 Maintenance and Storage Facility

The MSF for Alternative 6 would located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Since there is no open habitat, waterways, or native vegetation present, no impacts to the movement of native resident or migratory fish or wildlife would be expected from the operation or construction of the MSF.

10.3.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Alternative 6 RSA does not enter unincorporated County land, so the County of Los Angeles General Plan and Sustainability Plan "OurCounty" are not applicable.

For Alternative 6, the *City of Los Angeles General Plan*'s (DCP, 2001) policies to create and maintain an integrated open space system that apply to and are addressed by the Project include preserving habitat linkages and providing wildlife corridors (MM BIO-14); conserving and managing watersheds (MM BIO-15 through Jurisdictional Aquatic Resource mitigation); onsite evaluation of sensitive habitats (MM BIO-10) and species (MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9, and MM BIO-14); and analysis of wildlife movement (MM BIO-14). Since no SEAs intersect with the RSA and no ground disturbance is planned for the Sepulveda Basin, these policies do not apply to Alternative 6

The City of Santa Monica General Plan is not applicable to Alternative 6 since no land owned by the City is within the Alternative 6 RSA.

Three local ordinances or policies protecting biological resources are present within the Alternative 6 RSA, including the City of LA Ordinance, City of Los Angeles Street Tree Policy (City of LA Policy), and the Metro Tree Policy. No other ordinances or policies related to biological resources were identified in the

operation of Alternative 6. Each tree or cluster within the Tree Survey Area was assessed for protection by the City of LA Ordinance. When protection requirements for City of LA Ordinance were not met, trees were considered protected through either the City of LA Policy or Metro Tree Policy; applicable jurisdiction per tree is included in the detailed tree inventory (Appendix B, Attachment 1, Tree Inventory Tables). Mitigation amounts and maintenance periods vary between ordinances and policies (Table 9-6).

There is potential for significant impacts related to tree and vegetation removal within the City of Los Angeles related to the construction and operation of Alternative 6.

Table 10-7. Details of Jurisdiction, Mitigation Ratios, and Maintenance Period for Landowners with Potential for Impacts to Trees

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
City of LA Protected Tree and Shrub Ordinance	City of LA including private property	4:1	3 years	Survival of continuously living replacements for maintenance period required.
Metro Tree Policy	Metro ROW, Properties & Capital Project Sites	2:1	3 years	Heritage trees, as defined by local ordinance, are protected at 4:1[a].
City of Los Angeles Street Tree Policy	City of LA Public ROW	2:1	5 years	Applicable to any tree or upon any street or parkway in the City, but does not apply to trees within private properties, in Caltrans ROW, or on UCLA[b] unless the tree was planted and maintained by the City.

Source: HTA, 2024

[a]Mitigation ratios are for number of replacement trees required per individual tree impacted.

[b]Teresa Estrada, phone call by C. Hargreaves to LA Dept of Urban Forestry Division, July 19, 2024.

10.3.5.1 Operational Impacts

During operations of Alternative 6, activities such as trimming, encroaching into the protection zone (i.e., dripline or canopy), or other actions that could damage root systems or alter the grade around a trunk may impact protected tree and shrub species. These activities would result in a potentially significant impact to protected trees.

Protected tree species on Alternative 6 that may require operational maintenance include coast live oak and Mexican elderberry at the proposed UCLA station. Additionally, several southern California black walnut and coast live oaks are presumed to be present around the proposed mid-mountain ventilation shaft facility within the Stone Canyon Reservoir area that may require operational maintenance. Maintenance to these protected trees would constitute a significant impact.

To address this impact, Alternative 6 would implement MM BIO-3, described in Section 3.3.6, which would require the installation and maintenance of replacement trees or shrubs when impacts are unavoidable. With implementation of MM BIO-3, impacts to protected trees during operations of Alternative 6 would be reduced to a less than significant level through installation and maintenance of replacement trees or shrubs following the requirements of the pertinent tree preservation ordinance.

10.3.5.2 Construction Impacts

For the purpose of this assessment, protected trees and shrubs included in the inventory (i.e., of the appropriate size and species whose TPZ falls at least partially within the Tree Survey Area) are presumed to require removal during construction.

For Alternative 6, a total of 938 protected trees and shrubs are mapped within the Tree Survey Area of (Table 10-8, map series in Appendix B, Attachment 2). Of those, 329 are estimated to be protected under the purview of the City of LA Ordinance, irrespective of land ownership, and require permits for any alterations made to protected trees and shrubs during construction, including trimming and encroaching into the tree/shrub protection zone. Due to lack of access into portions of the Tree Survey Area around Stone Canyon Reservoir, the number of trees was estimated through aerial imagery and species was designated as southern California black walnut per the publicly available vegetation mapping (NPS, 2004-2019). Since California walnut are protected under the City of LA Ordinance, inventoried trees within the area were assumed to be protected and are included herein.

The remaining 609 trees are under the jurisdiction of the City of LA Policy or the Metro Tree Policy. Heritage or protected trees as determined by local ordinances or policy, may be present within the Alternative 6 Tree Survey Area; impacts to these trees are anticipated to be less than significant for Alternative 6.

Unless mitigated, the anticipated removal and alteration of protected trees and shrubs during construction of Alternative 6 would conflict with the City and County tree ordinances and with Metro and City tree policies. This is considered a significant impact. Protected tree and shrub field surveys were conducted in 2023 on April 10 through April 14, April 17 through April 20, May 18, July 7, and on March 27, 2024. See Appendix B, Initial Protected Tree and Shrub Inventory Memorandum, for the full list of these recorded trees.

To address this impact, Alternative 6 would implement MM BIO-13, described in Section 3.3.6, which would require installation and maintenance of replacement trees or shrubs following requirements of the pertinent preservation policy or ordinance. With implementation of MM BIO-13, impacts associated with the removal of protected trees and shrubs during construction of Alternative 6 would be reduced to a less than significant level.

Table 10-8. Alternative 6: Protected Trees and Shrubs by Jurisdiction within Tree Survey Area

Jurisdiction	Scientific Name	Common Name	Quantity	Mitigation Amount (# replacement trees)
City of Los Angeles Protected Tree and Shrub Ordinance	*Juglans californica*[a]	Southern California black walnut[a]	314	1,256
	Quercus agrifolia	Coast live oak	13	52
	Sambucus mexicana	Mexican elderberry	2	8
TOTAL			**329**	**1,316**
Metro/City of Los Angeles Street Tree Policy	Numerous native and non-native tree species[b]		609	1,218 plus additional for heritage trees
GRAND TOTAL			**938**	**2,534 plus heritage trees**

Source: HTA, 2024

10.3.5.3 Maintenance and Storage Facility

The MSF for Alternative 6 would be on developed property located east of the Van Nuys Metrolink Station and south of the LOSSAN rail corridor, bounded by Hazeltine Avenue to the west and Woodman Avenue to the east. Within the Alternative 6 MSF, there are 36 ornamental trees including Mexican fan palm, Canary Island pine, and eucalyptus trees among others. Since the MSF will be within Los Angeles Metro property lines, Metro is responsible for trees within the MSF; these trees are covered by the Metro Tree Policy.

Impacts to trees at the Alternative 6 MSF during the operational phase would conflict with the Metro Tree Policy, which applies to tree removal within Metro property lines or Metro's ROW. Trees within the Alternative 6 MSF are anticipated to be removed during construction. Those that are not removed during construction could be subject to potentially significant impacts during operations if maintenance, such as trimming, injury that would result in death, or removal, is required during operations. With implementation of MM BIO-3, impacts to protected trees and shrubs during operations of the MSF for Alternative 6 would be reduced to less than significant.

Tree removal at the Alternative 6 MSF during construction conflicts with the Los Angeles Street Tree and Metro Tree Policies, which would constitute a significant impact. Mitigation amounts required for trees located in MSFs are included in Table 10-8.

To address this impact, the MSF for Alternative 6 would implement MM BIO-13, described in Section 10.4, which would require the installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. With implementation of MM BIO-13, impacts associated with removal of protected trees and shrubs during construction of the MSF for Alternative 6 would be reduced to less than significant.

10.3.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 6 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

10.3.6.1 Maintenance and Storage Facility

There are no adopted HCPs, NCCPs, or other approved regional, or state HCPs that occur within the Alternative 6 RSA. Therefore, no impacts to an adopted HCP, NCCP, or other state HCP would occur.

10.4 Mitigation Measures

10.4.1 Operational Mitigation Measures

Operational Mitigation Measures can be re-evaluated through discussion with Metro with consideration of any programmatic permits or operation and maintenance plans that pertain to potential impacts to biological resources during operation of the Project.

MM BIO-1: ***Avoid and Minimize Operations-Related Impacts to Nesting Birds.*** *Vegetation trimming for operation of the Project related to operational maintenance shall be under the purview and conducted in compliance with the existing Metro Tree Policy on facilities owned by Metro. The Metro Tree Policy's measures to protect native nesting birds (generally February 15 through September 15), including implementation of bird surveys if tree maintenance must occur within the breeding season, shall be implemented. Metro shall be responsible for ensuring compliance with the Metro Tree Policy throughout operations where such activities occur on its own properties.*

- *Project features and/or mitigation recommendations to avoid direct impacts to bird movement shall be implemented where possible, such as Implementation of appropriate deterrents (e.g., visual and/or auditory) on aerial vehicles and/or support structures of the aerial alignment (where present) to prevent bird collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*

MM BIO-2: ***Avoid and Minimize Operations-Related Impacts to Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from operations-related activities, the following shall be implemented:*

- *Specific mitigation measures related to operational work for the Project shall be detailed in a Bat Habitat Mitigation and Monitoring Plan (BHMMP) created by a Qualified Biologist and approved by the California Department of Fish and Wildlife prior to initiation of construction. The BHMMP shall include site-specific measures for operational work to avoid and minimize Project-related impacts to roosting, overwintering, and breeding special-status bat species. The BHMMP also shall include reporting requirements to document activities and the results of these measures. Bat protection measures may include, but not be limited to, the following:*
  - *Limiting vegetation removal wherever possible.*
  - *Implementation of appropriate deterrents (e.g., visual, sonar, and/or auditory) on aerial vehicles and/or support structures of the aerial alignment where present to prevent bat collisions (e.g., using non-reflective glass, glass treatments, or striped bird-safe film on windows).*
  - *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (vehicles, equipment, etc.) at night relative to roosting locations.*
  - *If swallow nests need to be removed during operations, they shall be removed only during the fall (September 1 to October 31) or a time recommended by a Qualified Biologist to ensure removal occurs outside of bat maternity and hibernation seasons. Removal shall occur at night whenever feasible to minimize disturbances. Before removal, a Qualified Bat*

Biologist shall inspect each swallow nest for occupancy. If the nest is unoccupied, it may be removed immediately. If bats are present, a small portion of the nest shall be carefully removed to make it less suitable for roosting. This process shall be repeated nightly until the nest is vacated. If the next is not vacated after successive attempts, consultation with the California Department of Fish and Wildlife shall occur to determine appropriate actions.

- *Trees, bridges, or other structures that may need to have maintenance work conducted during operations shall be evaluated for potential to support bat roosts. Before work is conducted, a Qualified Biologist shall conduct a one-night emergence survey during acceptable weather conditions. The following measures shall apply to trees, bridges, or other structures should bat roosts be detected.*
  - *If roosting bats are determined to be present during the maternity season (April 15 through August 31), work on the tree/structure shall be avoided to the extent feasible until after the maternity season when young are self-sufficient. If work on a tree/structure must occur during the maternity season (for repairs or other activities that cannot wait until the end of the maternity season), bat surveys shall be conducted by a Qualified Biologist to determine the use of the roost by bats, if a maternity roost is present, etc. This shall help inform additional avoidance and minimization measures that may need to be implemented in conjunction with the California Department of Fish and Wildlife to permit work during the maternity season.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state, which occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of operations activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, impacts to the roost shall be avoided, to the extent feasible, until after the winter season when bats are once again active. If avoidance of roosting bats is not possible due to the need for repairs, discussion with the California Department of Fish and Wildlife may be necessary to reduce potential impacts while permitting repair activities.*
- *Trees, bridges, or structures with potential colonial bat habitat that require trimming or repairs during operations outside of the maternity season and winter season (generally February 16 through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) can be conducted using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities that would potentially be used by bats shall be removed by hand (e.g., using handsaws) or smaller components of the structure should begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of*

the tree will likely cause bats roosting in the tree to either abandon the roost immediately or avoid returning to the roost after emergence.

- *Day 2, Step 2: Removal of the remainder of the tree, bridge, or structure can occur the following day under the supervision of a Qualified Biologist.*
- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-3: ***Avoid and Minimize Operations-Related Impacts to Protected Trees and Shrubs.*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *Compliance with the applicable tree policies requirements for permitting and mitigation.*
- *Impacts to protected trees and shrubs during operation of the Project shall be minimized to the maximum extent feasible. When impacts to protected trees and shrubs are unavoidable — including alterations made such as trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy of the tree/shrub) — the following measures shall be required.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities with jurisdiction as follows*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of LA Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*
  - *Trees protected by the Los Angeles County Oak Tree Ordinance shall require coordination with the Los Angeles County Director of Public Works prior to tree work.*
  - *Trees within the Santa Monica Mountains National Recreation Area shall require coordination for tree trimming or removal with the appropriate entities (e.g., National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority).*
- *If operations and maintenance requires removal of protected trees or shrubs, the required tree removal permits shall be obtained, and replacement shall occur at*

the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.

- ***Special-status trees afforded protection under the California Endangered Species Act or federal Endangered Species Act:*** *Impacts to all trees protected by the California Endangered Species Act or federal Endangered Species Act (e.g., Quercus dumosa) shall require coordination with the California Department of Fish and Wildlife or U.S. Fish & Wildlife Service, as applicable, in addition to the appropriate tree protection ordinance or policy.*
- ***Los Angeles County Oak Tree Ordinance:*** *All trees within the oak genus (Quercus) shall be replaced at a ratio of 2:1 per individual oak tree.*
- ***City of Los Angeles Protected Tree and Shrub Ordinance:*** *Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
- ***Policy-Protected Trees****: All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1, or an in-lieu fee shall be made. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*
- ***Santa Monica Mountains National Recreation Area****: Any tree within the Santa Monica Mountains National Recreation Area shall be replaced by trees of a species and ratio at the discretion of National Park Service, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority.*

- *All trees occurring on private property, including within the Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*

MM BIO-28: ***Avoid and Minimize Operations-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors during operations shall be avoided, minimized, and/or mitigated as follows:*

- *Metro shall develop, in coordination with the California Department of Fish and Wildlife and relevant species experts, and implement a five-year monitoring plan to track wildlife movement across corridors during operations of the Project. This shall include a survey of the Project area prior to construction to establish baseline conditions, as well as monitoring the Project area during operations. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is adversely impacted by the presence of the Project (e.g., injury or mortality due to collisions and other effects, reduced habitat patch connectivity, disruptions in corridor usage or avoidance of pre-existing travel corridors),*

additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to the California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.

10.4.2 Construction Mitigation Measures

10.4.2.1 Resource-Specific Mitigation Measures

MM BIO-4: ***Avoid and Minimize Construction-Related Impacts to Nesting Birds.*** *Vegetation clearance for construction of the Project shall occur outside of the nesting bird season (generally February 15 through September 15) to the extent feasible. If vegetation removal outside this time period is not feasible, the following additional measures shall be employed to avoid and minimize impacts to special-status bird species and nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code:*

- *A preconstruction nesting bird survey of the work area (as defined by the Ground Disturbance Area, including staging and laydown yards) plus a 300-foot buffer shall be conducted by a Qualified Biologist within three days prior to the start of ground disturbing activities (including vegetation removal activities) to determine whether active nests (defined as nests with eggs or young) are present within or adjacent to (i.e., within 100 feet for non-special-status songbirds, 300 feet for raptors and special-status species) the work zone. Any active nests found shall be recorded and a nest avoidance zone shall be established where no work shall occur. If project activities are delayed beyond 72 hours, a new nesting bird survey shall be completed within 72 hours prior to the resumption of ground disturbing activities.*
- *Active bird nests for species protected by the Migratory Bird Treaty Act shall have a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer established as follows: 300-foot radius buffer for raptors and special-status birds (refer to MM BIO-7 for additional least Bell's vireo measures) and 100-foot-radius buffer for non-raptor and non-special-status avian nests. The Qualified Biologist can adjust buffer distances to increase or decrease the radius contingent on topography, existing noise levels, planned operational activities, species specific tolerances to disturbances such as noise and vibration from construction activities, and observations specific nesting pair tolerance to disturbances. Nest monitoring by the Qualified Biologist shall be required following buffer modifications to ensure new buffer is appropriate; adjustments can be made only following monitoring of nesting pair to determine if the buffer is adequate to protect the nest from construction impacts, including from noise and vibrations. Installation of temporary noise barriers between the work area and nest can also be evaluated, if installation can occur in a manner to not disturb the nesting pair based on the Qualified Biologist's recommendation. If a Qualified Biologist*

determines work activities may result in nest failure, project work shall cease within the recommended no-disturbance buffer until a Qualified Biologist determines nest status. Additional follow-up surveys shall be conducted as necessary to determine nest status. Once the nest is determined to be fledged or no longer active, the buffer shall be removed.

- *A Qualified Biologist shall inform maintenance personnel of any active nests, facilitate avoidance measures, and verify operational activities do not cause disturbance. Maintenance personnel shall be updated on nest status and when avoidance buffers are no longer necessary.*
- *A Qualified Biologist shall monitor each nest on a biweekly basis and project activities shall not occur within the buffer until a Qualified Biologist determines the nest is no longer active (either by fledging or failing naturally). If a nest is adjacent to an access road where no project activities are being conducted, vehicles can drive past the nest without stopping or parking. Signage stating no stopping or idling vehicles shall be posted (facing outwards from the buffer) at the start and end of the nest buffer where it crosses the road.*
- *A Qualified Biologist can determine a nest is inactive (defined as eggs and young no longer present or reliant on the nest site, including fledged young that still depend upon the nest) following no observations of activity at the nest location for 1 hour for non-raptor avian nests and 4 hours for raptors.*
- *A summary of nesting bird surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented by the biologist at the conclusion of each nesting season and submitted to Metro. In the event that an active bird nest is identified as belonging to a special-status species afforded protection under the California Endangered Species Act or federal Endangered Species Act, then the appropriate agency shall be immediately informed, and additional coordination shall occur, as needed.*

MM BIO-5: ***Avoid and Minimize Construction-Related Impacts to Roosting Special-Status Bat Species.*** *To reduce impacts on roosting bats resulting from construction activities, the following shall be implemented:*

- *A bat habitat assessment shall be conducted during the bat maternity season (generally April 15 through August 31 for southern California, yearly timing dependent on weather conditions) at least one year prior to construction. A Qualified Biologist shall conduct surveys to determine the presence of bat roosting or maternity habitat within suitable areas where vegetation trimming, tree removal, bridge repair activities, structure demolition, or other construction-related activities may occur and bats may be present. A visual inspection and/or one-night emergence survey of potential bat habitat that may be impacted by activities shall be completed utilizing acoustic recognition technology to determine if any maternity roosts are present. Results from this survey shall be used to create a Bat Habitat Mitigation and Monitoring Plan (BHMMP), produced by a Qualified Biologist, and shall include site-specific minimization and avoidance measures for operations and construction of the Project. These measures shall include but not be limited to establishment of no-disturbance*

buffers, monitoring of roosting bats to ensure tolerance to disturbances such as noise and vibration from Project activities, mitigation for habitat impacts, and humane eviction or exclusion. If monitoring indicates established no-disturbance buffer is not adequate to prevent disturbances to roosting bats, a Qualified Biologist can adjust the buffer as needed.

- *Flight pathways, i.e., line of flight into and out of the roost, shall be maintained during maintenance Project work. Modifications to ingress and egress routes are not allowed, including but not limited to obstacles presented from construction equipment use and staging, location and type of lighting or reconfiguration of staged materials (e.g., vehicles, equipment, etc.) at night relative to roosting locations.*
- *If swallow nests need to be removed during construction, removal shall occur in the fall (September 1 to October 31 or based on local expert bat biologist input as long as it is outside of bat maternity or hibernation season), preferably at night. Nests shall be inspected for occupancy by a Qualified Biologist and if empty, removed. If a bat is present, if feasible a small portion of the nest can be carefully removed to make the nest a less suitable for roosting. The following night, if the nest is empty, it can be removed entirely. If not, another small portion can be removed if feasible. If removal is not feasible or bats are still present, consultation with the California Department of Fish and Wildlife may be appropriate.*
- *Trees or structures to be removed as part of the Project shall be evaluated for their potential to support bat roosts. An experienced bat biologist shall conduct a one-night emergence survey during acceptable weather conditions, before the start of removal. The following measures shall apply to trees or structures to be removed that provide potential bat roost habitat; these shall be implemented by a Qualified Biologist.*
  - *If roosting bats are determined present in a tree or on a structure during the maternity season (April 15 through August 31), the tree/structure shall be avoided until after the maternity season when young are self-sufficient. If other trees/structures in the immediate vicinity are slated for removal, or other work shall occur in the immediate vicinity that might disturb roosting bat, a no-work buffer may be needed.*
  - *If roosting bats are determined to be present during the winter months when bats are in torpor (i.e., a state in which the bats have significantly lowered their physiological state that occurs generally October 31 through February 15), and if conditions permit, a Qualified Biologist shall physically examine the roost for the presence or absence of bats before the start of project activities; equipment such as an electric lift may be utilized to conduct the inspection. If the roost is determined to be occupied during this time, the tree or structure shall be avoided until after the winter season when bats are once again active.*
- *Trees or structures with potential to serve as colonial bat habitat can be removed outside of the maternity season and winter season (generally February 16*

through April 14 and September 1 through October 30, or as determined by a Qualified Biologist) using a two-step process that occurs over two consecutive days.

- *Day 1, Step 1: Under the supervision of a Qualified Biologist, tree branches and limbs with no cavities shall be removed by hand (e.g., using handsaws) or smaller components of the structure shall begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise disturbance and physical alteration of the tree/structure will likely cause bats roosting to either abandon the roost immediately or avoid returning to the roost after emergence.*
- *Day 2, Step 2: Removal of the remainder of the tree or structure can occur the following day under the supervision of a Qualified Biologist.*

- *Trees that are only to be trimmed and not removed shall also require a two-step process with these deviations from the removal process explained above: if a branch with a potential roost must be removed, all surrounding branches shall be trimmed on Day 1 under supervision of a Qualified Biologist and then the limb with the potential roost shall be removed on Day 2.*
- *The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to the California Department of Fish and Wildlife in electronic format at the conclusion of all bat-related mitigation activities.*

MM BIO-6: ***Avoid and Minimize Construction-Related Impacts to Crotch's Bumble Bee.*** *To reduce impacts on Crotch's bumble bee from construction activities, the following shall be implemented:*

- *A pre-construction habitat assessment for Crotch's bumble bee shall be conducted by a Qualified Biologist within the Ground Disturbance Area and a surrounding 100-foot buffer to demarcate potentially suitable nesting and foraging habitat.*
- *Nesting surveys and foraging surveys shall be conducted during the most active flight period and peak blooming period of nectar and pollen sources (generally April 1 through July 31). The survey shall be conducted between at least 1 hour after sunrise and at least 2 hours before sunset, with ambient air temperature between 60- and 90-degrees Fahrenheit. Surveys shall not be conducted during windy periods with speeds of over 10 mph, during fog or low visibility, or precipitation heavier than drizzling rain.*
- *Foraging surveys shall focus on areas of high abundance of nectar and pollen sources with meandering transects within these areas at a rate of no more than 2.5 acres per hour.*
- *Nesting surveys shall focus on areas with existing, abandoned, rodent burrows; the biologist shall focus on detecting potential Crotch's bumble bee nest within suitable habitat.*

- *If a nest is documented, a 50-foot "no-disturbance" buffer shall be established and clearly identified in the field for avoidance. Construction activities shall avoid the nest location and surrounding buffer until the nest has senesced.*
- *Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed and/or a nest is located, the California Department of Fish and Wildlife shall be informed, and additional coordination shall occur as needed.*

MM BIO-7: ***Avoid and Minimize Project-Related Impacts to Least Bell's Vireo.*** *To reduce impacts on least Bell's vireo from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, the Project shall perform one full season of protocol surveys for least Bell's vireo in suitable habitat within 500 feet of construction activities following the accepted U.S. Fish & Wildlife Service protocol. Focused surveys shall be completed prior to construction initiation and results shall be used to inform a consultation process with the U.S. Fish & Wildlife Service for project permitting. Eight surveys shall be conducted between April 10 and July 31, with each survey spaced at least 10 days apart. Reduction in the prescribed number of individual surveys may be evaluated in accordance with the U.S. Fish & Wildlife Service protocol. Surveys shall be conducted between dawn and 11:00 a.m. and outside of periods of inclement weather (excessive heat or cold, high winds, rain, etc.). Surveys shall not be conducted concurrently with other surveys. Per the U.S. Fish & Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.*
- *Following completion of protocol surveys, pre-construction presence/absence clearance surveys shall be required if construction is planned to begin within the nesting season. Clearance surveys shall be required within 500 feet of suitable habitat and must occur 3 or fewer days prior to start of activities. Presence/absence surveys shall be conducted by a Qualified Biologist who is familiar with species visually and aurally, and who is able to differentiate similar species. The Qualified Biologist shall not be required to have an Endangered Species Act Section 10(a) recovery permit covering this species since recorded vocalizations shall not be used to illicit responses and nest monitoring (i.e., locate and monitor the nest, including removal of brown-headed cowbird (Molothrus ater) eggs and chicks from parasitized nests) and handling of individual are not proposed.*
- *If protocol and pre-construction survey results are negative, construction activities can commence, and a Qualified Biologist shall conduct presence/absence surveys weekly during the breeding season while construction is occurring within 500 feet of suitable habitat. If least Bell's vireo are detected during a survey, a Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat until the end of the breeding season. If construction within 500 feet of suitable habitat is paused for more than 3 days, a new survey must be conducted to verify if least Bell's vireo are present.*

- *If an active nest is documented, a no-disturbance 300-foot radius buffer shall be established and clearly identified in the field. Construction activities shall avoid the nest location and buffer until a Qualified Biologist declares the nest inactive. A Qualified Biologist shall be required to monitor construction activities within 500 feet of suitable habitat every day work is occurring while the nest is active. Noise monitoring shall be required weekly on varying days to account for changes in construction-related noise levels from before the nest is active to after. Monitoring shall be to ensure noise levels remain at or below 60 A-weighted decibels (dBA) or to the ambient noise level if it already exceeds 60 dBA before construction at specified monitoring locations within 100 feet of the nest. The Qualified Biologist shall either conduct the noise monitoring or escort the noise monitor if they are not a Qualified Biologist.*
- *The results of the surveys shall be used to design project features and temporary work areas to avoid direct impacts to occupied habitat for listed riparian bird species. Results of all survey efforts shall be summarized in writing and submitted to Metro for documentation. In the event species presence is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*

MM BIO-8: ***Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles.*** *To reduce impacts on special-status reptiles from construction activities, the following shall be implemented:*

- *Prior to the start of vegetation removal, the Ground Disturbance Area shall be clearly fenced (usually with silt fencing) to delineate the extent of the construction area.*
- *Once fencing is in place, a Qualified Biologist shall conduct a pre-vegetation clearance sweep to look for and remove any special-status reptile species (e.g., coast horned lizard, two-striped garter snake, southwestern pond turtle, coastal whiptail, and southern California legless lizard) that may occur within the Ground Disturbance Area. If any special-status reptile species are detected within the Ground Disturbance Area, personnel shall allow the species to escape unimpeded if possible. Alternatively, the Qualified Biologist shall move the species outside of the fencing to the closest suitable habitat pending authorization from the U.S. Fish & Wildlife Service or California Department of Fish and Wildlife, if required.*
- *Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*
- *Any observations of special-status reptiles shall be summarized in writing and submitted to Metro. In the event that an observed special-status species is afforded protection under the California Endangered Species Act or federal Endangered Species Act, then the appropriate agency shall be immediately informed and additional coordination shall occur, as needed.*

MM BIO-9: ***Avoid and Minimize Construction-Related Impacts to Special-Status Plants.*** *Impacts to special-status plants shall be avoided, minimized and/or mitigated through incorporation of the following:*

- *Prior to any Project activities that may modify vegetation, focused rare plant surveys shall be conducted following California Department of Fish and Wildlife protocols. Focused surveys shall occur during optimal blooming periods for special-status species likely to occur, which typically results in multiple visits within one growing season (e.g., early, mid- and late-season surveys). In the event a federally listed species is confirmed, the U.S. Fish & Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.*
- *If focused rare plant data is more than 1 year old at commencement of construction, pre-construction surveys during the optimal blooming periods shall occur to demarcate special-status plant populations for avoidance (where feasible). The results of the focused surveys shall be used to design project features and temporary work areas to avoid direct impacts to federally and state-listed plant species.*
- *All observations of special-status plants prior to and during Project construction activities shall be documented in writing, including detailed descriptions of the location, species, and condition of the plant. If a special-status species protected under the California Endangered Species Act or the federal Endangered Species Act is observed, Metro shall immediately notify the appropriate agency (e.g., California Department of Fish and Wildlife or U.S. Fish & Wildlife Service) and coordinate further actions as required by law. This may include consultation to determine the need for additional avoidance, minimization, or mitigation measures. If impacts to special-status plants cannot be avoided, the Project shall prepare and implement a Habitat Restoration Plan. The Habitat Restoration Plan shall include mitigation ratios for impacted special-status plants and native habitats, installation methods, a detailed monitoring plan that includes quantifiable data collection, maintenance strategies, reporting requirements, and quantifiable performance criteria for restoration success.*
- *Special-status plant mitigation strategies shall include restoration of impacted areas through seeding and/or plantings. Weed abatement shall be implemented if Project activities result in non-native species within the Ground Disturbance Area that were not present before activities began. Specific strategies shall be implemented as described below:*
  - *If special-status plant species observed during surveys can feasibly be transplanted, such as slender mariposa lily (Calochortus clavatus var. gracilis), individuals shall be salvaged prior to ground disturbance for translocation. Salvage may include collection by hand of individual plants, storage in an appropriate manner depending on species, and replanting within suitable habitat close to its original location following completion of construction activities. For the purposes of this measure, "feasible" shall*

mean the ability to transplant plants without jeopardizing plant viability, project design, or safety requirements.

- *If on-site repair or restoration efforts are not feasible or adequate to mitigate for impacted plants, alternative measures, such as off-site compensation, shall be implemented. Off-site compensation shall achieve equivalent or greater ecological value and shall utilize a minimum 3:1 replacement ratio (three replacement plants for every one impacted plant). The replacement ratio shall be based on the number of individuals impacted or the acreage of habitat affected, depending on the specific circumstances, and the species affected. The compensation area shall be protected in perpetuity through mechanisms such as conservation easements, deed restrictions, or long-term management agreements.*
- *To protect special-status plant populations from human disturbance after construction is completed, fencing or signage shall be installed around restored areas where public access is anticipated.*

MM BIO-10: ***Avoid and Minimize Construction-Related Impacts to Sensitive Vegetation Communities.*** *Impacts to sensitive vegetation communities shall be avoided, minimized, and/or mitigated as follows:*

- *The Project shall prioritize avoiding impacts to sensitive vegetation communities, including but not limited to California walnut woodland and sugar bush shrubland, and any other communities ranked S1 to S3 by the California Department of Fish and Wildlife. When avoidance is not possible, impacts shall be minimized by planning construction activities in previously disturbed areas to the extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid impacts without compromising essential project design, safety, regulatory compliance, or causing environmental impacts that would be greater than those being minimized.*
- *Impacts to any natural vegetation communities designated sensitive, such as California walnut woodland and sugar bush shrubland, shall be reduced by trimming vegetation instead of removing entire trees or shrubs where feasible. For the purposes of this measure, "feasible" is defined as the ability to trim vegetation without compromising plant health, public or worker safety, or essential project design requirements. Where trimming alone is infeasible, removal shall be conducted in a manner that avoids further damage to surrounding vegetation.*
- *When feasible, temporary impact areas shall have vegetation trimmed and rootballs left intact to enable regrowth once construction is complete.*
- *In conjunction with appropriate entities with jurisdiction (i.e., Caltrans for their right-of-way, Santa Monica Mountains Conservancy for Santa Monica Mountains National Recreation Area), Metro shall design, develop and implement a 5-year restoration plan to restore native vegetation communities disturbed by construction activities. A preconstruction assessment of sensitive vegetation communities shall be conducted to collect a comprehensive plant species list,*

community structure data, native and nonnative plant cover assessments, and preconstruction photos for permanent photo points; this information will be incorporated into the restoration plan. The plan shall include a monitoring program that includes both qualitative and quantitative data collection, quantified performance criteria that consider pre-construction conditions, irrigation and maintenance actions, and the use of native plantings and/or seedlings to restore native communities. Performance criteria shall be defined with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and shall include the following habitat characteristics: native plant species cover and diversity, container plant survivorship (if applicable), non-native annual species cover, absence of non-native, woody perennial species cover, and self-sufficiency of restoration plants (i.e., ability to persist without supplemental irrigation).

- *Native species such as succulents, bulb species, and cactus shall be salvaged from the Ground Disturbance Area before work begins, to the maximum extent feasible, and stored in an appropriate manner depending on species requirements. These species shall be replanted within the Ground Disturbance Area at project conclusion as part of the restoration efforts.*
- *Progress toward these performance criteria shall be evaluated on a regular basis as defined in the restoration plan, but a minimum of once annually for the 5-year maintenance period. If the success standards are not met by the end of Year Five, additional measures such as replanting, remedial seeding, and/or supplemental watering shall be implemented. Monitoring shall continue thereafter until performance criteria are attained.*
- *Restoration monitoring results and future recommendations shall be submitted in annual reports submitted to Caltrans, the Santa Monica Mountains Conservancy, and other relevant agencies until success criteria are achieved.*

MM-BIO-13: ***Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Applicable to Alternative 6).*** *Impacts to protected trees and shrubs shall be avoided, minimized, and/or mitigated by incorporation of the following:*

- *A Tree Expert, as defined under the City of Los Angeles Protected Tree and Shrub Ordinance, shall complete a detailed tree survey report prior to construction and once access is obtained to properties within the alignment. The report shall build upon the Initial Protected Tree and Shrub Inventory Memorandum (Appendix B) and include detailed field methods and data for each protected tree or shrub, such as species, height, diameter, canopy spread, physical condition, and precise location. The City of Los Angeles Protected Tree and Shrub Ordinance has jurisdiction in the Project; therefore, a Tree Expert shall be required to conduct the detailed survey and procure permits for protected tree/shrub removal from the Los Angeles Board of Public Works. The Tree Expert's follow-up report shall expand upon the initial assessment to provide a comprehensive dataset with verification of tree/shrub species, height, canopy width, and tree/shrub health for the Ground Disturbance Area. This follow-up report shall be used to procure the*

required permit prior to commencement of tree impacts within the City of Los Angeles.

- *Impacts to protected trees and shrubs shall be minimized to the maximum extent feasible. For the purposes of this measure, "feasible" is defined as the ability to avoid or minimize impacts while meeting project design, safety, and operational requirements, as determined by the Tree Expert and project engineers. When trimming and/or encroachment into the tree/shrub protection zone (defined as the dripline or canopy) is needed, the following measures shall be required.*
- *Trimming of protected trees/shrubs must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture and conducted in a manner that does not cause permanent damage or adversely affect the health of the trees or shrubs. Trimming shall require coordination and permitting with the appropriate entities as follows:*
  - *Species protected under the Los Angeles Protected Tree and Shrub Ordinance shall coordinate with the City of Los Angeles Board of Public Works, Urban Forestry Division.*
  - *Trees protected under the City of Los Angeles Street Tree Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees covered by the Metro Tree Policy shall require the Project to prepare a tree protection plan identifying Tree Protection Zones for all trees designated for retention and to prepare a mitigation plan for damaged and removed trees.*
- *For impacts to protected trees and shrubs beyond trimming, the required tree removal permits shall be obtained, and replacement shall occur at the below rates. Mitigation locations of replacement trees shall be determined through the permitting process.*
  - ***City of Los Angeles Protected Tree and Shrub Ordinance:** Protected trees and shrubs included trees of the oak genus (indigenous to California), western sycamore, southern California black walnut and California bay, and two shrub species (Mexican elderberry and toyon). Individual trees and shrubs shall be replaced at a 4:1 ratio by plants that are the same species of protected plant.*
  - ***Policy-Protected Trees:** All policy-protected trees, which fall under the purview of the Los Angeles Street Tree Policy or the Metro Tree Policy, shall be replaced at a ratio of 2:1. The Los Angeles Street Tree Policy allows for an in-lieu fee to be made with approval of the Board of Public Works following verification that replacement trees cannot be feasibly planted onsite. Trees under the Metro Tree Policy that are designated as heritage trees in a local ordinance shall be replaced at a 4:1 ratio with trees of the same variety.*

- *All trees occurring on private property, or Caltrans right-of-way, shall not require permitting, but shall require coordination and negotiation with property owners. Mitigation implementation shall follow Metro Tree Policy's replacement ratio of 2:1.*
- *For protected trees and shrubs that are not anticipated to be impacted, a Tree Protection Zone shall be established around each tree/shrub or cluster of trees/shrubs prior to the commencement of work. The Tree Protection Zone shall be erected using temporary fencing in an environmentally sensitive manner and remain in place until all site work has been completed. Specific installation timeframe may vary but the Tree Protection Zone must be inspected and approved by a Qualified Arborist prior to construction work including staging of equipment. Work can commence directly following arborist inspection and approval. No construction-related materials shall be stored or staged within the Tree Protection Zone (fenced areas).*
- *The LA Street Tree Policy would require coordination with the City of Los Angeles Department of Public Works for removal or maintenance of protected trees; this policy does not apply to trees within private property, UCLA, or within the Caltrans ROW. Metro Tree Policy would not require permitting but would require coordination with the landowners (e.g., private landowners, UCLA, Caltrans) when a tree must be removed. Additionally, Metro Tree Policy states a mitigation plan would be required to be developed in consultation with a Certified Arborist if construction impacts resulted in a damaged or removed tree; decisions would be made in accordance with local ordinances identifying protected trees.*

MM BIO-14: ***Avoid and Minimize Construction-Related Impacts to Mountain Lion and Vertebrate Movement Corridors.*** *Impacts to mountain lion and other vertebrate movement corridors shall be avoided, minimized, and/or mitigated as follows:*

- *Prior to any ground-disturbing activity, a Qualified Biologist shall conduct a detailed analysis of wildlife movement and corridors within the Santa Monica Mountains as they relate to ground disturbance activities for the Project. Analysis shall include desktop review of publicly available documentation — including research publications, project reports, environmental analyses, and high-quality aerial imagery — to anticipate wildlife movement patterns within the project vicinity. Field surveys shall also be conducted to identify and document wildlife crossings.*
- *Prior to construction, Metro shall coordinate with the California Department of Fish and Wildlife, Caltrans, the Santa Monica Mountains Conservancy/Santa Monica Mountains National Recreation Area, and species experts (as appropriate) to identify and implement appropriate minimization and avoidance measures to facilitate mountain lion and other vertebrate movement and connectivity across the Santa Monica Mountains. Performance standards for wildlife connectivity shall require that post-construction conditions maintain or improve wildlife movement. Specifically, the Project shall achieve a 0 percent increase in road mortality for mountain lions and other sensitive species in the*

Project Study Area, as measured through tracking and monitoring for at least five years post-construction.

- *Prior to any ground-disturbing activities, field surveys shall be conducted by a Qualified Biologist to survey for (1) confirm mountain lion presence or absence (2) identify known or potential mountain lion natal dens within suitable habitat with 600 feet of ground-disturbing activities during the breeding season (April through September), and (3) identify and document wildlife crossings in the Project vicinity. Surveys shall be conducted at dawn and dusk to increase probability of detection.*
  - *If a mountain lion natal den is identified during the survey, the Qualified Biologist shall establish a clearly demarcated (via flagging, fencing and/or signage) no-disturbance buffer where work shall cease until the den is no longer occupied or the cubs have successfully reared. The size of the buffer shall be determined based on characteristics of the den (e.g., distance, direction facing, observed behavior) and through consultation with species experts and the California Department of Fish and Wildlife to ensure the buffer is of appropriate size to not adversely affect rearing of cubs.*
  - *Vegetation removal shall be limited wherever possible, particularly within the Santa Monica Mountains.*
  - *Vegetation restoration within temporarily disturbed areas adjacent to wildlife crossings shall be designed to facilitate wildlife movement. Installed vegetation patches shall be designed to act as "stepping stones" to provide cover for wildlife approaching crossings. All vegetation provided shall be consistent with any Habitat Restoration Plan required pursuant to MM BIO-9.*
- *A summary of survey results from presence/absence and den surveys shall include maps of the survey area and possible denning locations and shall be submitted to Metro and the California Department of Fish and Wildlife. If a natal den or presence is confirmed, the California Department of Fish and Wildlife shall be immediately informed, and additional coordination shall occur, as needed.*
- *Metro shall also develop a five-year monitoring plan, in coordination with the California Department of Fish and Wildlife and species experts, to track wildlife movement across corridors during and after construction. Monitoring shall use camera traps, radio collars, or other wildlife tracking technologies. If the data indicate that mountain lion or other vertebrate movement is negatively impacted, additional mitigation measures, such as enhanced crossing infrastructure or more extensive wildlife funneling fencing, shall be implemented within six months. During the five-year monitoring phase, annual reports summarizing the effectiveness of the mitigation measures, any observed impacts on wildlife movement, and the results of the monitoring program shall be submitted to the California Department of Fish and Wildlife, Caltrans, and the Santa Monica Mountains Conservancy. These reports shall also include recommendations for adjustments to ensure compliance with wildlife connectivity standards.*

MM BIO-15: ***Avoid and Minimize Construction-Related Impacts to Jurisdictional Aquatic Resources.*** *Potential impacts to drainages shall be avoided and/or minimized when working in or adjacent to aquatic resources as defined in the Aquatic Resources Delineation Report (Appendix AAppendix A from the Sepulveda Transit Corridor Project Ecosystem and Biological Resources Technical Report) through incorporation of the following:*

- *A Qualified Biologist/Aquatic Specialist shall monitor construction activities adjacent to jurisdictional aquatic resources during vegetation clearing and/or initial ground-disturbance activities. Additionally, they shall support impact avoidance and minimization measures detailed in permits and approvals obtained for the Project.*
- *Limits of the Ground Disturbance Areas shall be designated with lathe staking or a similar method. All equipment and workers shall remain within approved work limits.*
- *Wherever possible, construction personnel shall utilize existing access roads or previously disturbed areas to reach the project area or stage their vehicles and equipment.*
- *Maintenance personnel shall also not leave any waste or debris behind which would impact natural habitats.*
- *To protect water quality:*
  - *Appropriate best management practices shall be installed to prevent erosion and guide runoff during rain events.*
  - *Equipment and materials shall be staged within the alignment and away from water drainages. Parked equipment shall have secondary containment to prevent any fluid leaks from coming into contact with the ground surface.*
  - *Water containing mud, silt, or other pollutants from construction activities shall not be allowed to enter into an aquatic resource.*
  - *Disposal or temporary placement of excess fill, brush, or other debris shall not be allowed in Waters of the United States, Waters of the State, and California Department of Fish and Wildlife streambeds or their banks.*

MM BIO-29: ***Avoid and Minimize Construction-Related Impacts to Overwintering Burrowing Owls.*** *To avoid and reduce impacts on overwintering burrowing owls from construction activities, the following shall be implemented:*

- *Prior to initiation of construction activities, a Qualified Biologist familiar with the ecology of burrowing owls shall conduct the following field investigations:*
  - *A habitat assessment to map Project areas with potential to support overwintering burrowing owls. The habitat assessment shall follow the methodology outlined in Appendix C of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012) and shall include the Project footprint and a 150-meter buffer of these areas.*

- *One season of non-breeding season surveys, including at least four (4) visits spread evenly throughout the non-breeding season (defined as September 1 to January 31).*
- *Results of these investigations shall be summarized in writing and submitted to the California Department of Fish and Wildlife, and used to inform the need for pre-construction take avoidance surveys or additional permitted as needed.*

- *A Qualified Biologist shall conduct a pre-construction take avoidance survey in all areas of known or potentially suitable overwintering habitat, following the methodology outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW, 2012). The take avoidance survey shall be conducted no less than 14 days prior to initiating ground disturbance and may be repeated if work activities are paused for a period of 7 days or more during the non-breeding season (September 1 to January 31).*
  - *At the discretion of the Qualified Biologist, an additional pre-construction clearance survey shall be conducted no more than 24 hours prior to ground disturbance, to ensure that no burrowing owls have colonized the work areas or adjacent habitats.*
  - *If an occupied wintering burrow is located, an appropriate no-disturbance buffer shall be implemented. The width of the buffer shall be determined by the Qualified Biologist with consideration of the level of disturbance that is anticipated for the burrowing, following the recommended buffer distances outlined below.*
    - *Low level of disturbance: 50 meters*
    - *Medium level of disturbance: 100 meters*
    - *High level of disturbance: 500 meters*
  - *Results of the survey shall be summarized in writing and submitted to the California Department of Fish and Wildlife for review.*
  - *If an occupied burrow cannot be avoided, work in the vicinity of the burrow will stop, the California Department of Fish and Wildlife shall be contacted, and additional coordination shall occur as needed in compliance with the California Endangered Species Act.*

10.4.2.2 General Construction Measures

The following general construction measures are proposed for implementation during construction activities:

MM BIO-16: *Prior to vegetation clearing, grading, and/or construction activities that may impact habitats of special-status species, a Qualified biologist(s) shall oversee installation of appropriate temporary Environmentally Sensitive Area fencing and/or flagging to delineate the limits of construction and the approved construction staging areas for protection of identified sensitive resources outside the approved construction/staging zones. All construction access and circulation shall be limited to designated construction/staging zones. Fencing shall be of a type that shall not entangle or*

otherwise detrimentally effect wildlife or the environment. Fencing shall be checked weekly to ensure it is intact and functioning as intended, to look for signs of degradation that might cause harm to wildlife or the environment, and to ensure fenced construction limits are not exceeded. This fencing shall be removed upon completion of construction activities.

MM BIO-17: *A Qualified Biologist(s) shall monitor project activities during vegetation clearing, grading, and/or construction within or adjacent to areas identified as sensitive habitat and/or jurisdictional aquatic resources. If special-status species and/or sensitive habitats adjacent to the project sites are inadvertently impacted by activities, then the Qualified Biologist(s) shall immediately inform the on-site construction supervisor who shall temporarily halt or redirect work away from the area of impact. If unanticipated impacts occur to occupied habitat for special-status species, the Project shall consult with the appropriate regulatory agencies.*

MM BIO-18: *A Worker Environmental Awareness Plan (WEAP) shall be developed and implemented prior to the start of construction. Environmental training shall be led by the Qualified Biologist(s) and shall cover the sensitive resources found on-site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. New workers added to construction after the initial training at work start shall be required to receive WEAP training before they may begin work on the Project. Documentation of personnel who have attended WEAP training shall be maintained and submitted to Metro. All information included in WEAP training shall be kept on Project sites to be readily accessible to any personnel in a form deemed appropriate for the Project (e.g., wallet cards, printed flyers, etc.).*

MM BIO-19: *Wildfires shall be prevented by exercising care when driving to prevent sparks and by not parking construction vehicles where catalytic converters could ignite dry vegetation. All construction vehicles shall carry water and shovels or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. Smoking shall take place within designated areas and away from vegetated areas.*

MM BIO-20: *Construction workers shall be prohibited from bringing pets and firearms to the site.*

MM BIO-21: *To prevent unnecessary erosion, runoff, and sedimentation, all construction activities within 100 feet of drainages or wetlands shall cease during Stormwater Pollution Prevention Plan-defined rain events and shall not resume until conditions are suitable for the movement of equipment and materials. Vehicle access along unpaved access routes shall not occur during saturated soil condition to avoid rutting or other soil disturbance.*

MM BIO-22: *If night work shall occur, all lighting used during night construction shall be temporary and shall be implemented to reduce lighting effects onto adjacent open space areas (i.e., downcast, away from habitat) and/or shall also be directed away from nests/roosting sites on man-made structures. Light shields shall be used to minimize light pollution adjacent to the Project.*

MM BIO-23: *Prior to entering the construction areas, equipment and personnel shall be free of mud, debris, or vegetation to prevent the introduction and spread of weeds or invasive species to the Project. If required, vehicle washing shall occur within designated areas within project construction areas where appropriate containment has been established, or at a suitable off-site facility.*

MM BIO-24: *Dust suppression measures shall be implemented during construction to minimize the creation of dust clouds and possible degradation of sensitive vegetation communities and special-status species suitable habitat. These measures shall include applying water at least once per day or as determined necessary by the Qualified Biologist(s) to prevent visible dust emissions from exceeding 100 feet in length in any direction. In addition, watering frequency shall be increased to four times per day if winds exceed 25 miles per hour. Nontoxic soil stabilizers may be used on access roads to control fugitive dust, as needed.*

MM BIO-25: *Vehicle speeds shall be restricted to posted speed limits on existing paved roads and to 15 miles per hour on dirt or gravel access roads during all phases of the Project. Speed limit signs shall be posted on dirt or gravel access roads throughout the site to remind workers of travel speed restrictions.*

MM BIO-26: *Trenches and excavations located within open areas shall be backfilled with earth at the end of each workday or have one edge sloped into an escape ramp with a less than 1:1 (45 degree) slope to prevent wildlife entrapment. A non-slip material may be used (e.g., wooden ramp with traction) when an earthen escape ramp cannot be created. For instances when these methods are not feasible (e.g., deep, long-term excavations for underground segments), temporary exclusion fencing can be installed around the perimeter of the work area to prevent animal entrapment. The Qualified Biologist shall ensure the temporary exclusion fencing is sufficiently supported to maintain integrity under all conditions and shall be checked daily to ensure integrity is maintained and inspect it daily while work is occurring. Fencing shall be repaired each day, as needed to ensure integrity is maintained. A Qualified Biologist shall inspect all trenches and excavations for trapped animals at the beginning and end of each day, as well as before excavations are backfilled. Should wildlife become trapped in any trenches or excavations, a Qualified Biologist(s) shall remove and relocate them outside the construction zone. When entrapped wildlife is a listed species with handling restrictions, relocation must be conducted by a biologist permitted to handle the species. Where trenches or excavations cannot be immediately backfilled or sloped, open excavations shall be covered and the end of each day with boards or plates. The edges of the boards shall be sealed with native spoils to prevent wildlife from entering the excavation in gaps at the board edges.*

MM BIO-27 *Spoils, trash, and any construction-generated debris shall be removed to an approved off-site disposal facility. Trash and food items shall be contained in closed containers and removed daily to reduce the attraction of opportunistic predators such as common ravens, coyotes, and feral cats and dogs that may prey on sensitive species.*

10.4.3 Impacts After Mitigation

Implementation of the mitigation measures would reduce biological resources impacts related to project operations and construction to a level that is considered less than significant.

11 PREPARERS OF THE TECHNICAL REPORT

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Andrew Borcher	Senior Biologist	21
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Andrew Fisher	Senior Wildlife Biologist	16
Wynter Dawson	Senior Biologist	11
Emma Fraser	Senior Wildlife Biologist	10
Marie Solis	Wildlife Biologist, Certified Arborist	5
Armando Gonzales	Wildlife Biologist	3
Aubrey Mathews	Wildlife Biologist	3
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Appendix A. Aquatic Resources Delineation

The Aquatic Resources Delineation Report was submitted under separate cover.

Appendix B. Initial Protected Tree and Shrub Inventory Memorandum

The Initial Protected Tree and Shrub Inventory Memorandum was submitted under separate cover.

Appendix C. Photos of RSA

Photograph 1. West-facing view of trees and habitat near the Metro G Line Busway

Photograph 2. North-facing view of trees and landscaping on University of California, Los Angeles (UCLA) campus near Construction Access Staging and Laydown Area for Alternatives 4, 5, and 6.

Photograph 3. West-facing view of trees and landscaped area in Westwood Park for Alternatives 4, 5 and 6.

Photograph 4. Agricultural land near Van Nuys Airport.

Photograph 5. South-facing view of river off Van Nuys Boulevard through Alternative 6.

Photograph 6. East-facing view of trees and landscaping at US Federal Building near Construction Access Staging and Laydown Areas, Wilshire Boulevard/Metro D Line Station for Alternative 3.

Photograph 7. East-view of trees and habitat near the Construction Access Staging and Laydown Areas for Alternative 1.

Photograph 8. North-facing view of trees off Westwood Boulevard near Construction Access Staging and Laydown Areas for Alternatives 4, 5 and 6.

Photograph 9. North-facing view of trees and landscaping on UCLA campus south of proposed UCLA station for Alternatives 4, 5 and 6.

Photograph 10. South-facing view of trees in landscaped home area in Westwood, near Veteran Park, for Alternatives 3, 4, 5 and 6.

Photograph 11. North-facing view of trees in Los Angeles Department of Water and Power Property near railroad for Alternatives 1, 3, 4, 5, and 6.

Photograph 12. North-facing view of trees and habitat near West Los Angeles VA Medical Center near Construction Access Staging and Laydown Areas for Alternatives 1 and 3.

Appendix D. Wildlife and Plant Species Observed

Table D-1. Wildlife Species Observed

Common Name	Scientific Name
Birds	
American bushtit	Psaltriparus minimus
American crow	Corvus brachyrhynchos
American robin	Turdus migratorius
Anna's hummingbird	Calypte anna
Bewick's wren	Thryomanes bewickii
California gull	Larus californicus
California towhee	Melozone crissalis
Cedar waxwing	Bombycilla cedrorum
Dark eyed junco	Junco hyemalis
European starling	Sturnus vulgaris
Hooded oriole	Icterus cucullatus
House finch	Haemorhous mexicanus
House sparrow	Passer domesticus
Killdeer	Charadrius vociferus
Mockingbird	Mimus polyglottos
Mourning dove	Zenaida macroura
Northern rough winged swallow	Stelgidopteryx serripennis
Red tailed hawk	Buteo jamaicensis
Rock dove	Columba livia
Song sparrow	Melospiza melodia
Western bluebird	Sialia mexicana
Western kingbird	Tyrannus verticalis
White-crowned sparrow	Zonotrichia leucophrys
Yellow-chevroned parakeet	Brotogeris chiriri
Yellow-rumped warbler	Setophaga coronata
Insects	
Eastern tiger swallowtail	*Papilio glaucus*
Mammals	
California ground squirrel	*Otospermophilus beecheyi*
Eastern red ground squirrel	*Tamiasciurus hudsonicus*
Reptiles	
Western fence lizard	*Sceloporus occidentalis*

Source: HTA, 2024

Table D-2. Plant Species Observed

Common Name	*Scientific Name*
Avena grass	*Avena strigosa*
Bermuda grass	*Cynodon dactylon*
Black mustard	*Brassica nigra*
Branching phacelia	*Phacelia ramosissima*
California buckwheat	*Eriogonum fasciculatum*
California poppy	*Eschscholzia californica*
Cheeseweed/ least mallow	*Malva parviflora*
Common ice plant	*Mesembryanthemum crystallinum*
Common lantana	*Lantana camara*
Coyote brush	*Baccharis pilularis*
Eastern prickly pear cactus	*Oputnia humofusa*
Laurel sumac	*Malosma laurina*
Lemonade berry	*Rhus integrifolia*
Common morning glory	*Ipomoea purpurea*
Mulefat	*Baccharis salicifolia*
Narrow-leaved bed straw	*Galium aparine*
Nasturtium	*Tropaeolum*
Prickly lettuce	*Lactuca serriola*
Red brome grass	*Bromus madritensis ssp. rubens*
Redstem filaree	*Erodium cicutarium*
Star thistle	*Centaurea solstitialis*
Tree tobacco	*Nicotiana glauca*

Source: HTA, 2024