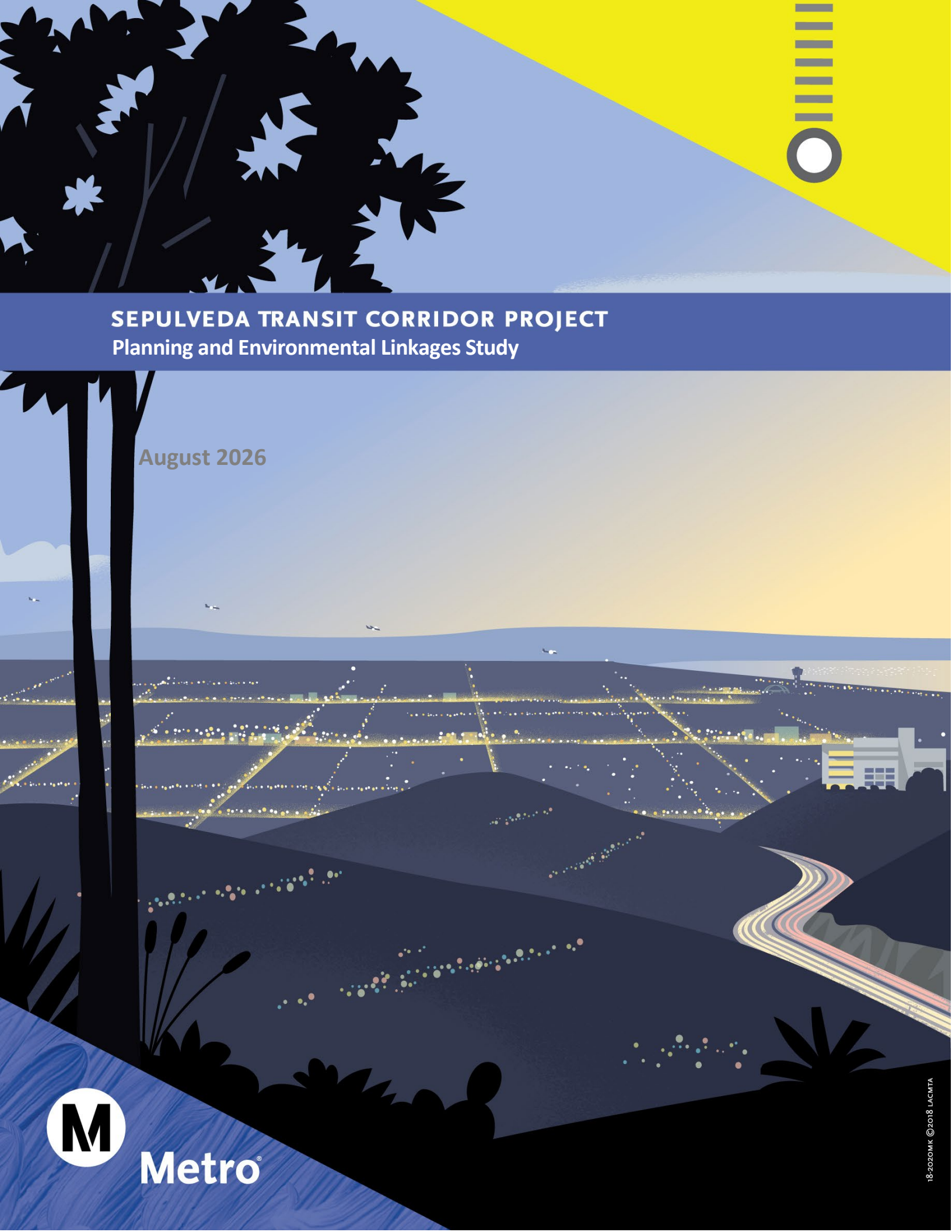
SEPULVEDA TRANSIT CORRIDOR PROJECT

Planning and Environmental Linkages Study

August 2026



Metro®

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SEPULVEDA TRANSIT CORRIDOR PROJECT

Contract No. AE67085000

Planning and Environmental Linkages Study

Task 5.01.01.03

Prepared for:

Metro

Los Angeles County
Metropolitan Transportation Authority

Prepared by:

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Table of Contents

ABBREVIATIONS AND ACRONYMS V

1 INTRODUCTION AND SUMMARY 1-1

1.1 Project Background and History 1-1

1.2 General Process 1-3

1.3 Summary of Next Steps 1-4

2 PURPOSE AND NEED 2-1

2.1 Process Followed to Develop the Purpose and Need 2-1

2.2 Key Data Used to Develop the Purpose and Need 2-1

2.2.1 Land Uses 2-1

2.2.2 Demographic Patterns 2-3

2.2.3 Freeways and Roadways 2-8

2.2.4 Transit Service 2-8

2.3 Purpose and Need Statement 2-9

3 ALTERNATIVES CONSIDERED IN THE PEL STUDY 3-1

3.1 Process Followed to Identify Alternatives 3-1

3.2 Range of Alternatives Considered Prior to the PEL Study 3-1

3.3 Evaluation Criteria 3-3

3.4 Screening Process Results 3-5

3.5 Pre-Development Agreements 3-5

3.6 Alternatives Eliminated from Consideration 3-5

3.7 Alternatives Included for Consideration 3-6

3.7.1 Alternative 1: Monorail with Aerial Alignment in the I-405 Corridor and Electric Bus Connection to UCLA 3-6

3.7.2 Alternative 3: Monorail with Aerial Alignment in the I-405 Corridor and Underground Alignment between the Getty Center and Wilshire Boulevard 3-8

3.7.3 Alternative 4: Heavy Rail with Underground Alignment South of Ventura Boulevard and Aerial Alignment generally along Sepulveda Boulevard in the San Fernando Valley 3-10

3.7.4 Alternative 5: Heavy Rail with Underground Alignment, including along Sepulveda Boulevard in the San Fernando Valley 3-12

3.7.5 Alternative 6: Heavy Rail with Entirely Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley, and Southern Terminus Station on Bundy Drive 3-14

3.7.6 Modified Alternative 5: Heavy Rail with Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station 3-16

4 ENVIRONMENTAL SCAN 4-1
4.1 Process Followed to Complete the Environmental Scan 4-1
4.2 Resource Assessments 4-2
4.2.1 Transportation and Traffic 4-6
4.2.2 Air Quality 4-14
4.2.3 Noise and Vibration 4-19
4.2.4 Ecosystems and Biological Resources 4-26
4.2.5 Water Resources 4-32
4.2.6 Visual Resources 4-43
4.2.7 Land Use 4-56
4.2.8 Parks and Recreational Facilities 4-61
4.2.9 Community Impacts 4-63
4.2.10 Cultural Resources and Tribal Cultural Resources 4-66
4.2.11 Geotechnical Considerations 4-91
4.2.12 Hazards and Hazardous Materials 4-94
4.2.13 Safety and Security 4-97
4.2.14 Real Estate and Acquisitions 4-105
4.2.15 Economic and Fiscal Considerations 4-109
4.2.16 Growth Inducing Effects 4-112
4.2.17 Cumulative and Indirect Effects 4-113
4.2.18 Section 4(f) Effects 4-114
4.2.19 Avoidance and Minimization Measures 4-124
4.3 Additional Data or Gaps to be Supplemented During the NEPA Process 4-183
4.4 Outstanding Issues Related to Impact Assessments 4-183
5 AGENCY AND PUBLIC INVOLVEMENT 5-1
5.1 Goals of Agency and Public Involvement Efforts 5-1
5.2 Techniques Used to Engage Stakeholders 5-1
5.3 Agency and Public Notice 5-3
5.4 Groups Engaged 5-3
5.5 Outreach Outcomes 5-4
5.6 Unresolved Issues 5-18
6 NEXT STEPS 6-1
6.1 Next Steps for the NEPA Process 6-1
6.1.1 Recommendation for NEPA Class of Action 6-1
6.1.2 Conditions Identified in 23 U.S.C. 168(d) 6-1
6.2 Unresolved Issues and Recommendations 6-2
6.3 Next Steps 6-2
7 REFERENCES 7-1

Appendices

Appendix A. Sepulveda Transit Corridor Project PEL Study Environmental Constraints Technical Report
Appendix B. Sepulveda Transit Corridor Project PEL Study Affected Environment Technical Report
Appendix C. Sepulveda Transit Corridor Project PEL Study Agency and Public Involvement Appendix

Figures

Figure 1-1. Sepulveda Transit Corridor Project Study Area 1-2
Figure 2-1. Existing Land Uses 2-2
Figure 2-2. Population Density (2019) 2-4
Figure 2-3. Job Density (2019) 2-5
Figure 2-4. Transit Propensity Score 2-7
Figure 3-1. Initial Valley-Westside Concepts from 2019 Feasibility Report 3-2
Figure 3-2. Refined Valley-Westside Concepts from 2019 Feasibility Report 3-3
Figure 3-3. Final Valley-Westside Alternatives from 2019 Feasibility Report 3-4
Figure 3-4. Alternative 1: Alignment 3-7
Figure 3-5. Alternative 3: Alignment 3-9
Figure 3-6. Alternative 4: Alignment 3-11
Figure 3-7. Alternative 5: Alignment 3-13
Figure 3-8. Alternative 6: Alignment 3-15
Figure 3-9. Modified Alternative 5: Conceptual Alignment 3-17
Figure 4-1. Watersheds in the Project Study Area 4-34
Figure 4-2. FEMA Flood Zones 4-40
Figure 4-3. Visual Areas of Analysis 4-48
Figure 4-4. Before and After Simulation View, View Looking South Toward I-405 and the Skirball Center on the Right 4-50
Figure 4-5. Before and After Simulation View, View Looking Southeast Toward the Primary Station Entrance of the UCLA Gateway Plaza Station 4-52
Figure 4-6. Before and After Simulation View, View Looking South Toward the Vent Shaft and Stone Canyon Reservoir 4-54
Figure 4-7. Existing Land Use Within the Project Study Area 4-57
Figure 4-8. Alternatives 1 and 3: Open Space Acquired for Getty Center Station 4-59
Figure 4-9. Wildfire Hazard Zones in the Project Study Area 4-103
Figure 4-10. Historical Wildfires in the Project Study Area 4-104
Figure 4-11. Alternative 1: Property Acquisition – Mission Canyon Open Space 4-121
Figure 4-12. Alternative 1: Property Acquisition – Teichman Family Magnolia Park 4-123

Tables

Table 4-1. Summary of Potential Impacts 4-3
Table 4-2. Changes in Daily Vehicle Miles Traveled by Alternative 4-6
Table 4-3. Peak Daily Regional Operational Emissions (Horizon Year 2045) 4-16
Table 4-4. Peak Daily Regional Construction Criteria Pollutant Emissions 4-17
Table 4-5. Peak Daily Localized Operational Criteria Pollutant Emissions 4-18
Table 4-6. Unmitigated Localized Construction Criteria Pollutant Emissions 4-19
Table 4-7. Levels of Impact 4-20
Table 4-8. Summary of Potential Unmitigated Noise Impacts Associated with Rail Operations and Ancillary Facilities 4-21
Table 4-9. Summary of Unmitigated Noise Impacts Associated with Maintenance and Storage Facilities 4-22
Table 4-10. Summary of Unmitigated Vibration Impacts Associated with Rail Operations 4-23
Table 4-11. Total and Protected Trees within the Ground Disturbance Areas 4-32
Table 4-12. New Impervious Surface Area 4-35
Table 4-13. Landscape Unit Visual Character 4-46
Table 4-14. Summary of Potential Impacts to Built Historic Resources 4-68
Table 4-15. Typical Causes of Property Acquisition and Displacement for the Project 4-106
Table 4-16. Summary of Potential Displacement Units by Alternative 4-107
Table 4-17. Parcels to be Used During Construction for the Project Alternatives 4-108
Table 4-18. Potential Income Tax Generated Earnings (2023 $M) 4-109
Table 4-19. Potential Sales Tax Revenues (2023 $M) 4-109
Table 4-20. Summary of Capital Costs (2023 $M) 4-110
Table 4-21. Alternative 1: Net Effects of Capital Expenditure 4-111
Table 4-22. Alternative 3: Net Effects of Capital Expenditure 4-111
Table 4-23. Alternative 4: Net Effects of Capital Expenditure 4-111
Table 4-24. Alternative 5: Net Effects of Capital Expenditure 4-112
Table 4-25. Alternative 6: Net Effects of Capital Expenditure 4-112
Table 4-26. Potential NEPA Avoidance and Minimization Measures 4-125
Table 5-1. PEL Study Introductory Meeting for Agencies 5-4
Table 5-2. PEL Study Agency Comments and Meeting 5-7
Table 5-3. Draft PEL Study Comments 5-19

Abbreviations and Acronyms

ADA	Americans with Disabilities Act of 1990
APM	automated people mover
Basin	South Coast Air Basin
bgs	below ground surface
BHMMP	Bat Habitat Mitigation and Monitoring Plan
BMP	best management practice
BSL	Bureau of Street Lighting
CAA	Clean Air Act
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CBM18B	Metro's Transportation Analysis Model 2018
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CIDH	cast-in-drilled-hole
CO	carbon monoxide
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CWA	Clean Water Act
dBA	A-weighted decibels
DCP	City of Los Angeles Department of City Planning
DEIR	Draft Environmental Impact Report
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESFV LRT	East San Fernando Valley Light Rail Transit
ExpressLanes project	I-405 Sepulveda Pass ExpressLanes project
FAA	Federal Aviation Administration
Feasibility Report	Final Sepulveda Transit Corridor Feasibility Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration

FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
g/bhp-hr	grams per brake horsepower hour
GSA	General Services Administration
GTI	Gabrielino Tongva Indians
HOV	high occupancy vehicle
HRDF	High Resilience Direct Fixation Rail Fasteners
HRT	heavy rail transit
HTA	HTA Partners
HUD	U.S. Department of Housing and Urban Development
I-10	Interstate 10
I-405	Interstate 405
IOS	Initial Operating Segment
LACSD	Los Angeles County Sanitation Districts
LADOT	Los Angeles Department of Transportation
LADWP	City of Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAMC	City of Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LASD	Los Angeles County Sheriff's Department
LASRE	LA SkyRail Express
LAWA	Los Angeles World Airports
LAX	Los Angeles International Airport
lb/day	pound per day
$L_{eq.equip}$	equipment-related equivalent noise level
LID	low impact development
LOSSAN	Los Angeles-San Diego-San Luis Obispo
LPA	Locally Preferred Alternative
LRT	light rail transit
MBTA	Migratory Bird Treaty Act
MCLF	Mission Canyon Landfill
Metro	Los Angeles County Metropolitan Transportation Authority
MM	mitigation measure
mph	miles per hour
MRCA	Mountains Recreation and Conservation Authority
MRDC	Metro Rail Design Criteria

MRT	monorail transit
MSF	maintenance and storage facility
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
O_3	ozone
OHP	Office of Historic Preservation
PCA	project concept alternative
PCB	polychlorinated biphenyls
PDA	pre-development agreement
PEL	planning and environmental linkages
PM	Project Measure
PM	particulate matter
$PM_{2.5}$	fine particulate matter (particles with diameters less than 2.5 microns)
PM_{10}	respirable particulate matter (particles with diameters less than 10 microns)
POAQC	Project of Air Quality Concern
PPV	peak particle velocity
Project	Sepulveda Transit Corridor Project
ROW	right-of-way
RSA	Resource Study Area
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SHPO	State Historic Preservation Officer
SMMC	Santa Monica Mountains Conservancy
SMMNRA	Santa Monica Mountains National Recreation Area
SO_2	sulfur dioxide
SOI	Secretary of the Interior
SR	State Route

STCP	Sepulveda Transit Corridor Partners
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TBM	tunnel boring machine
TCR	tribal cultural resources
TMP	Transportation Management Plan
TOC	transit-oriented community
TOD	transit-oriented development
TPS	transit propensity score
TPSS	traction power substation
TSC	transit solution concept
UCLA	University of California, Los Angeles
UCLA PD	UCLA Police Department
UCLA Plan	UCLA Long Range Development Plan Amendment
U.S.	United States
US-101	U.S. Highway 101
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
VA	U.S. Department of Veterans Affairs
VA Plan	*VA Greater Los Angeles Healthcare System Draft Master Plan*
Valley	San Fernando Valley
VdB	vibration decibel notation
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WCCOG	Westside Cities Council of Governments
WEAP	Worker Environmental Awareness Plan
Westside	Westside of Los Angeles

1 INTRODUCTION AND SUMMARY

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 (Westside). 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.

The scope of the Planning and Environmental Linkages (PEL) Study is to bridge the gap between project planning and environmental phases of the corridor by compiling and integrating the current California Environmental Quality Act (CEQA) work into the anticipated subsequent National Environmental Policy Act (NEPA) process. The PEL statute refers to 23 U.S.C. 168, which outlines the integration of transportation planning and environmental review through the PEL process. 23 U.S.C.168 (c)(1) and (2) apply to planning decisions and planning analyses, including those listed in the statute. This statute allows for the use of planning products developed during transportation planning to inform and streamline the NEPA process. The PEL process helps agencies consider environmental and community goals early in transportation planning, using that information to inform and potentially expedite the subsequent NEPA review. The PEL Study identifies and supplements data needs to support the potential future NEPA process and engages federal agencies and other partners in a facilitated form to solicit comments on the Project. The planning products produced in this planning process may be adopted during a subsequent environmental review process completed for the Project.

1.1 Project Background and History

The Sepulveda Corridor provides a crucial transportation link across the Santa Monica Mountains and through the Westside of the City of Los Angeles, connecting the heavy concentration of households in the Valley with major employment and activity centers on the Westside, including such major travel destinations as Westwood, the University of California, Los Angeles (UCLA), and Century City. The Sepulveda Corridor and entire Project Study Area are shown on Figure 1-1. The Sepulveda Corridor serves trips throughout western Los Angeles County and beyond. With increasing population, employment, and travel, congestion on Interstate 405 (I-405) and other Project Study Area roadways is likely to worsen and spread over longer periods of the day unless substantial new system capacity is added. As congestion gets worse, Valley residents will see their access to Westside travel destinations deteriorate.

The 2019 Sepulveda Transit Corridor Project Final Feasibility Report (Metro, 2019) (henceforth referred to as the 2019 Feasibility Report) 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 2019 Feasibility Report identified feasible transit solutions that met the Purpose and Need, goals, and objectives of the Project. The 2019 Feasibility Report 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 Corridor and would provide travel times competitive with the automobile.

Figure 1-1. Sepulveda Transit Corridor Project Study Area



Source: HTA, 2024

In November 2021, Metro released a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) pursuant to CEQA for the Project that included six alternatives (Metro, 2021c). 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 I-405 corridor and an electric bus connection to 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

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, 2024).

The Draft Environmental Impact Report (DEIR), which evaluated the five remaining alternatives, was released on June 2, 2025, for a 90-day public review and comment period (Metro, 2025). In January 2026, the Metro Board of Directors selected a Modified Alternative 5 as the Locally Preferred Alternative (LPA). Modified Alternative 5 is a heavy rail with an underground alignment along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station. The LPA is the alternative determined to best meet the Project's goals, objectives, and community needs based on technical analysis and public input. Identifying an LPA does not constitute project approval. Hence, all alternatives are assessed in the PEL Study.

In addition, Metro is studying phase implementation inclusive of an Initial Operating Segment (IOS), for the Project with priority given to connecting the San Fernando Valley at the Metro G Line to the Westside at the Metro D Line. This IOS would be an incremental investment so that benefits can be married with identified funds, thereby allowing the majority of the Project's mobility benefits to be realized sooner. The IOS has not yet been fully defined by Metro, including the maintenance and storage facility (MSF) location. The IOS will be studied in an upcoming further NEPA and CEQA analyses.

1.2 General Process

Metro intends to use the contents of the PEL Study to bridge the gap between the planning and the state and federal environmental phases of the Project. The PEL Study streamlines the environmental and permitting phases of the Project, and reduces long-term project costs, time, and risk to the public. The PEL Study consultation process is a collaborative and integrated approach to transportation decision-making that considers benefits and impacts of the proposed transportation system improvements to the environment, community, and economy during the transportation planning process.

This PEL Study establishes the environmental setting for the Project Study Area and includes an environmental scan of potential effects on NEPA resources. The information was primarily informed by the CEQA DEIR and supporting technical reports (Metro, 2025; Metro, 2025a-Metro, 2025v). However, the PEL Study also includes information specific to NEPA compliance and federal regulations (e.g.,

Section 106 and Section 4(f)). The PEL Study identifies substantial issues to be addressed in future NEPA studies. The scan assesses the potential for NEPA impacts based on findings in the DEIR and preliminary analysis for NEPA-specific topics. The PEL Study also includes potential avoidance, minimization, and/or mitigation measures that are consistent with mitigation measures and project measures included in the DEIR.

Metro conducted outreach via email to more than 50 federal, state, regional, and local agencies to discuss the PEL Study. A virtual meeting attended by more than 20 agencies was held on February 2, 2023. The meeting introduced the agencies to the PEL Study process for the Project. Focused meetings were held from spring 2023 through winter 2024 with individual agencies that expressed interest in the PEL Study process. Comments provided during this interagency consultation process were considered during the design process and environmental assessment of the Project alternatives. These comments were considered in preparing this PEL Study.

The Draft PEL Study was circulated for public review between April 10 and May 9, 2026, to assist Metro in understanding environmental and design constraints prior to assessing a single build alternative in an anticipated NEPA document. Notice of the Draft PEL Study availability was posted to the project website in addition to being emailed to key agency stakeholders. Comment letters were received from the U.S. Environmental Protection Agency (EPA), U.S. Department of Veterans Affairs (VA), Federal Aviation Administration (FAA), the City of Los Angeles Department of Water and Power (LADWP), one stakeholder group, and two members of the general public. These comments are summarized in Section 5, Agency and Public Involvement, of the PEL Study, along with responses.

1.3 Summary of Next Steps

Metro anticipates that the Federal Transit Administration (FTA) will initiate the NEPA process in 2026. The NEPA Class of Action is undetermined. Consistent with Appendix A of 23 Code of Federal Regulations (CFR) Part 450, the information, analysis, and products from the PEL Study and planning processes may be incorporated into and relied upon in NEPA documents. The Fixing America's Surface Transportation Act transportation authorization at 23 United States Code (U.S.C.) 139(f)(4)(E)(iii) allows for the elimination of certain alternatives from detailed study during NEPA if they were analyzed in prior planning work.

Metro, in cooperation with the FTA and other regulatory agencies, will prepare the environmental document pursuant to the requirements of NEPA 42 U.S.C. 4321 et seq.), the Federal Public Transportation Law (49 U.S.C. Chapter 53), the Clean Air Act (CAA) (42 U.S.C. 7401 et seq.), the Clean Water Act (CWA) (33 U.S.C. 1250 et seq.), the National Historic Preservation Act (54 U.S.C. 306108 and 36 CFR 800), Section 4(f) of the U.S. Department of Transportation (USDOT) Act requirements (49 U.S.C. 303 and 23 U.S.C. 138) and its implementing regulations in 23 CFR 774, the federal Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531–1544), Executive Order (EO) 11988 (Floodplain Management), and EO 11990 (Protection of Wetlands).

2 PURPOSE AND NEED

The Purpose and Need statement defines the underlying problem the project aims to address and explains the reasons action is necessary. It provides the foundation for identifying and evaluating the effectiveness of different alternatives in compliance with NEPA and other applicable laws.

The purpose of the Project is to provide a high-quality transit service that effectively serves a large and growing travel market between the Valley and the Westside that is currently primarily funneled into a highly congested and constrained corridor through the Sepulveda Pass. The need for the Project is based on the currently limited travel options to traverse the Pass; their unreliability; impact on air pollution; and a major north-south gap in the fixed guideway system between the Metrolink Ventura County Line, the East San Fernando Valley Light Rail Transit (ESFV LRT) Line, and the Metro D, Metro E, and Metro G Lines.

2.1 Process Followed to Develop the Purpose and Need

Metro completed the early stages of transportation planning for the Project in the 2019 Feasibility Report (Metro, 2019). To meet the requirements of Title 23 CFR Part 450 – Linking the Transportation and NEPA Processes, the study was conducted with 1) input from an extensive public outreach effort; 2) through close coordination with local, state, and federal agencies; and 3) by ensuring that the process for developing and screening alternatives, the level of definition of the alternatives, and the type and level of analyses were commensurate with the decisions that need to be made. The 2019 Feasibility Report included a preliminary Purpose and Need to guide Project development.

Since completion of the 2019 Feasibility Report, Metro reviewed Project Study Area conditions such as land use, demographic patterns, and travel conditions in light of current plans and policies, including the 2020 Long Range Transportation Plan (Metro, 2020a), Moving Beyond Sustainability (Metro, 2020b), and its Equity Platform (Metro, 2018). Metro established six goals for the Project:

1. Improve Mobility
2. Improve Accessibility and Promote Equity
3. Support Community and Economic Development
4. Protect Environmental Resources and Support a Sustainable Transportation System
5. Provide a Cost-effective Solution and Minimize Risk, and
6. Enhance Resiliency.

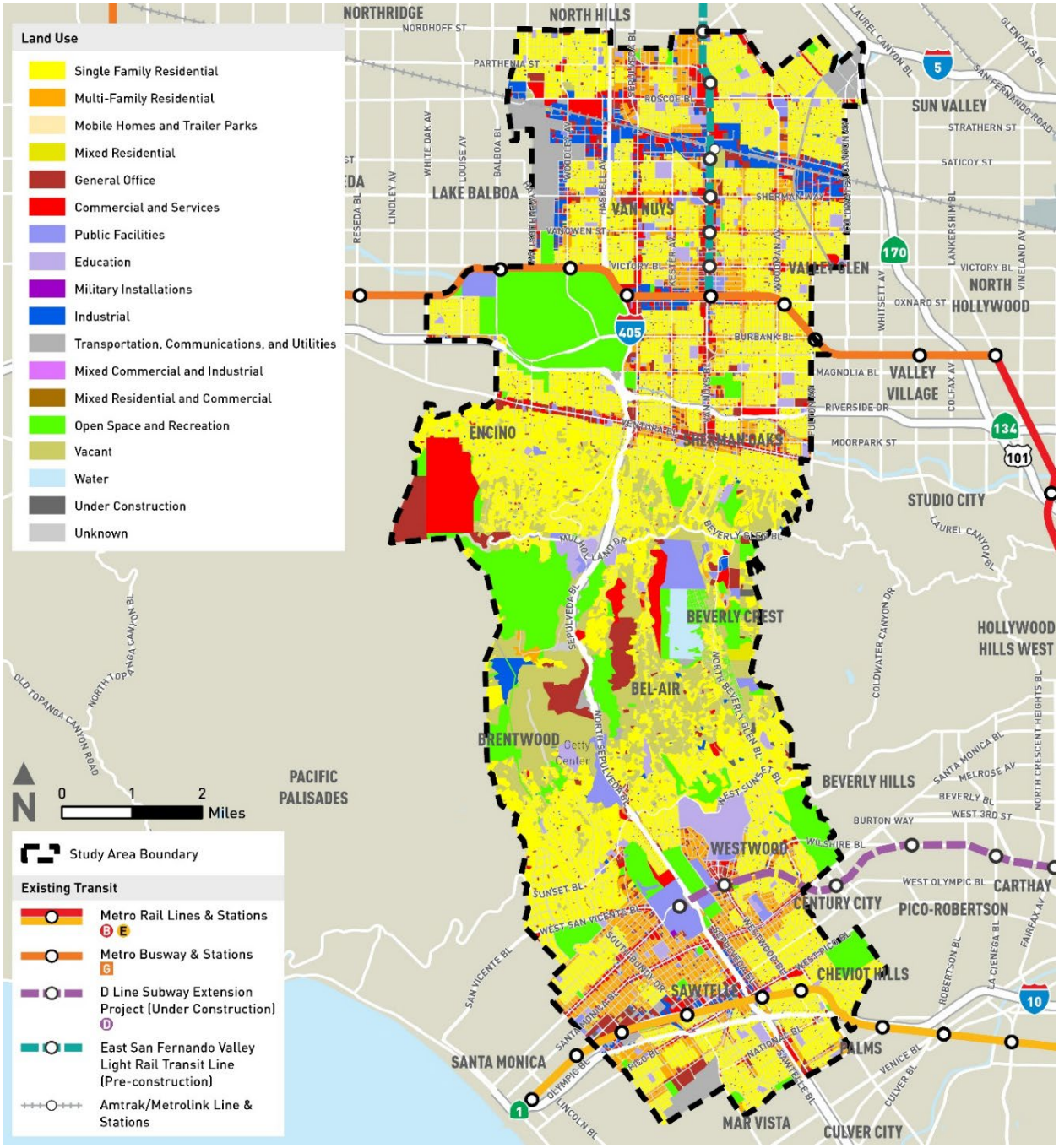
2.2 Key Data Used to Develop the Purpose and Need

Key information used to develop the Purpose and Need included land uses, socio-economic characteristics, existing and future transportation conditions in the Project Study Area, and high-level travel demand trends. A comprehensive discussion of the key information may be reviewed in the Sepulveda Transit Corridor Project Purpose and Need Statement Technical Report (Metro, 2021a).

2.2.1 Land Uses

Residential, commercial, government, industrial, cultural, recreational, and educational land uses are found throughout the Project Study Area (Figure 2-1). Commercial (both retail and office) and industrial uses that support high levels of employment tend to be concentrated in a small number of geographic areas. The Project Study Area also includes several major regional attractions, most notably UCLA, the Getty Center, and the Skirball Cultural Center. This type of land use pattern can result in frequent travel by residents outside their communities for work, leisure, or educational purposes.

Figure 2-1. Existing Land Uses



Source: HTA,2024

Single-family residences constitute the largest share (54.5 percent) of land in the Project Study Area and are distributed throughout the Project Study Area. Government-owned land and commercial land uses constitute 5.8 percent and 4.7 percent of the Project Study Area, respectively. Multi-family residences constitute 10.2 percent of all land uses in the Project Study Area and are concentrated mainly in the Valley, Westwood, West Los Angeles, Palms, and Mar Vista. Industrial uses represent 5.8 percent of land and are concentrated mainly along the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor in the Valley, along the Metro G Line, and along the Metro E Line west of Sepulveda Boulevard.

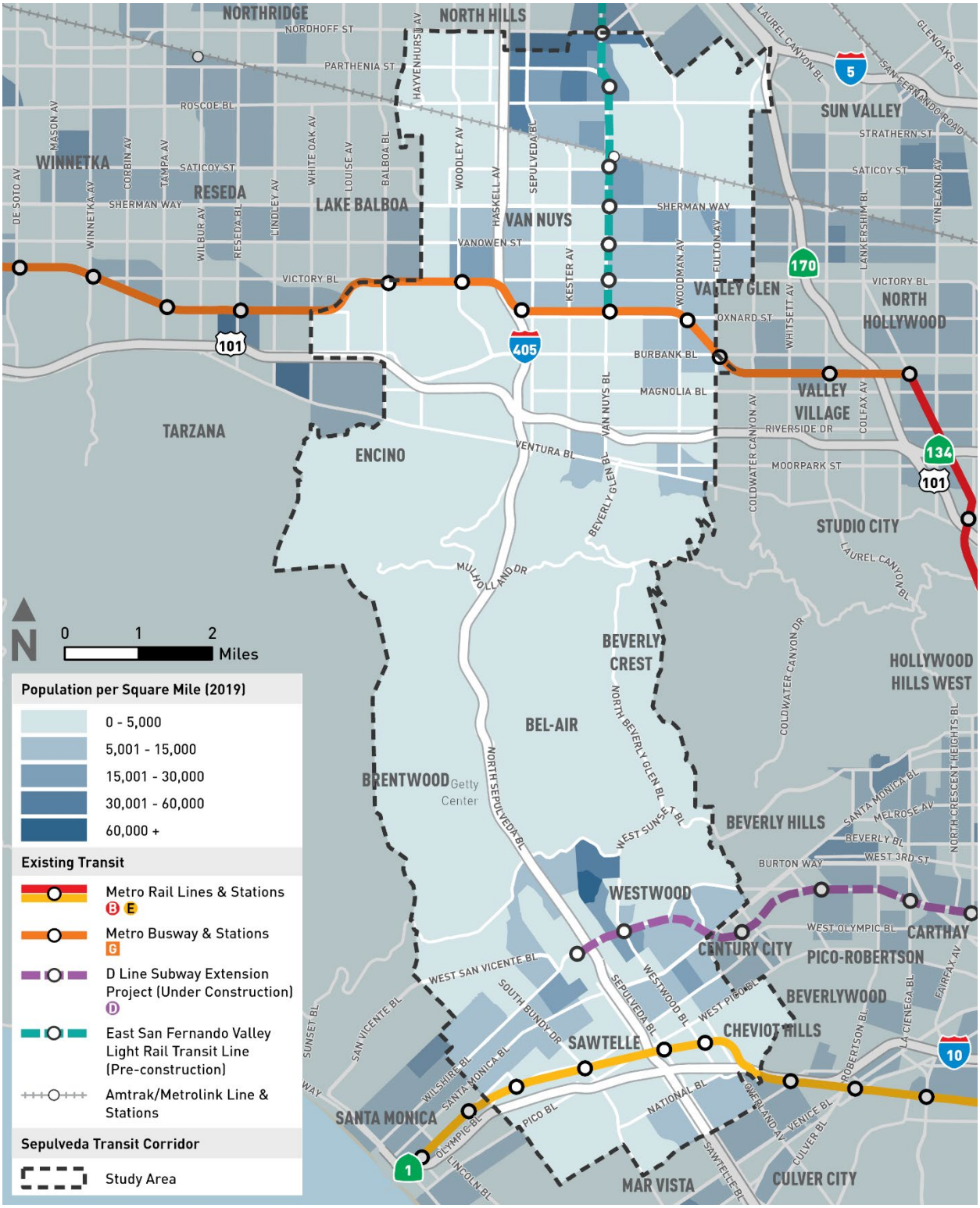
Land uses in the Project Study Area will be affected by planning efforts that have progressed in the past few years. Examples include the West Los Angeles Civic Center Redevelopment Plan (DCP, 2021), the UCLA Long Range Development Plan Amendment (UCLA Plan) (UCLA, 2018), and the VA Greater Los Angeles Healthcare System Master Plan (VA Plan) (VA, 2022). The Civic Center project will add high-density housing, government, and commercial facilities and be bicycle and pedestrian supportive. Both the UCLA Plan and the VA Plan will add high-density residential development. Other examples include the Exposition Corridor Transit Neighborhood Plan for the Metro E Line (DCP, 2019) and plans being developed for the Metro D Line and Metro G Line by the City of Los Angeles Department of City Planning (DCP), in collaboration with Metro.

2.2.2 Demographic Patterns

Patterns of population and employment density follow the distribution of land uses: areas with high concentrations of residential land uses, particularly multi-family residential uses, have high population densities; similarly, areas with high concentrations of commercial land uses, particularly office uses, have high employment densities. Over 500,000 people reside within the Project Study Area, with a median annual household income of $107,000. Low-income households constitute approximately 19 percent of the households in the Project Study Area, and approximately 9 percent of households do not own an automobile. Figure 2-2 shows population density in the Project Study Area and the surrounding region. Several portions of the Project Study Area are densely populated, with the highest densities in parts of Westwood, UCLA, West Los Angeles, and Brentwood on the Westside, where the population density exceeds 60,000 people per square mile. In the Project Study Area, the Valley generally has population densities between 15,000 and 30,000 people per square mile, although Van Nuys and Panorama City directly north of the Project Study Area have residential densities exceeding 30,000 people per square mile. Population densities below 5,000 people per square mile are found in the Santa Monica Mountains portion of the Project Study Area.

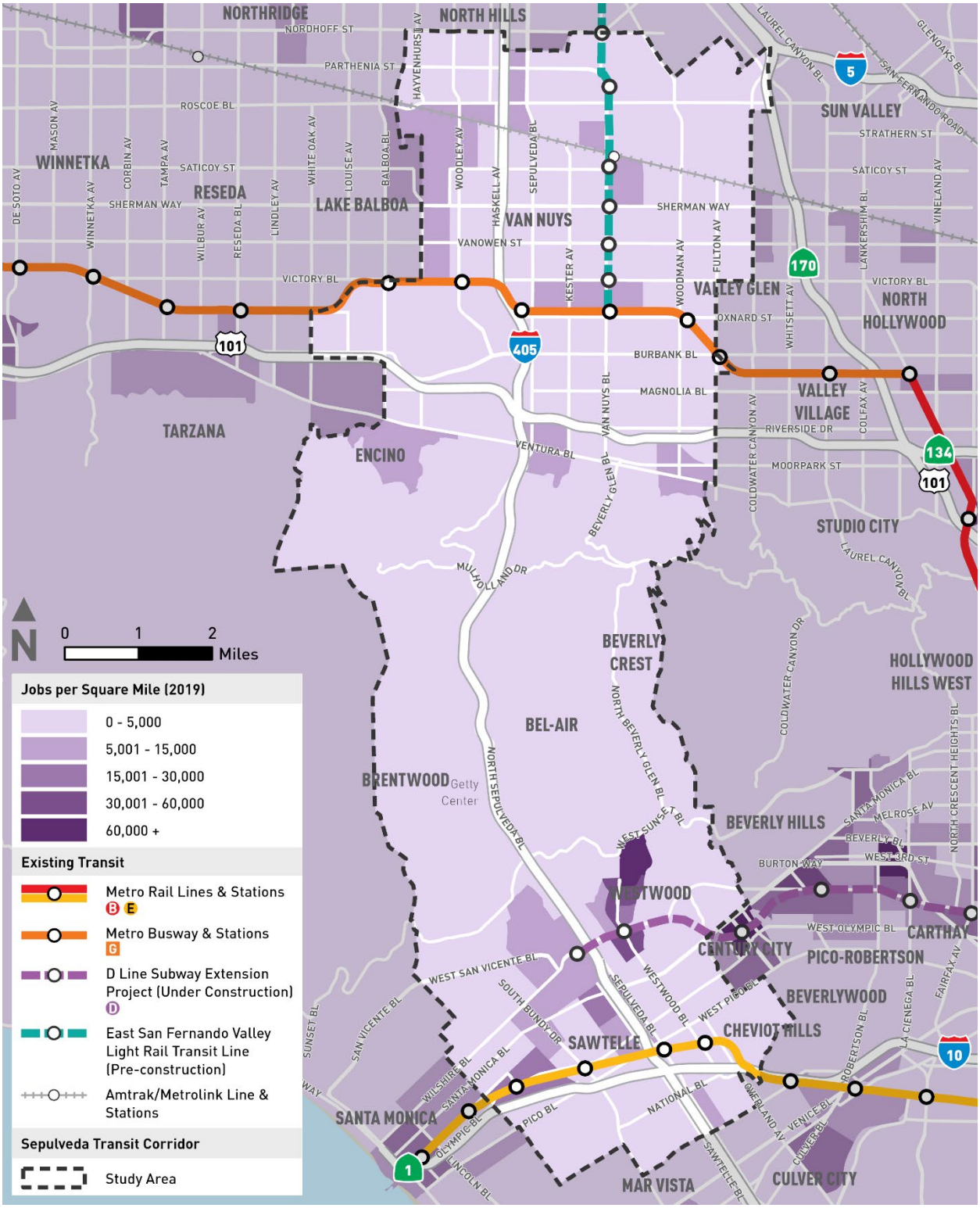
Figure 2-3 shows the greatest job concentrations in the Project Study Area are found in the Westside, where job densities generally are between 15,000 and 30,000 jobs per square mile, with some areas exceeding 60,000 jobs per square mile. Adjacent to, but outside the Westside portion of the Project Study Area, Century City and 20th Century Fox Studios have more than 60,000 jobs per square mile. The Valley is characterized primarily by low to medium job density in most areas.

Figure 2-2. Population Density (2019)



Source: HTA, 2024

Figure 2-3. Job Density (2019)



Source: HTA, 2024

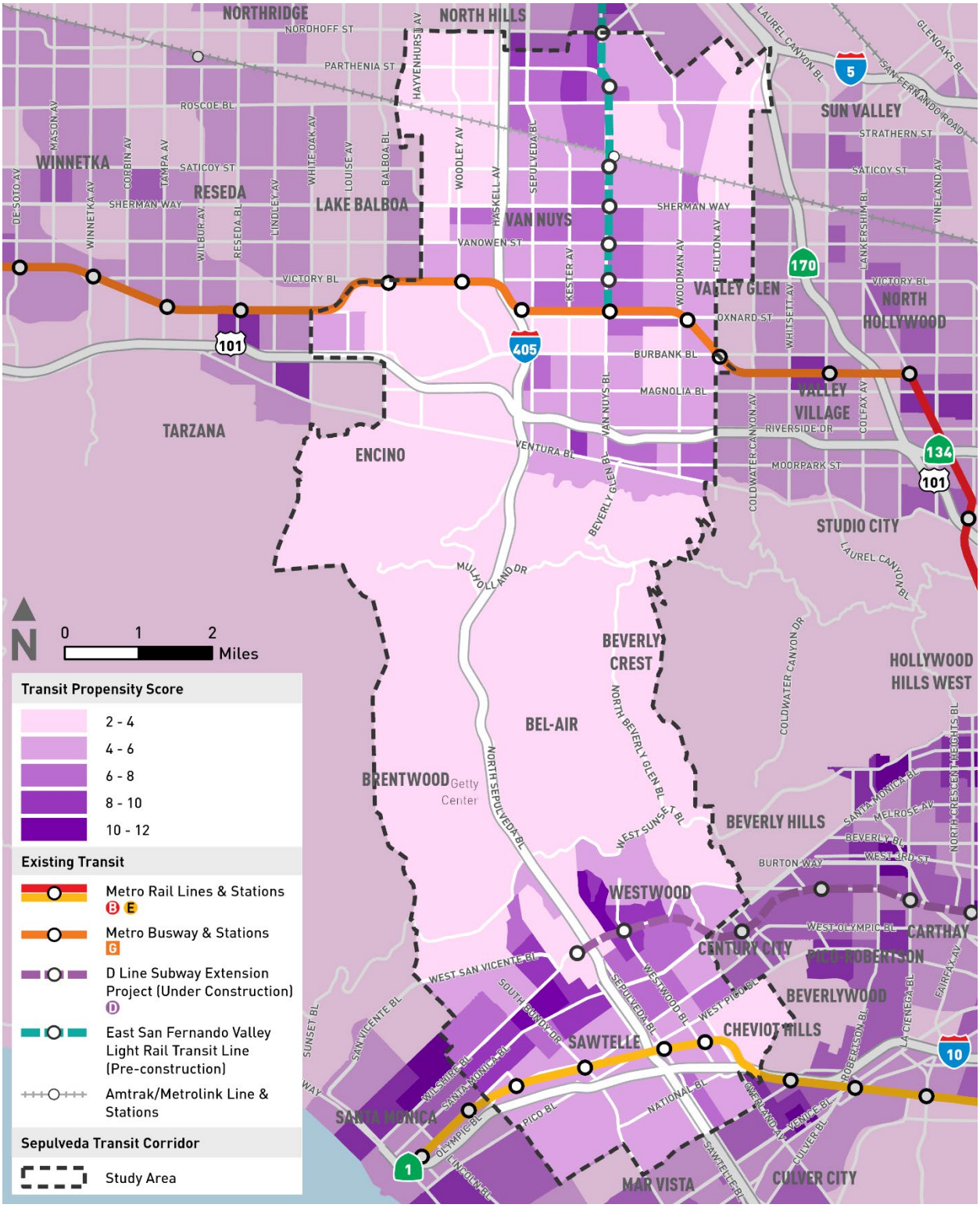
In the Valley, population centers are much denser than employment centers, while the reverse is generally true in the Westside, particularly when considering the adjacent Century City and Beverly Hills areas immediately outside the Project Study Area. This dispersed pattern of residences and job centers leads to increased and longer travel between communities where people live and where people work.

To support its NextGen bus restructuring effort, Metro developed the transit propensity score (TPS), which is a measure that captures the propensity of the residents, workers, and students of a geographic area to use transit (Metro, 2019). Areas where transit propensity is greatest embody the following three main characteristics:

1. A significantly large population of transit market segments occurs, which are defined as people who rely on transit for most of their travel, commuters and students who use transit for work and school trips, and discretionary riders who choose transit for some or all of their trips.
2. The intensity of travel demand to and from geographic areas is based on population and employment densities, including retail and entertainment, colleges and universities, and other trip generators.
3. A pedestrian-oriented street environment is also critical, including safe and well lighted pathways, sidewalks, and curb-cuts; a grid street network; and level topography, so that accessing transit stops/stations is easier and safer.

By aggregating these factors by geographic areas, the locations with the highest likelihood of producing transit trips can be determined. Figure 2-4 shows the TPS for the Project Study Area. The highest TPS areas are in the northern part of the Project Study Area in the Valley, including Van Nuys and Panorama City, and in the Westside area including UCLA, Westwood, and parts of West Los Angeles. These high TPS areas include relatively higher numbers of people who rely on transit, large population and employment densities, and high numbers of concentrated trip generators, such as UCLA.

Figure 2-4. Transit Propensity Score



Source: HTA, 2024

2.2.3 Freeways and Roadways

I-405 is heavily traveled throughout the Project Study Area, with particularly heavy volumes between Wilshire Boulevard and Interstate 10 (I-10). Weekend midday peak hour volumes often exceed weekday AM and PM peak hour volumes. A high travel demand occurs during weekends as well as for weekday travel, indicating that many reasons (e.g., shopping, recreation, social) other than work and school commute trips exist for travel 7 days a week. High occupancy vehicle (HOV) lane volumes are higher on weekends than on weekdays. This is because of higher travel demand on weekends and more family travel occurs on weekends than weekdays, increasing the occupancy of vehicles, allowing vehicles to use the HOV lanes.

The high level of demand experienced on I-405 results in congestion and low travel speeds. During the AM peak period, the greatest delays are experienced along I-405 by travelers from the Valley to the Westside. The average travel speed on I-405 during the morning peak is below 25 miles per hour (mph) southbound between Sherman Way and Skirball Center Drive and northbound between I-10 and Pico Boulevard. During the evening peak, the northbound speed between National Boulevard and Sherman Way from the Westside into the Valley is less than 25 mph. Southbound travel during the evening experiences its slowest speeds between Wilshire Boulevard and National Boulevard.

Slow travel speeds are not limited to freeways in the Project Study Area. Many arterial streets in the Valley and on the Westside experience reduced speeds at all times of the day. Some of these arterial streets serve regional destinations, such as the UCLA campus. Others are roughly parallel to freeways in the Project Study Area. Through the Santa Monica Mountains, both Sepulveda Boulevard and Beverly Glen Boulevard have faster northbound speeds during the morning peak hour and faster southbound travel speeds during the evening peak hour, reflecting the prevailing travel patterns. In the Project Study Area in the Valley, southbound travel is slower than northbound on Van Nuys and Sepulveda Boulevards during the morning, and the pattern reverses in the evening. Almost all roadways on the Westside have average speeds below 20 to 25 mph in the peak evening commute hour.

2.2.4 Transit Service

Conventional bus service in the Project Study Area consists of a broad range of services offered by both regional and municipal transit providers. Operators include Antelope Valley Transit Authority, City of Santa Clarita Transit, Santa Monica Big Blue Bus, Culver CityBus, Los Angeles Department of Transportation (LADOT), Los Angeles International Airports' (LAX) FlyAway, Long Beach Transit and Metro. In the Valley portion of the Project Study Area, service is provided primarily by Metro and LADOT; on the Westside, service is provided primarily by Metro and Big Blue Bus. In addition, Metro, LADOT, LAX FlyAway, Long Beach Transit, and City of Santa Clarita Transit all have services that travel along I-405. UCLA also provides transit services in the Project Study Area.

Although transit has frequent service on both sides of the Sepulveda Pass, the link through the Pass currently is served by routes offering less frequent service or by express services that operate only during peak commuter periods. Most transit riders traveling between the Valley and the Westside likely need to transfer between a higher frequency east/west bus route to a lower frequency north/south route on at least one part of their trips.

Metro began the NextGen Bus Study in 2018 to redesign the Metro bus network to provide fast, frequent, reliable, and accessible service to the communities it serves. The NextGen Bus Plan (Metro, 2020c) was approved by the Metro Board of Directors with a planned three-phase roll-out beginning in late 2020. Much of the NextGen Bus Plan has been implemented by Metro.

2.3 Purpose and Need Statement

The Sepulveda Corridor provides a crucial transportation link across the Santa Monica Mountains and through the Westside, connecting the heavy concentration of households in the Valley with major employment and activity centers on the Westside, including such major travel destinations as Westwood, UCLA and Century City. More broadly, the Sepulveda Corridor serves trips throughout western Los Angeles County and beyond.

The need for the Project is driven by increasing population, employment, and travel inside and outside of the Project Study Area, which will worsen congestion on I-405 and other Project Study Area roadways and spread it over longer periods of the day unless substantial new system capacity is added. As congestion gets worse, Valley residents will see their access to Westside travel destinations deteriorate. Metro is considering conversion of the existing HOV lanes on I-405 to ExpressLanes, and possibly adding an ExpressLane in each direction, but the presence of the Santa Monica Mountains severely constrains additional opportunities to add highway capacity.

Because existing and future travel demand far exceeds the available highway capacity, adding highway lanes is unlikely to provide sufficient capacity and will increase vehicle miles traveled (VMT), vehicle hours traveled, and pollutant emissions, without providing a reliable travel option that is not subject to roadway congestion.

With implementation of the NextGen bus network, some routes in the Project Study Area will be consolidated and will have headways adjusted to better serve the needs of riders. Metro is extending the Metro D Line to Westwood by 2027. This will enable people to travel from the Valley to Westwood via a combination of the Metro G Line, Metro B Line, and Metro D Line. This route is indirect and will involve multiple transfers. A direct route between the Valley and the Westside, operating on a dedicated guideway to increase speed and reliability, would be more competitive with automobiles and attract more riders to transit.

The purpose of the Project is to provide a high-quality transit service that effectively serves a large and growing travel market between the Valley and the Westside that is currently primarily funneled into a highly congested and constrained corridor through the Sepulveda Pass. The Project would connect the Valley—where more than 1.8 million people live—and the rest of the region to major destinations and job centers, including UCLA, Westwood, and Century City. Each day 86,000 students, faculty, staff, and visitors travel to the UCLA campus (UCLA, 2023), and more than 50,000 people work in Century City (SCAG, 2024).

The need for the Project is based on the currently limited travel options to traverse the Sepulveda Pass; their unreliability; impact on air pollution; and a major north-south gap in the fixed guideway system between the Metrolink Ventura County Line, the ESFV LRT Line, and the Metro D, Metro E, and Metro G Lines. Traveling across the Sepulveda Pass currently takes between 40 and 80 minutes by car due to unpredictable traffic conditions which would be shortened to a predictable 18 to 33 minutes depending on Project alternative. The Project would significantly expand mobility with a fast and dependable rail option while reducing air pollution and providing health and economic productivity benefits.

3 ALTERNATIVES CONSIDERED IN THE PEL STUDY

This section describes the history of the alternatives included in the PEL Study, beginning with the alternatives developed in the 2019 Feasibility Report (Metro, 2019) and followed by the development of the pre-development agreement (PDA) alternatives.

3.1 Process Followed to Identify Alternatives

In 2016, the voters of Los Angeles County approved Measure M to fund transportation improvements throughout the county. The Measure M Los Angeles County Traffic Improvement Plan, Attachment A, Measure M Expenditure Plan (Metro, 2016) includes the Sepulveda Corridor, which was defined as a transit project between the San Fernando Valley and LAX.

The 2019 Feasibility Report (Metro, 2019) documented the transportation conditions and travel patterns in the Sepulveda Corridor; identified mobility problems affecting travel between the Valley, the Westside and the LAX area; and defined initial goals and objectives and a Purpose and Need of the Sepulveda Corridor. Using an iterative evaluation process, the 2019 Feasibility Report identified feasible transit solutions that met the Purpose and Need, goals, and objectives of the Project.

3.2 Range of Alternatives Considered Prior to the PEL Study

The 2019 Feasibility Report was conducted with (1) input from an extensive public outreach effort; (2) through close coordination with local, state, and federal agencies; and (3) by ensuring that the process for developing and screening alternatives, the level of definition of the alternatives, and the type and level of analyses were commensurate with the decisions that need to be made. After reviewing the characteristics of a variety of transit technologies and their applicability in the Sepulveda Corridor, the following four modes were selected for development of the initial transit concepts:

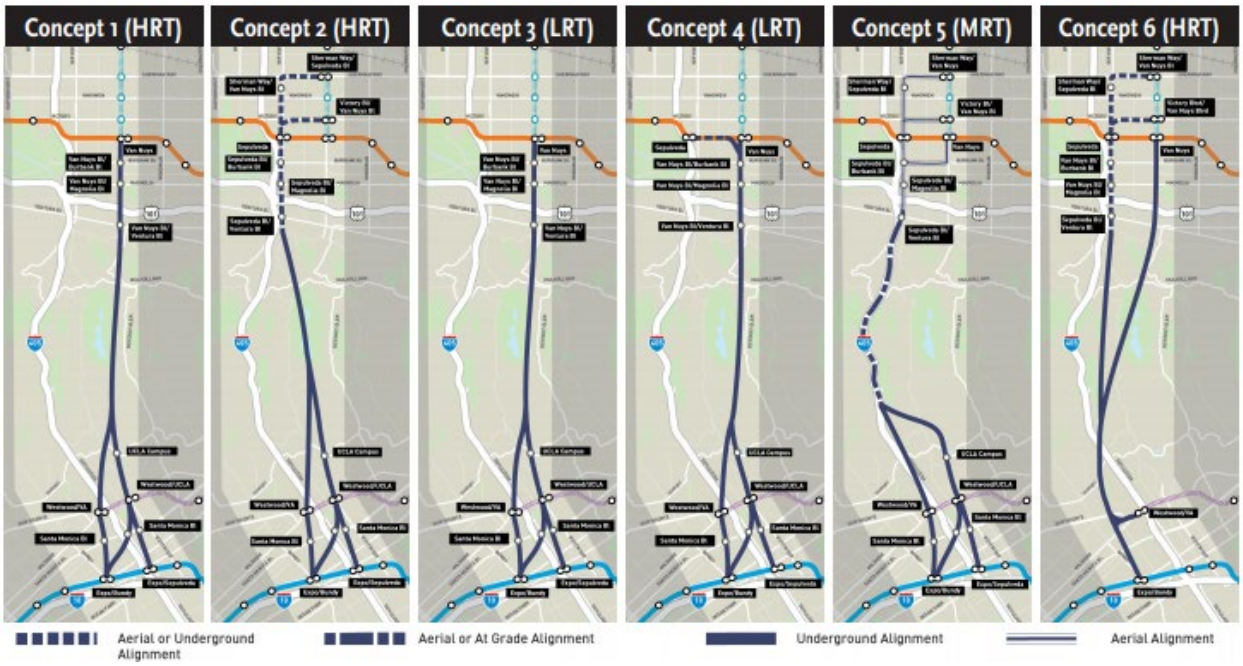
- Heavy rail transit (HRT)
- Light rail transit (LRT)
- Monorail transit (MRT)
- Rubber-tire trains

Because of the similar performance characteristics of monorail and rubber-tire trains, the two modes were identified as monorail/rubber-tire transit and considered to be equivalent for purposes of the 2019 Feasibility Report in the evaluation of the transit concepts. Following the selection of modes to study, southern termini at each of the Metro E Line stations within the Project Study Area were considered, and connection points to the Metro G Line at each of the Metro G Line stations within the Project Study Area were considered. The significantly lower existing ridership of the Metro E Line Westwood/Rancho Park Station and the Metro G Line Woodley Station, compared to the other stations on their respective lines, and the low density, residential nature of their surrounding land uses led these potential termini to be dismissed from consideration early in the alternative development process.

Alignments were identified that followed roadway rights-of-way or connected potential termini directly. These alignments were screened based on major physical constraints and the ability to connect key activity centers. The design configurations considered included at-grade, aerial, and below grade, and the applicability of each configuration was determined based on the physical characteristics of the alignment. The screening of alignments and configurations resulted in the development of several HRT, LRT, and monorail/rubber-tire transit concepts for initial evaluation and included public review and

comment. Figure 3-1 illustrates the six base concepts, each with route design options at the northern and southern termini.

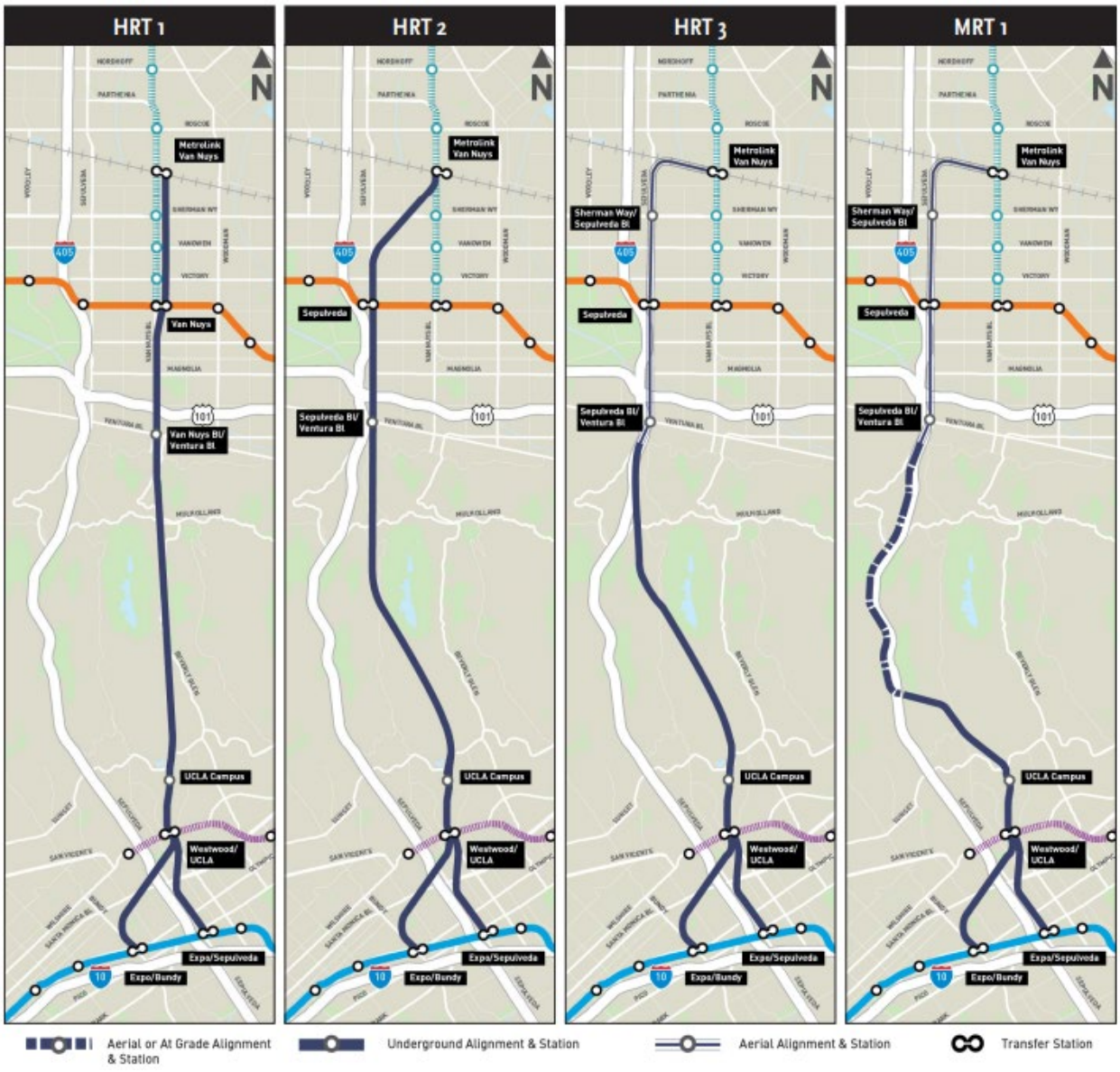
Figure 3-1. Initial Valley-Westside Concepts from 2019 Feasibility Report



Source: Metro, 2019

Following evaluation and public comment, the HRT and monorail/rubber-tire transit initial concepts were refined to extend farther north to alleviate projected passenger loads on the ESFV LRT Line caused by demand for access to the Project. Additionally, because the option to connect to the Metro D Line at the Westwood/VA Station performed poorly, in terms of ridership, compared to the option to connect at the Westwood/UCLA Station, this option was eliminated from consideration. The LRT concepts were eliminated from further consideration because they could not be refined to provide additional capacity between the Metrolink Van Nuys Station and the Metro G Line. The Metro D Line Extension was eliminated because of its inability to support a UCLA campus station, which resulted in the lowest ridership. Figure 3-2 illustrates the remaining four concepts regrouped by mode.

Figure 3-2. Refined Valley-Westside Concepts from 2019 Feasibility Report

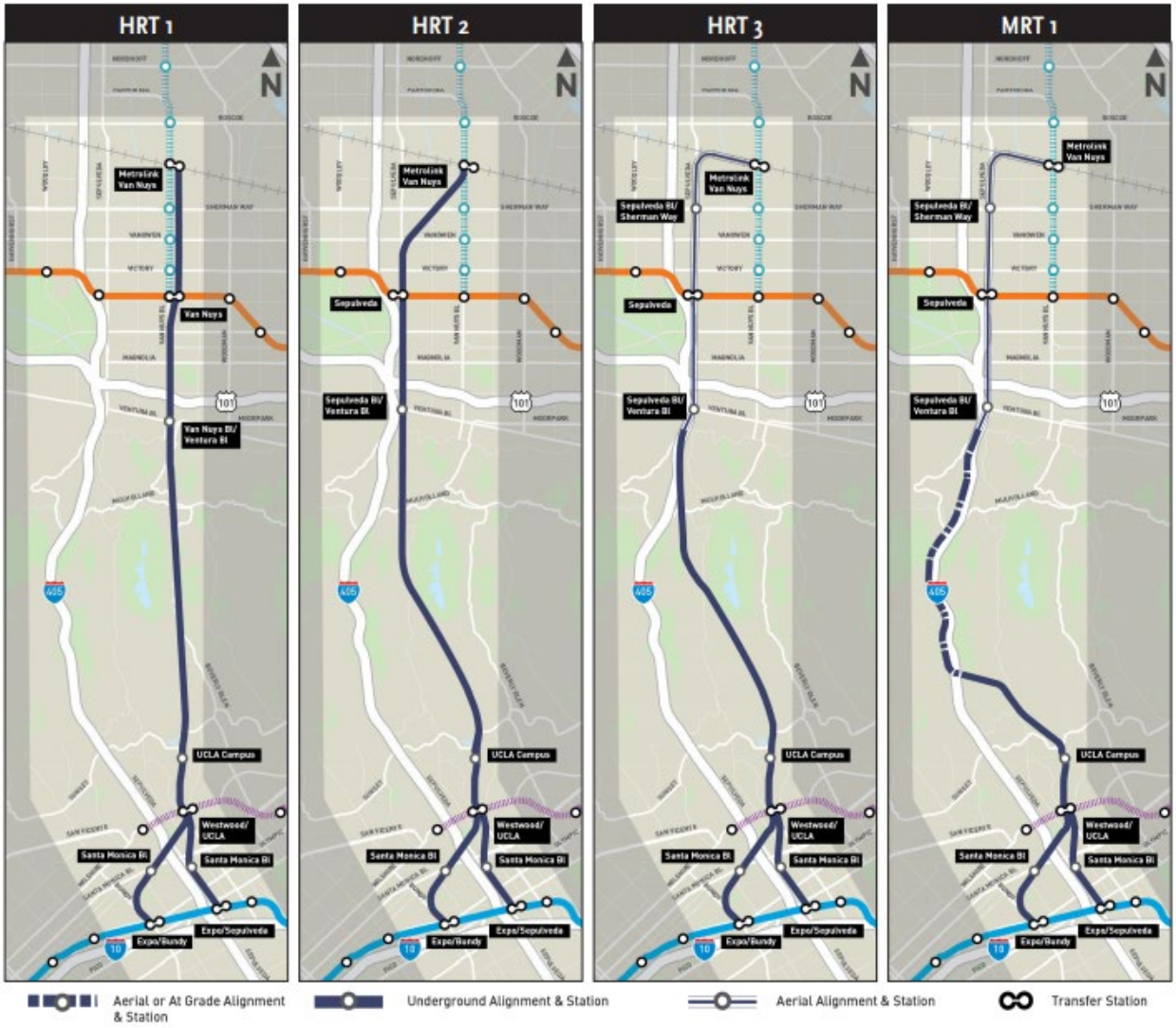


Source: Metro, 2019

3.3 Evaluation Criteria

The four refined concepts were developed into final alternatives (illustrated on Figure 3-3), including all the features required to operate a transit system, such as operating plans throughout the day, calculations of the required size of the vehicle fleet, and identification of ancillary facilities. These alternatives were evaluated for their ability to meet the five Project goals, using evaluation criteria more detailed than those used to evaluate the initial and refined concepts.

Figure 3-3. Final Valley-Westside Alternatives from 2019 Feasibility Report



Source: Metro, 2019

During development of the 2019 Feasibility Report, Metro held three rounds of public open house meetings in 2018 and 2019 at multiple locations in the Sepulveda Corridor. The first round of meetings occurred after the development of the Purpose and Need and initial concepts to connect the Valley and Westside. The second round of meetings occurred after the initial concepts and preliminary comparative evaluation on key performance measures, which were based on the goals and objectives developed from the Purpose and Need, were refined. The third round of meetings presented the final alternatives developed in the 2019 Feasibility Report and a more detailed comparative evaluation of their performance. Metro hosted question and answer sessions during all public open houses and solicited written feedback during these meetings. Public comment and feedback were also solicited and received by email, postal mail, and the Project's telephone hotline throughout the duration of the 2019 Feasibility Report. Metro also met directly with public agencies with jurisdiction within the Project Study Area and received feedback regarding elements of the alternatives that could affect their jurisdictions.

3.4 Screening Process Results

The 2019 Feasibility Report 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 an HRT or monorail/rubber-tire transit, would serve the major travel markets in the Sepulveda Corridor and would provide travel times competitive with the automobile. While not recommending a particular alternative, the 2019 Feasibility Report also identified potential environmental and community impacts that could result from construction and operation of the Sepulveda Corridor and developed cost estimates for construction and operations.

3.5 Pre-Development Agreements

At its July 2019 meeting, the Metro Board approved a PDA approach to support the Project's development and approved the procurement of PDA contracts for the Project. The PDA process allows for early contractor involvement in project design through the development of independently proposed alternatives. In October 2019, Metro issued a request for proposals (Metro, 2019) for the performance of PDA work for the Project. Metro did not determine the technology, nor the specific configuration or alignment for the Project; therefore, firms were encouraged to propose innovative "transit solution concepts" (TSC) that best met the Project's challenges. All potential PDA contractors were required to propose concepts that met the Purpose and Need, goals, and objectives established in the 2019 Feasibility Report. The request for proposals stated that up to two PDA contracts may be awarded.

After an evaluation of each of the proposals using criteria related to the proposer's work approach and inclusion of disadvantaged business enterprises; the proposer's qualifications, experience, and capacity; and price, Metro staff recommended selection of the two highest scoring proposals: a proposal by LA SkyRail Express (LASRE) with a TSC operating along an entirely aerial alignment using MRT technology within the I-405 right-of-way, and a proposal by Sepulveda Transit Corridor Partners (STCP) with a TSC operating along a mixed underground-aerial alignment using driverless HRT technology. Both TSCs were proposed to connect with the Metro E Line Expo/Sepulveda Station at their southern termini. After receiving public comment, the Metro Board voted to approve PDA contracts with LASRE and STCP at their March 2021 meeting.

Between March and October 2021, LASRE and STCP developed "project concept alternatives" (PCAs) based on the TSCs included in their proposals that addressed public comment at the March Board meeting. LASRE developed three PCAs that provided several options for connections to the UCLA campus. STCP developed two PCAs with different vertical configurations along Sepulveda Boulevard in the Valley. In addition, Metro directed HTA Partners (HTA) to study an underground alternative that follows Van Nuys Boulevard in the Valley and connects to the Metro E Line Expo/Bundy Station in the Westside.

3.6 Alternatives Eliminated from Consideration

In November 2021, Metro issued a NOP of a DEIR pursuant to CEQA for the Project that identified six alternatives for evaluation (Metro, 2021c). In October 2023, LASRE requested the removal of Alternative 2 from further consideration in the environmental process. Alternative 2 is a monorail alternative that includes an automated people mover (APM) connection to UCLA. After internal review, Metro concurred with LASRE's request for removal of Alternative 2 based on staff's independent, environmental perspective that Alternative 2 is challenged to provide advantages over other alternatives. These challenges included establishing the APM's alignment through Westwood (aerial or underground), the

feasibility of an underground MSF site, and potential impacts to the Federal Building and the VA Cemetery. In July 2024, following community meetings held in May 2024 dedicated to gathering feedback on the monorail alternatives, Alternative 2 was removed from further consideration in the environmental process with the understanding that the remaining alternatives represent a sufficient range of alternatives for environmental review, inclusive of modes and routes (Metro, 2024).

3.7 Alternatives Included for Consideration

This section describes the Project Alternatives, consisting of MRT alternatives (Alternatives 1 and 3), driverless HRT alternatives (Alternatives 4 and 5), and a driver-operated HRT alternative (Alternative 6). The section also includes a Modified Alternative 5, which has been selected by the Metro Board of Directors as the LPA. The LPA is the Project alternative that was determined to best meet the Project's goals, objectives, and community needs based on technical analysis and public input. Identifying an LPA does not constitute project approval. Hence, all alternatives are assessed in the PEL Study.

3.7.1 Alternative 1: Monorail with Aerial Alignment in the I-405 Corridor and Electric Bus Connection to UCLA

Alternative 1 is an entirely aerial monorail alignment that would run along the I-405 corridor and would include eight aerial MRT stations and a new electric bus route from the Metro D Line Westwood/VA Hospital Station to the 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 ESFV LRT 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.

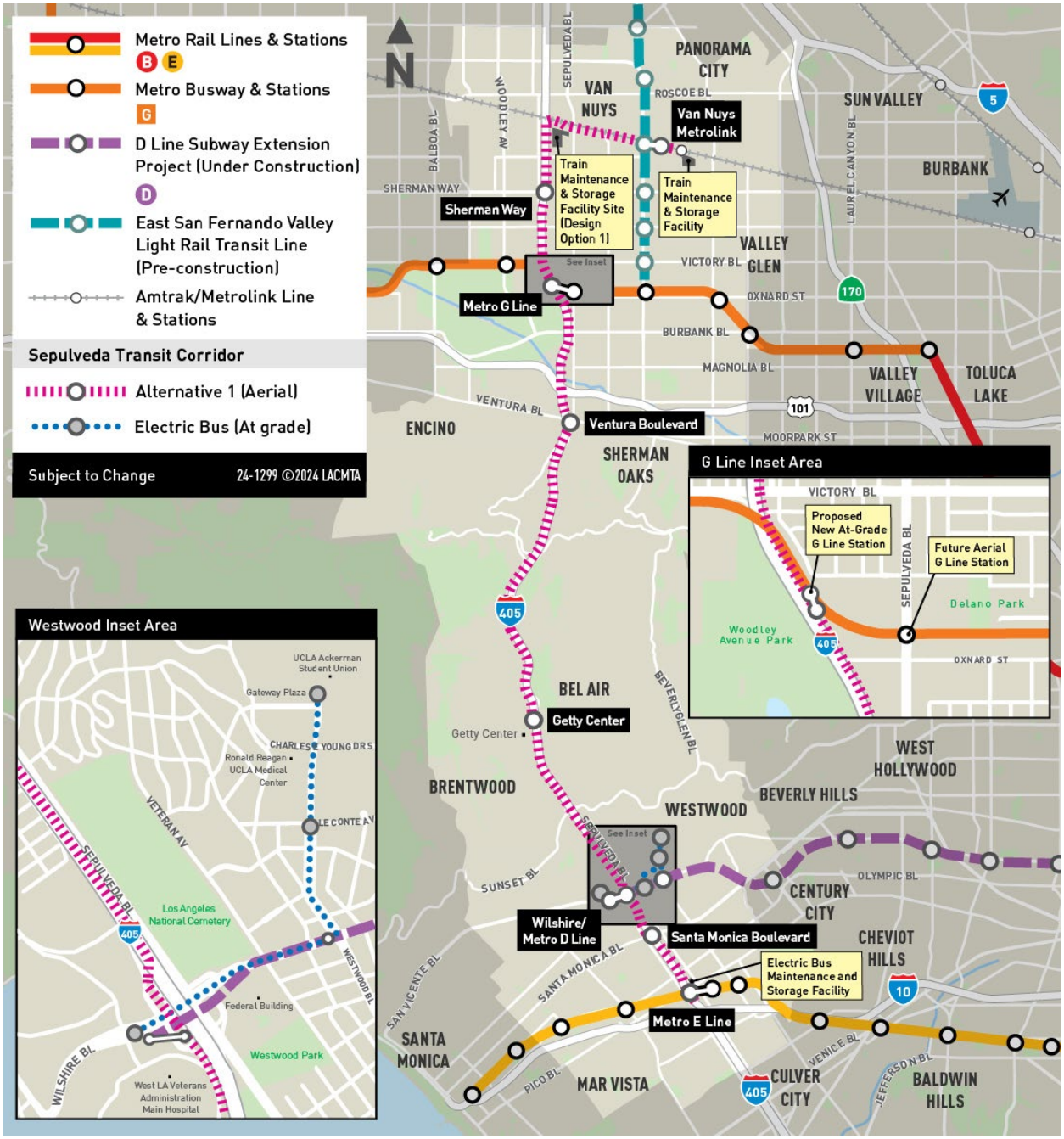
The eight aerial MRT stations and three bus stops would be as follows:

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)

Figure 3-4 shows the Alternative 1 alignment, stations, and the potential locations for the MSF.

Under the MSF Base Design for Alternative 1, the MSF would be located on LADWP property east of the Van Nuys Metrolink Station. This MSF site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. Under the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the LOSSAN rail corridor. The MSF site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. 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.

Figure 3-4. Alternative 1: Alignment



Source: LASRE, 2024; HTA, 2024

3.7.2 Alternative 3: Monorail with Aerial Alignment in the I-405 Corridor and Underground Alignment between the Getty Center and Wilshire Boulevard

Alternative 3 is an aerial monorail alignment that would run along the I-405 corridor and would include seven aerial 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 Metro E, Metro D, and Metro G Lines, the ESFV LRT 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.

Alternative 3 includes a tunnel alignment to provide a direct connection to the UCLA campus. The alignment would enter an underground tunnel south of the Federal Building parking lot, proceed to an underground UCLA Gateway Plaza Station, and then continue north under the UCLA campus until Sunset Boulevard where the tunnel would curve northwest for approximately 2 miles to rejoin the I-405 corridor.

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)

Figure 3-5 shows the Alternative 3 alignment, stations, and MSF.

The MSF Base Design and MSF Design Option 1 for Alternative 3 are identical to those for Alternative 1. The MSF Base Design would be located on LADWP property east of the Van Nuys Metrolink Station. The MSF site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. 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 site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles.

Figure 3-5. Alternative 3: Alignment



Source: LASRE, 2024; HTA, 2024

3.7.3 Alternative 4: Heavy Rail with Underground Alignment South of Ventura Boulevard and Aerial Alignment generally along Sepulveda Boulevard in the San Fernando Valley

Alternative 4 is an HRT system employing automated trains with a hybrid underground and aerial guideway track configuration that would include four underground stations and four aerial stations. The underground guideway for Alternative 4 would be constructed in a single-bore tunnel approximately 40 feet in diameter, with one track in each direction in the single tunnel. 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 and the Santa Monica Mountains to a tunnel portal south of Ventura Boulevard in the Valley. 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. 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 U.S. Highway 101 (US-101) and the Los Angeles River before continuing to the Metro G Line Sepulveda Station, immediately south of the Metro G Line Busway.

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 ESFV LRT 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)

Figure 3-6 shows the Alternative 4 alignment, stations, and MSF.

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.

Figure 3-6. Alternative 4: Alignment



Source: STCP, 2024; HTA, 2024

3.7.4 Alternative 5: Heavy Rail with Underground Alignment, including along Sepulveda Boulevard in the San Fernando Valley

Alternative 5 consists of an HRT system employing automated trains with a primarily underground guideway track configuration, including seven underground stations and one aerial station. The tunnel design for Alternative 5 would be the same as for Alternative 4. Alternative 5 follows the same horizontal alignment as Alternative 4 but with different vertical profiles and station configurations in the Valley. This alternative would include five transfers to high-frequency fixed guideway transit and commuter rail lines, including the Metro E, Metro D, and Metro G Lines, the ESFV LRT 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 miles 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)

Figure 3-7 shows the Alternative 5 alignment, stations, and MSF.

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.

Figure 3-7. Alternative 5: Alignment



Source: STCP, 2024; HTA, 2024

3.7.5 Alternative 6: Heavy Rail with Entirely Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley, and Southern Terminus Station on Bundy Drive

Alternative 6 is an HRT system employing driver-operated trains with an underground track configuration. The underground guideway for Alternative 6 would be constructed in twin-bore tunnels, each approximately 20 feet in diameter, with one track in each tunnel. 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 ESFV LRT Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.9 miles. Alternative 6 would be designed consistent with the typical HRT technology seen throughout the current Metro transit system.

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)

Figure 3-8 shows the Alternative 6 alignment, stations, and MSF.

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.

Figure 3-8. Alternative 6: Alignment



Source: HTA, 2024

3.7.6 Modified Alternative 5: Heavy Rail with Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station

Modified Alternative 5 is an entirely underground HRT alignment that incorporates key elements of Alternative 5, including automated vehicles in a single-bore tunnel and a terminus at the E Line Expo/Sepulveda Station. On the Westside, the alignment would be identical to Alternative 5 and provide connections to the Metro E and Metro D Lines. In the Valley, the alignment would follow a similar path as Alternative 6 to continue underneath Van Nuys Boulevard instead of Sepulveda Boulevard, providing connections to the Metro G Line, the ESFV LRT Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.2 miles, which may be developed in phases.

The seven underground HRT stations would be as follows:

1. STC Expo/Sepulveda Station (underground)
2. STC Santa Monica Bl/Sepulveda Station (underground)
3. STC Wilshire/Westwood Station (underground)
4. STC UCLA Station (underground)
5. STC Ventura/Van Nuys Station (underground)
6. STC G Line/Van Nuys Station (underground)
7. STC Van Nuys Metrolink Station (underground)

Figure 3-9 shows the conceptual alignment and station locations for Modified Alternative 5. An MSF location has not yet been identified for this alternative.

Figure 3-9. Modified Alternative 5: Conceptual Alignment



Source: HTA, 2026

4 ENVIRONMENTAL SCAN

4.1 Process Followed to Complete the Environmental Scan

The majority of the environmental scan was informed by the existing setting and impact assessments completed for the CEQA DEIR (Metro, 2025). This information was supplemented with preliminary analyses specific to NEPA and federal regulations (e.g., Section 106 and Section 4(f)).

Potential effects were assessed using designs and related information provided by LASRE (Alternatives 1 and 3), STCP (Alternatives 4 and 5), and HTA (Alternative 6). Metro has not yet completed detailed CEQA resource assessments for Modified Alternative 5. For this environmental scan, Alternative 5 information was used for the part of the Modified Alternative 5 alignment similar to Alternative 5, and Alternative 6 information was used for the part of the Modified Alternative 5 alignment similar to Alternative 6. For regional and/or corridor analyses (e.g., VMT), Modified Alternative 5 is described as potentially having effects similar to both Alternative 5 and Alternative 6. Since Modified Alternative 5 will utilize different train and tunnel technologies in the Valley than Alternative 6, some of the effects associated with Alternative 6 may be different than Modified Alternative 5 effects. Future detailed NEPA and CEQA analysis of Modified Alternative 5 will evaluate whether any of the effects noted in this study may be reduced.

Demographic data was used to inform multiple assessments, including transportation and community effects. This data was obtained from the U.S. Census Bureau and/or the Southern California Association of Governments (SCAG) Connect SoCal, 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG, 2024). SCAG is the federally designated metropolitan planning organization for Los Angeles County. The socio-economic estimates and projections used for RTP/SCS are also used in the SCAG Federal Transportation Improvement Program (FTIP). The SCAG regional growth forecast represents the most likely growth scenario for the southern California region in the future and takes into consideration recent and past trends, key technical assumptions, regional growth policies, and local plans and policies.

The anticipated ridership and associated changes in regional VMT are key components of the environmental scan. VMT forecasts were extracted from Metro's Transportation Analysis Model 2018 (CBM18B). CBM18B uses demographic data and projections, and assumptions regarding regional socioeconomic and transportation network characteristics to develop trip estimates occurring between different locations in the region, the market share of each transportation mode, and the routing of these trips over the highway and transit networks. The six-county SCAG region (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial Counties) was used as the basis for the geographic evaluation of VMT.

4.2 Resource Assessments

This section addresses the potential for the Project to affect environmental and community resources assessed in accordance with NEPA and relevant federal regulations (e.g., Section 4(f) and Section 106). The information is summarized from the Sepulveda Transit Corridor Project Environmental Constraints Technical Report (Metro, 2025a) and the Sepulveda Transit Corridor Project Affected Environment Technical Report (Metro, 2025b). The analyses are consistent with the assessments within the CEQA DEIR (Metro, 2025), where applicable. These technical reports have not been updated to reflect Modified Alternative 5, as these analyses will be revised as part of the upcoming further NEPA and CEQA analysis. Table 4-1 lists a summary of potential impacts for the environmental and community resources discussed below. The preliminary impact assessments associated with Modified Alternative 5 will be confirmed pending the upcoming design process.

This section also includes avoidance and minimization measures that may be included in the NEPA documentation to lessen environmental and community effects. These measures are listed together at the end of the section in Table 4-26.

Table 4-1. Summary of Potential Impacts

Environmental Resources	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Modified Alternative 5
Transportation and Traffic						
Regional Vehicle Miles Traveled	Ops: BEN Con: NI	Ops: BEN Con: NI	Ops: BEN Con: NI	Ops: BEN Con: NI	Ops: BEN Con: NI	Ops: BEN Con: NI
Transit Facilities	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Parking Facilities	NI	NI	NI	NI	NI	NI
Roadway Facilities	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Bicycle and Pedestrian Facilities	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Air Quality						
Transportation Conformity	NI	NI	NI	NI	NI	NI
Criteria Pollutant and Ozone Precursor Emissions	Ops: BEN Con: PI/MM	Ops: BEN Con: PI/MM	Ops: BEN Con: PI/MM	Ops: BEN Con: PI/MM	Ops: BEN Con: PI/MM	Ops: BEN Con: PI/MM
Localized Exposure to Pollutant Concentrations	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Odors	NI	NI	NI	NI	NI	NI
Noise and Vibration						
Noise	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Vibration	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Ecosystems and Biological Resources						
Wildlife and Plant Species	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
U.S. Fish and Wildlife Service Critical Habitat	NI	NI	NI	NI	NI	NI
Wetlands	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Tree Removal	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Water Resources						
Water Quality	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Drainage	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Floodplains	NI	NI	NI	NI	NI	NI
Groundwater	NI	NI	NI	NI	NI	NI
Visual Resources						
Scenic Vistas	NI	NI	NI	NI	NI	NI
Scenic Resources	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM

Environmental Resources	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Modified Alternative 5
Visual Quality and Character	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Light and Glare	NI	NI	NI	NI	NI	NI
Land Use						
Consistency with Plans	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI
Parks and Recreational Facilities						
Facility Degradation	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Community Impacts						
Community Division	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	PI/MM	PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Cultural Resources and Tribal Cultural Resources						
Built Historic Resources	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Archaeological Resources	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Human Remains	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Tribal Cultural Resources	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Geotechnical Considerations						
Seismicity	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Liquefaction	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI	Ops: PI/MM Con: NI
Soil Stability	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Hazardous Materials						
Hazardous Materials Transport, Use, or Disposal	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Hazardous Sites	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Methane Zones	NI	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
High Pressure Pipelines	NI	NI	NI	NI	NI	NI

Environmental Resources	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Modified Alternative 5
Airport Hazards	NI	NI	NI	NI	NI	NI
Safety and Security						
Fire Protection	NI	NI	NI	NI	NI	NI
Police Protection	NI	NI	NI	NI	NI	NI
Emergency Evacuations	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Wildfire Risk	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM	Ops: NI Con: PI/MM
Real Estate and Acquisitions						
Full or Partial Acquisitions	NI	NI	NI	NI	NI	NI
Economic and Fiscal Considerations						
Operational Output, Earnings, and Employment	BEN	BEN	BEN	BEN	BEN	BEN
Fiscal Effects	BEN	BEN	BEN	BEN	BEN	BEN
Construction Output, Earnings, and Employment	BEN	BEN	BEN	BEN	BEN	BEN
Growth Inducing Effects						
Regional Growth	NI	NI	NI	NI	NI	NI
Cumulative and Indirect Effects						
Cumulative and Indirect Effects	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM	PI/MM
Section 4(f) Effects						
Historic Sites	DU	DU	DU	DU	DU	DU
Public Parks and Recreational Areas	DMI	DMI	NI	NI	NI	NI

Source: HTA, 2024

BEN = Beneficial Effect (i.e., positive consequence)
Con = Construction
DMI = *de minimis* impact (i.e., negligible Section 4(f) property impacts)
DU = Direct Use (i.e., impacted Section 4(f) properties)
NI = No Impact
Ops = Operations
PI/MM = Potentially Impactful/Requires Mitigation, Avoidance, or Minimization Measures

4.2.1 Transportation and Traffic

The following analysis addresses regional VMT, transit facilities, roadway facilities, pedestrian/bicycle facilities, and emergency access. Refer to the Sepulveda Transit Corridor Project Transportation Technical Report and Sepulveda Transit Corridor Project Transportation Assessment Report (Non-CEQA Topics) for information related to existing conditions and the applicable regulatory environment (Metro, 2025c, 2025d).

4.2.1.1 Regional Vehicle Miles Traveled

VMT forecasts were extracted from Metro's CBM18B model. The six-county SCAG region (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial Counties) were used as the basis for the geographic evaluation of VMT. The model uses demographic data and projections and assumptions regarding regional socioeconomic and transportation network characteristics to develop trip estimates occurring between different locations in the region, the market share of each transportation mode, and the routing of these trips over the highway and transit networks. To calculate the 2045 without Project VMT, the length of each roadway segment in the Project Study Area was multiplied by the forecast daily volume on that segment. VMT reduction for each Project alternative was calculated by multiplying the number of trips by the length of each trip.

Operational Effects

Table 4-2 lists daily VMT forecasts for Alternatives 1 through 6 in the 2045 Horizon Year. In addition, it is anticipated that Modified Alternative 5 would result in a similar total VMT and associated change from 2045 without Project as Alternatives 5 and 6. Under each Project alternative, reductions in VMT are forecast relative to the 2045 without Project condition. The reduction of passenger vehicles on the roadway network is an environmental benefit associated with the Project. Mitigation measures under NEPA are ways to reduce or avoid the environmental impact of a project. It is not anticipated that mitigation measures will be required to reduce or avoid potential adverse effects.

Table 4-2. Changes in Daily Vehicle Miles Traveled by Alternative

Project Alternative	Total Vehicle Miles Traveled	Project Change from 2045 without Project
Existing Conditions (2019 Base Year)	456,869,300	Not Applicable
2045 without Project (2045 Horizon Year)	568,557,200	Not Applicable
Alternative 1 (2045 Horizon Year)	568,215,400	-341,800
Alternative 3 (2045 Horizon Year)	568,106,100	-451,100
Alternative 4 (2045 Horizon Year)	567,789,400	-767,800
Alternative 5 (2045 Horizon Year)	567,782,100	-775,100
Alternative 6 (2045 Horizon Year)	567,861,800	-695,400

Source: Metro, 2025c

Construction Effects

Construction of the Project alternatives would temporarily generate similar amount of additional VMT related to work activities, construction labor trips, and the transport of excavated materials, construction equipment, and supplies. This additional VMT would terminate upon completion of construction and would not be in effect during operations, when there would be an overall reduction in VMT compared to the 2045 without Project condition. It is not anticipated that mitigation measures will be required to reduce or avoid potential adverse effects.

4.2.1.2 Transit Facilities

The Project Study Area is served by several local and regional transit agencies. These agencies include Metro, LADOT, Amtrak, Metrolink commuter rail, Santa Monica Big Blue Bus, Culver CityBus, Santa Clarita Transit, Antelope Valley Transit Authority, Long Beach Transit, and UCLA BruinBus. Transit service types include rapid bus, express/commuter bus, commuter rail, LRT, bus rapid transit, shuttles and circulators, and local bus lines. The Project Study Area is served by Amtrak's Pacific Surfliner and Coast Starlight services, the Metrolink Ventura County Line, the Metro E and Metro G Lines, and 55 rapid, express, and local bus lines.

Operational Effects

The 2045 without Project condition is forecasted to include 1,716,293 regional daily transit trips in the Horizon Year. Implementation of Alternatives 1, 3, 4, 5, or 6 would result in increases in regional transit trips of between 20,051 and 42,043 daily trips in the 2045 Horizon Year. It is anticipated that Modified Alternative 5 would result in an increase near or above the high end of this range. Total daily bus trips would decrease with Project implementation, although the ridership on some individual bus lines would increase primarily within the Project Study Area. It is anticipated that the operators of these bus routes would be able to adjust service levels to accommodate additional ridership.

The capacities of heavy rail (Metro D Line) and light rail modes (Metro E Line and East San Fernando Valley) are approximately 12,000 and 4,800 passengers per hour, respectively, based on design headways and vehicle capacity. Capacity on the Metrolink Ventura County Line is approximately 2,240 passengers per hour, assuming 8-car trains at 30-minute headways. Metro G Line capacity is approximately 960 passengers per hour at 5-minute headways. While all Project alternatives would increase peak loads on the Metro E Line and the ESFV LRT Line, peak loads would remain under capacity. For the Metro G Line, peak loads would exceed capacity similar to the No Project Alternative. It is expected that Metro would accommodate the additional demand on the Metro G Line by implementing operational improvements and would also update its short- and long-range transit plans and increase service on parallel routes as needed, consistent with its usual service planning processes. An analysis of passenger queues at fare gates was conducted to evaluate the safety of transferring passengers. Under all Project alternatives, the volume of transfer passengers from the Project Van Nuys Metrolink Station to the ESFV LRT Van Nuys Metrolink Station is forecast to be high enough to generate queues at the ESFV station fare gates. These queues would not safely fit within the ESFV LRT Van Nuys Metrolink Station, which would be located in the median of Van Nuys Boulevard. Queues may therefore extend into the street, resulting in a risk to passenger safety. Implementation of Mitigation Measure (MM) TRA-1 would minimize potential impacts associated with all Project alternatives by removing fare gates at all entrances to the ESFV LRT Van Nuys Metrolink Station. Implementation of MM TRA-10 would minimize potential impacts associated with Alternative 6 by requiring the redesign of the west entrance of the existing Metro E Line Expo/Bundy Station to allow transfers from the Project station to the Metro E Line within a single fare-paid zone.

Construction Effects

Construction of the Project alternatives would require temporary closures of intersections, lanes, or sidewalks during construction, which may result in disruptions to bus service. Temporary re-routing and relocation of bus stops may be needed for the following transit lines:

- Metro 4, 155, 162, 169, 233, 234, 240, and 761 (all Project alternatives); 162 (Alternatives 1, 3, 4, and 5); 602 (Alternatives 1, 4, 5, 6, and likely Modified Alternative 5); 20 (Alternatives 5, 6, and likely Modified Alternative 5); and 158 (Alternative 6 and likely Modified Alternative 5)

- Antelope Valley Transit Authority 786 (Alternative 1)
- Santa Monica Big Blue Bus 1 (all Project alternatives); 7/7R and 17 (Alternatives 1, 3, 4, 5, and likely Modified Alternative 5); 2, R12, and 18 (Alternatives 1, 4, 5, 6, and likely Modified Alternative 5); and 5, R10, 14, and 14 (Alternative 6)
- Culver CityBus 6/R6 (all Project alternatives)
- LADOT 549 and DASH Panorama City/Van Nuys (all Project alternatives) and 431 and 534 (Alternatives 4, 5, 6, and likely Modified Alternative 5)
- Long Beach Transit 405 (Alternative 3)
- Amtrak Thruway (all Project alternatives)
- BruinBus U1, U2, U3, and U5 (all Project alternatives)

In addition to impacts to on-street bus service, construction at existing fixed guideway stations would temporarily impact rail and bus rapid transit service operations. At the existing Metro E Line Expo/Sepulveda Station, the construction of tail tracks and a pedestrian bridge connecting to the Project station would result in temporary nighttime and weekend service impacts on the Metro E Line. The construction of a pedestrian bridge connecting the Metro G Line Project station with new Metro G Line platforms would result in temporary nighttime and weekend service impacts to the Metro G Line. In addition, construction of the guideway would require temporary nighttime Metro G Line Busway closures. Temporary impacts to Amtrak and Metrolink rail operations and passenger experience at the Van Nuys Metrolink/Amtrak Station would also occur as a result of the construction of a new pedestrian bridge crossing the LOSSAN rail corridor at the station. Construction activities would occur within the vicinity of the ESFV LRT Van Nuys Metrolink Station for the construction of the aerial alignment and the Van Nuys Metrolink Station, which may temporarily affect passenger experience; however, disruptions to rail service or MSF operations are not anticipated.

Specific to Alternative 1, construction of a new entrance at the east end of the Metro D Line Westwood/VA Hospital Station and a new concourse over the Metro D Line tracks and platform within the station would result in temporary impacts to Metro D Line rail operations and passenger experience. Metro D Line trains would operate between Union Station and the Metro D Line Century City Station during this period of construction, as there would be no crossovers on the Metro D Line that would allow for service to operate past that station.

Specific to Alternatives 4, 5, 6, and likely Modified Alternative 5, construction of a mezzanine extension over the Metro D Line tracks and platform at the Metro D Line Westwood/UCLA Station would result in temporary impacts to Metro D Line rail operations and passenger experience. Metro D Line trains would operate between Union Station and the Metro D Line Century City Station while temporary falsework is constructed over the Metro D Line tracks. The Metro D Line Westwood/UCLA Station would then be temporarily closed to passengers during the construction of the mezzanine extension. However, Metro D Line trains would be able to pass through the station to the Westwood/VA Hospital Station.

Implementation of MM TRA-4 would minimize potential impacts associated with all Project alternatives by requiring a Transportation Management Plan (TMP) during construction activities. Implementation of MM TRA-5 would minimize potential impacts associated with all Project alternatives by requiring temporary bus service where construction results in the interruption of Metro rail operations.

4.2.1.3 Parking Facilities

A parking analysis was performed to assess potential effects to on- and off-street parking. The analysis also assessed potential spillover transit parking effects to on-street parking inventory on adjacent city streets near proposed transit stations. The analysis considered 0.25 miles around each station in the Project Study Area and within the Project footprint.

Operational Effects

Alternatives 1 and 3 would remove 104 on-street parking spaces on Cotner Avenue, Beloit Avenue, and Raymer Street and 47 off-street parking spaces near various stations. Alternative 4 would remove 773 on-street parking spaces affecting Del Gado Drive, Sepulveda Boulevard, and Raymer Street and 1,134 off-street parking spaces near various stations. Alternative 5 would remove 121 on-street parking spaces on Raymer Street and 1,134 off-street parking spaces near various stations. Alternative 6 would remove 16 on-street parking spaces on Santa Monica Boulevard, Wilshire Boulevard, and Oxnard Street and 75 off-street parking spaces near the Ventura Boulevard/Van Nuys Boulevard Station. It is not anticipated that Modified Alternative 5 would remove on-street parking on Raymer Street, but may remove off-street parking spaces near its stations. The potential for parking loss will be determined during the upcoming design process.

The ridership forecasts conducted for the Project Study Area constrain the parking demand to the available parking supply provided by Metro. The ridership model results do not indicate spillover parking directly due to being constrained to the parking supply, and therefore there may be more demand for station parking than provided. However, the ridership model does not account for other parking in the station areas that is not owned by Metro. In locations where additional parking exists within the station areas, it is possible that transit patrons may attempt to use these spaces for parking, which would be considered spillover parking. The local jurisdiction should provide parking restrictions for on-street public parking in the areas surrounding all transit stations to avoid spillover parking.

For all Project alternatives, there are existing park & ride facilities at the Metro E Line Expo/Bundy Station, Metro E Line Expo/Sepulveda Station, Metro G Line Sepulveda Station, and Metro G Line Van Nuys Station. For Alternatives 4 and 5, new parking facilities would be provided at the proposed Sherman Way and Ventura Boulevard/Sepulveda Boulevard Stations. Alternative 6 would add a new park & ride lot at the proposed Ventura Boulevard/Van Nuys Boulevard Station, and the Metro E Line Station would be expanded to add additional spaces. Modified Alternative 5 may add a new park & ride lot at the proposed STC Ventura/Van Nuys Station, depending on design constraints.

It is recommended that Metro coordinate with the City of Los Angeles to implement parking restrictions within the neighborhoods surrounding the stations to avoid spillover parking by transit patrons. With enforcement of restrictions, spillover parking effects would not be expected, and the parking demand from Alternative 6 riders would not appreciably shift area-wide parking patterns.

Construction Effects

During construction of all Project alternatives, temporary parking restrictions would be implemented near some station locations, sections of aerial guideway, and construction staging sites.

4.2.1.4 Roadway Facilities

The roadway network within the Project Study Area includes three freeways (I-405, I-10, and US-101) that provide regional access throughout Los Angeles County and Southern California, as well as multiple arterials, local roads, and intersections.

Operational Effects

Roadway Modifications

Alternatives 1 and 3 would include various changes to roadway facilities. Roadway segments that would be removed are not included in the City of Los Angeles Mobility Plan 2035 - An Element of the General Plan (also referred to as the Mobility Plan 2035) circulation system since they are classified as collector or local streets (DCP, 2016). Therefore, modifications to these roadways would not conflict with Mobility Plan 2035. The modifications to I-405 and adjacent roadways would not preclude the construction of Metro's I-405 Sepulveda Pass ExpressLanes project (ExpressLanes project), which is also included in the Measure M Los Angeles County Traffic Improvement Plan, Attachment A, Measure M Expenditure Plan (Metro, 2016). Metro is currently preparing a DEIR/Environmental Impact Statement (EIS) for the ExpressLanes project with an anticipated release in 2025. Any non-standard features proposed by Alternatives 1 and 3 within Department of Transportation right-of-way (ROW), such as reduced lane or shoulder widths, would be approved in accordance with the California Department of Transportation's (Caltrans) Project Development Procedures Manual (Caltrans, 2024a).

Alternatives 1 and 3 propose a new passenger pick-up/drop-off area located on the east side of the Metro E Line Expo/Sepulveda Station. This area would be accessed via a new driveway off Pico Boulevard. The proximity of the driveway to the intersection of Pico Boulevard and Cotner Avenue would not allow for a westbound left-turn lane into the driveway, creating a risk of rear-end collisions if left-turning vehicles are queueing in the westbound through lane. Implementation of MM TRA-2 would minimize potential impacts by limiting vehicular access to the pick-up/drop-off area at the Metro E Line Expo/Sepulveda Station to right-in/right-out only traffic. Implementation of MM TRA-3 would minimize potential impacts associated with Alternatives 1 and 3 by requiring advance warning signs at the pick-up/drop-off location on Sherman Way to facilitate traffic flow and ensure pedestrian safety. Construction on Dowlen Drive near the VA and UCLA Medical Centers may result in inadequate access for ambulances. Implementation of MM TRA-6 would require coordination to ensure adequate emergency access to the VA and UCLA Medical Centers.

Alternative 4 would change roadway facilities, including adding a raised median along Sepulveda Boulevard between Ventura Boulevard and Raymer Street, which would prohibit left-turn movements at driveways between intersections and at La Maida Street, Valleyheart Drive South, Hesby Street, Hartsook Street, Archwood Street, Hart Street, Leadwell Street, and Covello Street. These roadways are not included in the Mobility Plan 2035 (DCP, 2016) circulation system since they are classified as collector or local streets. Therefore, the operation of Alternative 4 would not conflict with a program, plan, ordinance, or policy related to roadways. Implementation of MM TRA-9 would minimize potential impacts by requiring coordination with emergency service providers to design median breaks, mountable curbs, or another design solution that would allow emergency service providers to make left-turn movements at each intersection along Sepulveda Boulevard. Alternative 4 would also narrow Raymer Street from Kester Avenue to Keswick Street.

Alternative 5 would include various modifications to roadway facilities surrounding project stations, including reconstruction of portions of Bentley Avenue, Wilshire Boulevard, Gayley Avenue, Lindbrook Drive, and Westwood Plaza on the Westside of Los Angeles (Westside), and Saugus Avenue, Dickens Street, Sepulveda Boulevard, G Line Busway, Raymer Street, and Van Nuys Boulevard in the San Fernando Valley (Valley). Wilshire Boulevard, Sepulveda Boulevard, and Van Nuys Boulevard are identified in the Mobility Plan 2035 circulation system; however, modifications to these roadways would not be inconsistent with Mobility Plan 2035.

Alternative 6 would not require changes to roadway facilities other than a new access road east of Stone Canyon Reservoir in the Santa Monica Mountains. This roadway is not included in the Mobility Plan 2035 circulation system since it is classified as an access road.

Intersection Evaluation

LADOT Transportation Assessment Guidelines were applied to identify potential corrective actions for intersections forecast to have unacceptable vehicular level of service or extended queues under the Alternatives 1, 3, 4, 5, and 6 (LADOT, 2022). The following intersections were identified for corrective actions for the noted Project alternatives. Intersections that could possibly require corrective actions under Modified Alternative 5 are also noted.

- Haskell Avenue/Sherman Way – Alternatives 1 and 3
- Haskell Avenue/Victory Boulevard – Alternatives 1, 3, 4, and 5
- Sepulveda Boulevard/Ventura Boulevard – Alternatives 1 and 3
- Sepulveda Boulevard/I-405 Southbound Off-Ramp – Alternatives 1 and 3
- Sunset Boulevard/Church Lane – Alternative 1
- Sawtelle Boulevard/Pico Boulevard – Alternatives 1 and 3
- Sepulveda Boulevard/Oxnard Street – Alternative 3
- Wilshire Boulevard/Sepulveda Boulevard – Alternative 3
- Firmament Avenue/I-405 Northbound Ramps and Sherman Way – Alternatives 4 and 5
- Sepulveda Boulevard/Vanowen Street – Alternative 4 and 5
- Sepulveda Boulevard/Victory Boulevard – Alternatives 4 and 5
- Sepulveda Boulevard/Metro G Line Busway and Park & Ride Road – Alternatives 4 and 5
- Sepulveda Boulevard/Oxnard Street – Alternatives 4 and 5
- Sherman Oaks Avenue/I-405 Southbound Ramps and Ventura Boulevard – Alternative 4
- Sepulveda Boulevard/Pico Boulevard – Alternatives 4 and 5, and likely Modified Alternative 5
- Sepulveda Boulevard/Sherman Way – Alternative 5
- Van Nuys Boulevard/Saticoy Street – Alternative 6 and likely Modified Alternative 5
- Van Nuys Boulevard/Burbank Boulevard – Alternative 6 and likely Modified Alternative 5
- Van Nuys Boulevard/US-101 Southbound Off-Ramp – Alternative 6 and likely Modified Alternative 5

Construction Effects

Construction vehicles would primarily use major arterials and freeways to comply with the Mobility Plan 2035 (DCP, 2016) Policy 1.8 that "truck movement should be limited to the arterial street network as much as possible since these streets have the lanes and wider turning radii to accommodate these heavy large vehicles." Under Alternatives 1 and 3, guideway construction along I-405 would require limited duration off-peak median lane closures. Nighttime lane closures may be necessary to accommodate the movement of construction equipment and transportation of guideway components into the median work areas. Temporary lane and ramp closures on I-405 would be coordinated and permitted through Caltrans in coordination with LADOT, Los Angeles County, and the California Highway Patrol (CHP). Guideway construction and traction power substation (TPSS) transformer installation affecting local streets on the Westside, along Raymer Street and the I-405 northbound on-ramp at Burbank Boulevard in the Valley would be coordinated and permitted through Caltrans and LADOT's Citywide Temporary Traffic Control Division. Traffic control measures necessary to complete construction of Alternative 1 would be temporary in nature. In accordance with Metro standard practice, implementation of MM TRA-4 would further reduce temporary impacts by providing a TMP that specifies measures to limit disruption during construction (such as establishing detour routes,

informing the traveling public, and coordinating with local business owners to maintain customer and delivery access).

Specific to Alternative 4, aerial guideway, foundation and column construction would require the establishment of temporary longitudinal work zones along Sepulveda Boulevard in the Valley via the use of temporary lateral lane shifts, supplemented with additional short-term lane closures to allow construction of multiple foundations in one work zone. At aerial stations — including Ventura Boulevard, Sherman Way, Metro G Line, and Van Nuys Metrolink — construction would be executed in stages to allow for maintenance of traffic on Sepulveda Boulevard or Van Nuys Boulevard. Full road closures at aerial stations would be utilized on select weekend and night-shift operations to erect portions of the structure, including outrigger bents and superstructure elements. The TMP would minimize temporary impacts.

Specific to Alternatives 4, 5, and likely Modified Alternative 5, underground station construction at Santa Monica Boulevard and Metro D Line Stations would result in temporary lane closures to through traffic on Gayley Avenue for the duration of station box excavation and other construction activities. Deliveries to businesses along Santa Monica Boulevard near South Bentley Avenue would be affected during construction if access is unable to be maintained during construction. The TMP would minimize temporary impacts.

Specific to Alternatives 4 and 5, truck movements have the potential to temporarily impact pick-up and drop-off at the nearby Ivy Bound Sherman Oaks Charter School, which is expected to remain open during Project construction. Implementation of MM TRA-8 would minimize potential impacts by prohibiting trucks or other construction vehicles from operating or parking on Morrison Street during school pick-up and drop-off times.

Alternative 6 would require closures and detours of roadways, lanes, and I-10 freeway ramps during construction. The road closures and detours would last between 18 and 24 months, with I-10 ramp detours at Bundy Drive lasting for the duration of Alternative 6 construction. The TMP would minimize temporary impacts.

4.2.1.5 Bicycle and Pedestrian Facilities

Pedestrian facilities vary across the Project Study Area, depending on the density, mix of land uses, and roadway facilities. In the Valley and on the Westside, sidewalks are well-connected and follow the grid pattern of roadway facilities. In the Bel Air and Brentwood neighborhoods adjacent to the Sepulveda Pass, sidewalks are sparse and disconnected given roadway slopes and topography. Existing bicycle facilities in the Project Study Area consist of a network of approximately 123 miles of bicycle facilities. Planned bicycle facilities in the Project Study Area include 180 miles of additional bicycle facilities.

Operational Effects

The Project alternatives would enhance bicycle and pedestrian access in the immediate station areas, such as bike parking and connections to existing nearby bike facilities, for improved bicycle-to-transit connections. At some locations along the alignments, sidewalks would be widened or replaced to accommodate Project components. Design plans would ensure that adequate sidewalk widths are maintained at station locations and along the aerial alignment. Additional enhancements, including crosswalk and Americans with Disabilities Act of 1990 (ADA)-compliant sidewalk improvements, would further improve pedestrian circulation and non-motorized access to transit stations.

A majority of the Alternative 1 and 3 alignments would be located within or adjacent to the I-405 corridor and the LOSSAN rail corridor, which would reduce the need for modifications to existing City of Los Angeles roadways where active transportation facilities exist or are planned. Along the Alternative 1 and 3 alignments, pedestrian and bicycle circulation would be maintained where the aerial guideway would cross roadways that serve as I-405 or LOSSAN rail corridor underpasses. The height of the aerial guideway would provide sufficient vertical clearance so that pedestrian and bicycle movement would not be inhibited underneath the structure. Additionally, the supporting columns would have sufficient horizontal span (distance between column to column) so that columns would generally be located outside of the sidewalk. Pedestrian mobility at signalized intersections would be maintained via crosswalks.

For Alternatives 1 and 3, columns supporting aerial stations would be constructed outside of the existing roadway and sidewalks in the Valley, which would not preclude any planned bicycle or pedestrian facilities nor alter any existing bicycle facilities at station areas. However, the Ventura Boulevard Station would reconfigure Dickens Street from a through street into a kiss & ride facility. The reconfiguration of Dickens Street would eliminate an existing through street that connects Sepulveda Boulevard to Ventura Boulevard and would alter existing pedestrian circulation. However, due to station area improvements, these modifications would ultimately benefit pedestrian and cyclist circulation.

Alternative 1 would install supporting columns along Raymer Street and necessitate roadway reconfigurations for the aerial guideway. Columns would be placed in proposed curb extensions within the westbound parking lane and within an extended sidewalk on the southern side of Raymer Street. The Mobility Plan 2035 identifies Raymer Street as a Class III bicycle route (DCP, 2016). Roadway improvements under Alternative 1 along Raymer Street would maintain this Class III bicycle route and would not conflict with Mobility Plan 2035. The sidewalk on the southern side of Raymer Street, between Kester Avenue and Ventura Boulevard, would be extended to accommodate the aerial guideway columns. In compliance with minimum sidewalk width requirements under the ADA, City of Los Angeles standards, and California Building Code (CBC) 11B-403.5.1, the supporting aerial guideway columns would be located in areas with adequate sidewalk width.

Because Alternative 4 would approach the Sherman Oaks community from the Santa Monica Mountains, the guideway would transition from an underground configuration to an aerial viaduct in the Valley. The height of the aerial guideway would provide sufficient vertical clearance so that pedestrian and bicycle movement would not be inhibited underneath the structure. However, introduction of the aerial viaduct would require physical changes to existing roadways and sidewalks along Sepulveda Boulevard between Valley Vista Boulevard and Raymer Street. To reduce potential impacts related to vehicle traffic at intersections, two supporting straddle-bent columns would be placed within or behind the sidewalk to support the aerial viaduct and aerial stations. In compliance with minimum sidewalk width requirements under the ADA, City of Los Angeles standards, and CBC 11B-403.5.1, supporting straddle-bent columns would be located in areas with adequate sidewalk width.

For Alternatives 4 and 5, the aerial viaducts would be in physical conflict with an existing pedestrian bridge over the rail corridor and would require the bridge's removal. Alternatives 4 and 5 would remove the Willis Avenue Pedestrian Bridge, which is a pedestrian facility that provides a connection between Willis Avenue and Raymer Street west of Van Nuys Boulevard. Implementation of MM TRA-7 would minimize potential impacts by requiring the replacement of the Willis Avenue Pedestrian Bridge with another pedestrian bridge or pedestrian undercrossing.

Construction Effects

Aboveground construction activities for each of the Project alternatives are likely to inhibit bicycle and pedestrian circulation. Temporary sidewalk closures would be required for a variety of construction activities associated with each alternative (e.g., sidewalk improvements, staging activities, street widenings, cut-and-cover activities, and station construction). In addition, temporary lane or road closures would affect existing and planned bicycle facilities. For Alternatives 1 and 3, bicycle through-access underneath existing underpasses and within areas of local street improvements or construction staging where existing bike facilities are present would require detours for the affected bike facilities, thereby inhibiting the flow of active transportation users. Additionally, roadway reconfiguration locations would require temporary closure of existing bicycle facilities to complete construction. As a result, affected bicycle facilities would be temporarily decommissioned and bicycle movements would require temporary detours. For Alternative 3 alignment approaches, the proposed Wilshire Boulevard/Metro D Line Station, sidewalks, and bicycle movements surrounding the Federal Building would require detours during the construction of the aerial guideway and proposed station. Furthermore, bicycle facility detours would be anticipated at the proposed Wilshire Boulevard/Metro D Line and UCLA Gateway Plaza Stations to support cut-and-cover cast-in-drilled-hole (CIDH) installation and decking. Street detours due to construction of stations and aerial guideways would require alternate routes to be identified for bicycle and pedestrian circulation to ensure safety. Implementation of MM TRA-4 would minimize potential impacts associated with all Project alternatives by requiring a TMP during construction activities that specifies measures to limit disruption during construction (such as establishing detour routes, informing the traveling public, and coordinating with local business owners to maintain customer and delivery access).

4.2.2 Air Quality

This summary addresses Transportation Conformity, criteria pollutant and ozone precursor emissions, localized exposure to pollutant concentrations, and odors. Refer to the Sepulveda Transit Corridor Project Air Quality Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025e). This report may also be referred to for additional details related to methodologies used to quantify emissions and identifying potential effects from air pollutants.

The federal CAA is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the U.S. EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare based on the latest science and requires states to adopt enforceable plans to achieve the standards.

The CAA requires EPA to set and revise NAAQS for certain common and widespread pollutants, known as “criteria pollutants,” and provides authority for the agency to add additional pollutants. Standards are in effect today for six pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (regulated as subsets of particles with diameter less than 2.5 microns and less than 10 microns denoted as $PM_{2.5}$ and PM_{10}, respectively), and lead. Federal law requires that all states attain the NAAQS. Areas of the state that are designated as “nonattainment" for one or more of the NAAQS are required under the CAA to develop plans meeting specific requirements depending on the severity of the pollution problem. The South Coast Air Quality Management District (SCAQMD) was created for planning, implementing, and enforcing air quality standards for the South Coast Air Basin (Basin), which includes Los Angeles County. For the NAAQS, the Basin portion of Los Angeles County is currently designated as a nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has established various rules to manage and improve air quality in the Basin (SCAQMD, 2021). Rules applicable to the Project include Rule 401 (Visible Emissions), Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 1113 (Architectural Coatings), and Rule 1186 (PM10 Emissions from Paved and Unpaved Roads).

4.2.2.1 Transportation Conformity

The Transportation Conformity requirement is based on CAA Section 176(c), which prohibits the USDOT and other federal agencies from funding, authorizing, or approving plans, programs or projects that do not conform to air quality plans for attaining the NAAQS. Transportation Conformity applies to transit projects and takes place on two levels: the regional—or planning and programming level—and the project level. A project must conform at both levels to be approved.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS. Regional conformity is based on emission analyses prepared for the Regional Transportation Plans (RTP) and FTIP, which include all transportation projects planned for a region over a period of at least 20 years for the RTP and 4 years for the FTIP. The Project, identified as project number 1160001 (Sepulveda Pass Transit Corridor Phase 2) in the SCAG 2024-2050 RTP/SCS. The RTP/SCS predicts the region's transportation sector air pollutant emissions through 2050 (SCAG, 2024). SCAG adopted the plan on April 4, 2024. Federal agencies determined on May 10, 2024, that conformity analysis indicates all air quality conformity requirements have been met. The Project is not listed in the 2023 FTIP adopted for the SCAG region. Metro will coordinate with SCAG to ensure that the Project is included in the FTIP.

Project-level conformity is achieved by demonstrating that the project comes from conforming plans and the project has a design concept and scope that has not changed significantly from those in the RTP and FTIP. Project-level conformity also needs to demonstrate that project analyses have used the latest planning assumptions and EPA-approved emissions models, and the project complies with any air pollution control measures in regional air quality plans. Furthermore, under federal regulations, additional analyses (known as hot-spot analyses) may be required for projects located in particulate matter (PM) and CO nonattainment areas to examine localized air quality impacts. A hot-spot is a localized pollutant concentration that exceeds air quality standards. Regarding the potential for PM hot-spots, all transportation projects must be presented to the SCAG Transportation Conformity Working Group for Interagency Consultation to determine if they should be identified as a Project of Air Quality Concern (POAQC). The primary consideration for these determinations is the potential to increase localized exposure to diesel particulate matter emissions. It is highly unlikely that an electrically powered rail transit project would be identified as a POAQC, thereby requiring a detailed PM hot-spot analysis. CO hot-spots at roadway intersections are typically found in areas with significant traffic congestion. The SCAQMD dispersion modeling determined that intersections in Los Angeles County that do not exceed average daily traffic volume of approximately 100,000 vehicles would not generate CO concentrations which would exceed the NAAQS (SCAQMD, 2003). The highest daily traffic volumes at an intersection within the vicinity of the Project would be approximately 75,460 vehicles per day at the intersection of Wilshire Boulevard and Sepulveda Boulevard (Metro, 2025b). Because the daily number of vehicles at this study intersection would not exceed 100,000 vehicles per day, it can be concluded that the Project would not contribute to an exceedance of the air quality standards for CO.

4.2.2.2 Criteria Pollutant and Ozone Precursor Emissions

Operational Effects

Operational emissions would be generated from mobile and area sources, as well as emergency generators related to the components of Project alternatives, such as MSF and train stations. Other components such as TPSS or tunnel ventilation systems would not result in appreciable air pollutant emissions as site visits for maintenance would be infrequent and ventilation systems would be electric powered. Table 4-3 lists peak daily operational emissions in Horizon Year 2045, including regional VMT emissions associated with the 2045 without Project condition. It is anticipated that Modified Alternative 5 would result in operational emissions similar to Alternatives 5 and 6. Table 4-3 also lists the SCAQMD thresholds to determine the significance of emissions from the implementation of new projects. Emissions have been estimated for criteria pollutants CO, SO_2, PM_{10}, and $PM_{2.5}$, along with ozone precursors volatile organic compounds (VOC) and nitrogen oxides (NO_X). Daily emissions associated with the Project alternatives would not exceed SCAQMD's regional operational significance thresholds for any pollutant; rather, all Project alternatives would result in an environmental benefit by resulting in a net decrease of daily criteria pollutant emissions for all pollutants except VOC. Daily VOC emissions would marginally increase relative to 2045 without Project conditions, but the magnitude of that increase would remain substantially below the applicable SCAQMD regional screening threshold for mass daily emissions. The benefit is due to the new transit line removing passenger vehicles and associated emissions from the regional roadway network. The marginal increase in VOC emissions is primarily due to the use of consumer cleaning products at the MSFs and stations.

Table 4-3. Peak Daily Regional Operational Emissions (Horizon Year 2045)

Alternative	Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Emissions Estimate by Alternative						
2045 without Project	8,987	88,927	623,264	3,487	408,902	105,487
Alternative 1	8,995	88,894	622,945	3,485	408,666	105,426
Alternative 3	9,002	88,911	622,855	3,484	408,587	105,407
Alternative 4	8,994	88,826	622,492	3,482	408,355	105,346
Alternative 5	8,996	88,825	622,495	3,482	408,349	105,345
Alternative 6	8,999	88,823	622,636	3,483	408,413	105,361
Net Change in Emissions from 2045 without Project						
Alternative 1	8	-33	-319	-2	-236	-61
Alternative 3	15	-16	-409	-3	-315	-80
Alternative 4	7	-101	-772	-5	-547	-141
Alternative 5	9	-102	-769	-5	-553	-142
Alternative 6	12	-105	-628	-4	-489	-126
SCAQMD Regional Significance Thresholds	55	55	550	150	150	55

Source: Metro, 2025e

CO = carbon monoxide
lb/day = pound per day
NO_x = nitrogen oxides
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide
VOC = volatile organic compounds

Construction Effects

Construction emissions would be generated from off-road equipment, mobile sources, including workers, vendor trucks, and haul trucks traveling to and from construction sites, demolition, soil handling activities, paving, application of architectural coatings, and operation of temporary concrete batch plants. These emissions sources would be primarily related to constructing the rail alignment, stations, TPSS, and MSFs. Regional emissions include emissions generated from on-site sources (e.g., off-road equipment) operating within the construction site boundaries and off-site sources, primarily mobile sources (e.g., haul truck travel). Table 4-4 lists peak daily construction emissions, including emission controls associated with the Metro Green Construction Policy (Metro, 2011). Modified Alternative 5 would use a similar design and construction approach as Alternative 5 and is anticipated to result in similar emissions. The peak daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of construction. Construction emissions would vary substantially from day to day, depending on the level of activity and the specific type of construction activity. Table 4-4 also lists the SCAQMD thresholds for regional construction emissions. Peak daily NO_X emissions would exceed the threshold under all Project alternatives, and the peak daily CO emissions would exceed the threshold under all Project alternatives except for Alternative 6 and possibly Modified Alternative 5. Implementation of MM AQ-1, MM AQ-2, and MM AQ-3 would minimize emissions by enforcing Metro and SCAQMD policies and requiring zero emissions or near zero emissions trucks, if commercially available. However, some SCAQMD significance thresholds may still be exceeded after implementation of these measures.

Table 4-4. Peak Daily Regional Construction Criteria Pollutant Emissions

Alternative	Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Alternative 1	32	202	776	1	48	17
Alternative 3	33	243	795	2	64	19
Alternative 4	38	359	900	3	101	28
Alternative 5	34	442	890	3	135	33
Alternative 6	29	226	505	1	75	17
SCAQMD Regional Significance Thresholds	75	100	550	150	150	55

Source: Metro, 2025e

CO = carbon monoxide
lb/day = pound per day
NO_x = nitrogen oxide
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide
VOC = volatile organic compounds

In addition, Metro's Moving Beyond Sustainability – Sustainability Strategic Plan 2020 (Metro, 2020b) requires that contractors use renewable diesel for all diesel engines. The use of renewable diesel reduces the negative health impacts from diesel exhaust. For the Metro Crenshaw/LAX Transit Corridor Project, the reduction in emissions for 2017 was equivalent to removing over 15,000 cars from the road.

4.2.2.3 Localized Exposure to Pollutant Concentrations

The term sensitive receptor refers to land uses associated with people who are considered to be more sensitive than others to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems on average than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time leading to increased pollutant exposure periods.

Operational Effects

Localized emissions during operations would be generated from area sources (i.e., landscaping equipment, use of consumer products, and reapplication of architectural coatings) and emergency generator maintenance testing. Table 4-5 lists peak daily localized operational emissions in Horizon Year 2045. It is anticipated that Modified Alternative 5 would result in localized operational emissions similar to Alternatives 5 and 6. Table 4-5 also lists the SCAQMD localized thresholds, which represent the maximum emissions a project can emit without causing or contributing to an air quality standard violation. Localized operational emissions would not exceed the thresholds established by the SCAQMD.

Table 4-5. Peak Daily Localized Operational Criteria Pollutant Emissions

Alternative	Daily Emissions (lb/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Alternative 1	17	40	1	1
Alternative 3	52	72	2	2
Alternative 4	18	63	<1	<1
Alternative 5	18	73	<1	<1
Alternative 6	<1	114	<1	<1
SCAQMD Regional Significance Thresholds	172	1,434	3	2

Source: Metro, 2025e

CO = carbon monoxide
lb/day = pound per day
NO_x = nitrogen oxide
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District

Construction Effects

Localized construction emissions were based on emissions generated on-site within the construction site boundaries, including exhaust emissions from off-road equipment and trucks, and fugitive dust from demolition, earth movement activities, and truck travel. Table 4-6 lists peak daily localized construction emissions, including emission controls associated with the Metro Green Construction Policy (Metro, 2011). It is anticipated that Modified Alternative 5 would result in localized construction emissions similar to those of Alternatives 5. Table 4-6 also lists the SCAQMD localized thresholds, which represent the maximum emissions a project can emit without causing or contributing to an air quality standard violation. Localized construction emissions would exceed the thresholds established by the SCAQMD. The PM_{10} localized threshold would be exceeded during the construction of all Project alternatives. The $PM_{2.5}$ localized threshold would be exceeded during the construction of Alternatives 4 and 5. It is anticipated that this threshold may also be exceeded under Modified Alternative 5. Implementation of MM AQ-1, MM AQ-2, and MM AQ-3 would minimize emissions by enforcing Metro and SCAQMD

policies and requiring zero emissions or near zero emissions trucks, if commercially available. However, some SCAQMD significance thresholds may still be exceeded after implementation of these measures.

Table 4-6. Unmitigated Localized Construction Criteria Pollutant Emissions

Alternative	Daily Emissions (lb/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Alternative 1	56.2	240.6	9.6	3.8
Alternative 3	56.2	240.6	9.6	3.8
Alternative 4	92.2	356.0	30.2	9.4
Alternative 5	75.4	283.4	27.9	9.3
Alternative 6	36.0	69.7	8.9	1.2
SCAQMD Localized Significance Thresholds	114	786	7	4

Source: Metro, 2025e

CO = carbon monoxide
lb/day = pound per day
NO_x = nitrogen oxide
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District

4.2.2.4 Odors

Operational Effects

All Project alternatives would include trash receptacles associated with the stations and MSFs. On-site trash receptacles would be covered and properly maintained to prevent adverse odors. With proper housekeeping practices, trash receptacles would be maintained in a manner that promotes odor control.

Construction Effects

During construction of all Project alternatives, exhaust from equipment, activities associated with the application of architectural coatings and other interior and exterior finishes, and paving activities may produce discernible odors typical of most construction sites. Such odors would be, at worst, a temporary source of nuisance to adjacent uses, if at all, and would not affect a substantial number of people. The Project alternatives would use architectural coatings compliant with SCAQMD Rule 1113, which would limit the odors associated with off-gassing from those coatings. Additionally, material deliveries and heavy-duty haul truck trips could occasionally produce odors from diesel exhaust. These odors would not affect a substantial number of people because construction would be temporary, and construction-generated odors dissipate rapidly with increasing distance from the source.

4.2.3 Noise and Vibration

This summary addresses noise and vibration effects. Refer to the Sepulveda Transit Corridor Project Noise and Vibration Technical Report (Metro, 2025f) for information related to existing conditions and the applicable regulatory environment. The report also includes detailed information related to the monitoring of existing noise and vibration levels, FTA impact criteria, and the methodologies used to assess potential impacts.

4.2.3.1 Noise

Operational Effects

The FTA standards and criteria for assessing noise impacts related to transit projects are based on community reactions to noise. The criteria reflect changes in noise exposure using a sliding scale where the higher the level of existing noise, the lower the increase in total noise exposure is allowed. Some land use activities are more sensitive to noise than others, such as parks, religious facilities, and residences, compared with industrial and commercial uses. Most commercial or industrial uses are not considered noise-sensitive because activities within these buildings are generally compatible with higher noise levels. Businesses can be considered noise-sensitive if low noise levels are an important part of operations, for example, sound and motion picture recording studios. Parks used primarily for active recreation such as sports complexes and bike or running paths are not considered noise sensitive. However, parks (even some in dense urban areas) primarily used for passive recreation such as reading, conversation, or meditation may be valued as havens from the noise and rapid pace of everyday city life. The FTA has defined three levels of impacts for sensitive uses affected by transit projects: no impact, moderate impact, or severe impact. A description of each impact level is listed in Table 4-7.

Table 4-7. Levels of Impact

Level of Impact	Description
No Impact	Project-generated noise is not likely to cause community annoyance. Noise projections in this range are considered acceptable by the Federal Transit Administration and mitigation is not required.
Moderate Impact	Project-generated noise in this range is considered to cause an impact at the threshold of measurable annoyance. Moderate impacts serve as alerts to project planners that potential adverse impacts and complaints from the community may occur. Mitigation should be considered at this level of impact depending on project specifics and details concerning the affected properties.
Severe Impact	Project-generated noise in this range is likely to cause a high level of community annoyance. The project sponsor should first evaluate alternative locations/alignments to determine whether it is feasible to avoid severe impacts altogether. In densely populated urban areas, evaluation of alternative locations may reveal a trade-off of affected groups, particularly for surface rail alignments.

Source: FTA, 2018

The Project alternatives would generate permanent noise associated with rail operations. This includes vehicle passby noise, motor noise, tire-guideway noise, crossover noise, aerodynamic noise, and noise from air conditioning and other auxiliary equipment on the vehicles. In addition to rail operations, ancillary sources would potentially generate noise at sensitive land uses. Ancillary sources include TPSS units and ventilation facilities, where needed for underground segments. The primary noise sources on TPSS units are the transformer hum and noise from its cooling systems or ventilation fan. Table 4-8 lists moderate and severe impacts without implementation of mitigation measures, as well as the total number of noise impacts. Alternatives 1 and 3 would both result in five unmitigated moderate impacts. Alternative 4 would result in the greatest number of noise impacts with 4 unmitigated moderate impacts and 6 unmitigated severe impacts, for a total of 10 unmitigated noise impacts. Alternative 5 would not result in noise impacts. Alternative 6 would result in 2 unmitigated moderate impacts. The potential noise impacts of Modified Alternative 5 will be determined during the upcoming design process. Implementation of MM NOI-1.1, MM NOI-3.1, and MM NOI-4.1 would minimize potential noise impacts by requiring the installation of soundwalls for Alternatives 1, 3, and 4. Implementation of MM NOI-6.1 would minimize potential noise impacts associated with TPSS sites 7 and 9 for Alternative 6 by

requiring noise reduction measures such as orienting fans and heating, ventilation and air conditioning equipment away from receptors and installing enclosures around the TPSS. The FTA noise impact criteria would no longer be exceeded for rail operations and ancillary facilities after implementation of mitigation.

Table 4-8. Summary of Potential Unmitigated Noise Impacts Associated with Rail Operations and Ancillary Facilities

Alternative	Noise Source	Potential Unmitigated Noise Impacts		
		Moderate	Severe	Total
Alternative 1	Rail Operations	5	0	5
	Ancillary Facilities	0	0	0
	Alternative 1 Total	**5**	**0**	**5**
Alternative 3	Rail Operations	5	0	5
	Ancillary Facilities	0	0	0
	Alternative 3 Total	**5**	**0**	**5**
Alternative 4	Rail Operations	4	6	10
	Ancillary Facilities	0	0	0
	Alternative 4 Total	**4**	**6**	**10**
Alternative 5	Rail Operations	0	0	0
	Ancillary Facilities	0	0	0
	Alternative 5 Total	**0**	**0**	**0**
Alternative 6	Rail Operations	0	0	0
	Ancillary Facilities	2	0	2
	Alternative 6 Total	**2**	**0**	**2**

Source: Metro, 2025f

In addition to noise generated by rail operations and ancillary facilities, the MSF associated with each Project alternative would potentially generate excessive noise at noise-sensitive land uses. Noise generated by the MSF options include train movements on lead tracks, wheel squeal on tight radius curves, track crossovers, the car wash facility, maintenance shop, and TPSS equipment within the MSF yard. Table 4-9 summarizes potential MSF noise impacts, except for Modified Alternative 5 for which an MSF site has not yet been identified. The Monorail Transit MSF Base Design and Monorail Transit MSF Design Option 1 associated with Alternatives 1 and 3 would not result in noise impacts. The Electric Bus MSF exclusive to Alternative 1 would similarly not result in noise impacts. The HRT MSF associated with Alternatives 4, 5, and 6 would result in two unmitigated moderate impacts and one unmitigated severe impact, for a total of three noise impacts.. Implementation of MM NOI-1.1, MM NOI-3.1, and MM NOI-4.1 would minimize potential noise impacts by requiring the installation of soundwalls along portions of the aerial alignment and at the southern property boundaries of the MSF site for Alternatives 1, 3, and 4. Soundwalls reduce noise levels at noise-sensitive receptors by breaking the direct line-of-sight between source and receptor with a solid wall. Soundwalls are proposed at heights of 3 feet to 10 feet to reduce noise at sensitive receptors. The FTA noise impact criteria would no longer be exceeded after implementation of mitigation.

Table 4-9. Summary of Unmitigated Noise Impacts Associated with Maintenance and Storage Facilities

Alternative	Maintenance and Storage Facility	Noise Impacts		
		Moderate	Severe	Total
Alternative 1	Monorail Transit MSF Base Design	0	0	0
	Monorail Transit MSF Design Option 1	0	0	0
	Electric Bus MSF	0	0	0
Alternative 3	Monorail Transit MSF Base Design	0	0	0
	Monorail Transit MSF Design Option 1	0	0	0
Alternative 4	Heavy Rail Transit MSF	2	1	3
Alternative 5	Heavy Rail Transit MSF	2	1	3
Alternative 6	Heavy Rail Transit MSF	2	1	3

Source: Metro, 2025f

Construction Effects

Construction of the Project alternatives would include various phases that would involve the use of construction equipment at specific locations along the proposed alignment. Example phases of construction include at-grade rail construction, aerial station and guideway construction, underground station and rail construction, roadway improvements, construction of ancillary facilities, utility relocation, demolition, and excavation. Construction noise levels would typically range from 57 to 102 A-weighted decibels (dBA) at 50 feet depending on the construction equipment mix for each phase and Project alternative. This is an 8-hour average noise level (L_{eq}). The FTA has provided guidance for assessing construction noise associated with transit projects. The criteria are based upon an 8-hour L_{eq}. For residential uses, the threshold is 80 dBA for daytime construction and 70 dBA for nighttime construction. Commercial uses are held to an 85-dBA daytime and nighttime construction noise threshold. Industrial uses are held to a 90 dBA daytime and nighttime noise construction threshold. The Project alternatives, as is anticipated for Modified Alternative 5, would result in temporary and periodic increases in ambient noise levels due to construction activity that would exceed the FTA criteria, including at residential land uses. Implementation of MM NOI-1.2, MM NOI-3.2, MM NOI-4.2, MM NOI-5.2, MM NOI-6.2 would minimize construction noise levels by requiring a Noise Control Plan.

Pile driving may be required for construction activities associated with all Project alternatives. Impact or vibratory pile drivers are the most noise-intensive construction equipment that could result in elevated noise levels above typical construction methods. It is unknown at this stage of design if pile driving would be the required construction method, which is dependent on soil type. Typically, where possible, piles are drilled, which is a quieter method of pile installation such as CIDH. Impact pile driving generates an hourly noise level of approximately 94.3 dBA L_{eq} at 50 feet, vibratory pile driving generates an hourly noise level of 93.8 dBA L_{eq} at 50 feet, and CIDH generates an hourly noise level of approximately 77.4 dBA L_{eq} at 50 feet. Vibratory pile driving is approximately 0.5 dBA quieter than impact pile driving, and CIDH is approximately 16.9 dBA quieter. To reduce noise levels where piles may be required, the Noise Control Plans for all Project alternatives require impact pile driving to be avoided where possible and to use drilled or vibratory piles where feasible.

Nighttime construction could adversely affect sleep for residents living near active construction sites. The Noise Control Plans for all Project alternatives require noise variances, which typically must demonstrate the implementation of control measures to maintain noise levels below the applicable FTA and local standards, if required by the responsible jurisdiction.

4.2.3.2 Vibration

Operational Effects

The Project alternatives could potentially result in exposure of sensitive land uses to excessive vibration. The FTA developed impact criteria for acceptable levels of groundborne noise and groundborne vibration based on the maximum indoor vibration level from a train passing by for different land use categories (FTA, 2018). Category I land uses are buildings where vibration would interfere with interior operations. Category II land uses are residences and buildings where people normally sleep. Category III land uses are institutional land uses with primarily daytime use. The FTA has also published criteria for special buildings such as concert halls, television and recording studios, auditoriums, and theaters, which are also sensitive to vibration but do not fit into the three FTA sensitive land use categories previously described (Category IV land uses). Table 4-10 lists vibration impacts by Project alternative as well as the total number of vibration impacts. Alternatives 1 and 3 would both result in no vibration impacts. Alternative 4 would result in 48 unmitigated vibration impacts, Alternative 5 would result in 313 unmitigated vibration impacts, and Alternative 6 in 26 unmitigated vibration impacts. Modified Alternative 5 would utilize Alternative 6's alignment in the Valley, which would potentially avoid some of the unmitigated operational vibration impacts associated with Alternative 5. However, Modified Alternative 5 is anticipated to have increased peak and off-peak hour frequency and could potentially result in more unmitigated operational vibration impacts than Alternative 6. Implementation of MM VIB-4.1, MM VIB-5.1, and MM VIB-6.1 would minimize potential impacts by requiring the implementation of trackwork isolation methods to reduce vibration generated during rail operations. The types of vibration reduction methods include high resilience direct fixation rail fasteners, low-impact or spring frogs, floating slab track and resiliently supported ties. The FTA vibration impact criteria would no longer be exceeded related to rail operations after implementation of mitigation.

Table 4-10. Summary of Unmitigated Vibration Impacts Associated with Rail Operations

Alternative	Vibration Impacts			
	Category 1 Land Use	Category 2 Land Use	Category 3 Land Use	Total
Alternative 1	0	0	0	0
Alternative 3	0	0	0	0
Alternative 4	15	33	0	48
Alternative 5	21	292	0	313
Alternative 6	20	4	1	26

Source: Metro, 2025f

Construction Effects

Vibration would be generated by heavy equipment during construction of the Project alternatives and MSFs. In most cases, the primary concern regarding construction vibration relates to potential damage effects. Construction activities, such as pile driving, use of drill rigs, pavement breaking, and the use of tracked vehicles (e.g., bulldozers) and hoe rams, could result in perceptible levels of groundborne vibration at sensitive buildings located in close proximity to construction sites. These activities would typically be limited in duration and their vibration levels are likely to be well below thresholds for minor cosmetic building damage. The FTA guidance states that a damage risk criterion of 0.2 inches per second peak particle velocity (PPV) is protective of all but the most fragile buildings (FTA, 2018). The limit of 0.12 PPV for fragile historic structures is among the most restrictive limits used for vibration damage risk to buildings. Construction would include a limited number of activities expected to generate vibration

that approaches the building damage limit. For example, use of a drilling rig, hoe ram, or large bulldozer would be safe at distances greater than 22 feet from fragile buildings (Category IV buildings). A vibratory roller would be safe at distances greater than 22 feet from Category IV buildings, and typical impact pile driver operation would be safe at distances of 79 feet or greater. Typical building construction in an urban setting consists of buildings that are Category II engineered concrete and masonry that have a 0.3 inches per second PPV threshold or Category III non-engineered timber and masonry buildings that have a 0.2 inches per second PPV threshold. Typical construction equipment, such as a large bulldozer, would not exceed the 0.2 inches per second PPV building damage criterion at distances of 18 feet or greater and would not exceed the 0.3 inches per second PPV building damage criterion at distances of 13 feet or greater. A vibratory roller would not exceed the 0.2 inches per second PPV building damage criterion at distances of 32 feet or greater and would not exceed the 0.3 inches per second PPV building damage criterion at distances of 23 feet or greater. An impact pile driver would not exceed the 0.2 inches per second PPV building damage criterion at distances of 67 feet or greater and would not exceed the 0.3 inches per second PPV building damage criterion at distances of 47 feet or greater.

Along the underground alignments of Alternatives 3, 4, 5, and 6 and likely Modified Alternative 5, the tunnel boring machine (TBM) would be the main source of groundborne vibrations. However, the TBM is slow moving and causes very little vibration and related groundborne noise to the surrounding area when operating at full tunnel depths. The Alternative 3 tunnel would range in depth from less than 20 feet to nearly 400 feet below ground surface. In a few multi-family residential areas south of Wilshire Boulevard and for residential buildings closest to the north tunnel portal, groundborne vibration from the TBM may be felt distinctly for a short period (about 2 days) while the machine passes under the receptor locations. Throughout the rest of the tunnel alignment, groundborne vibration from the TBM would be either not perceptible or just barely perceptible to some building occupants. Expected TBM vibration levels, however, would be well below the strictest building damage threshold of 0.12 inches per second. Construction of the proposed Wilshire/Metro D Line station along the underground alignment would likely be cut-and-cover construction, which could result in aboveground vibration. However, buildings would typically be located more than 50 feet away from station construction and appear to be constructed of engineered concrete and masonry (0.3 in/sec threshold), resulting in limited potential for excessive vibration damage and annoyance. The alignment would surface in the Santa Monica Mountains near the Getty Center parking area. Construction activity would typically occur at distances greater than 50 feet from sensitive buildings in the Santa Monica Mountains between the Getty Center and Green Leaf Street in the Valley, because the alignment would be located in either the I-405 ROW or areas immediately adjacent to I-405, where there are limited to no structures. The potential for vibration damage and annoyance would be limited in this area. North of Greenleaf Street, the alignment would travel along the east side of I-405 in a constrained area with buildings adjacent to the construction footprint. The FTA building damage criteria and vibration annoyance criteria could potentially be exceeded at buildings in these areas.

The Alternative 4 tunnel would range in depth from approximately 30 feet to over 750 feet below ground surface. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. In residential areas in the mountain region between Sunset Boulevard and the north tunnel portal, groundborne vibration from the TBM would not be perceptible, because the tunnel would be very deep underground. Expected TBM vibration levels would be well below the strictest building damage threshold of 0.12 inches per second along the entire underground alignment. Construction of the proposed Metro E Line and Santa Monica Boulevard Stations along the underground alignment would likely be cut-and-cover construction, which could at times occur within 25 feet of structures, potentially resulting in excessive vibration. The

alignment would surface in the Santa Monica Mountains near Del Gado Drive. Between Del Gado Drive and Ventura Boulevard, construction activity could occur at distances of 25 feet or less of adjacent buildings, including single-family residences, multi-family residences, and commercial buildings. Construction activity in this area could result in the exceedance of the FTA building damage or vibration annoyance criteria. North of Ventura Boulevard, construction activity would typically occur within the Sepulveda Boulevard ROW, and nearby buildings would typically be located at distances of 50 feet or greater, thus reducing the potential for vibration damage or annoyance. In some instances, construction activity may occur at closer distances to sensitive buildings or more intense vibration-generating equipment (vibratory roller) may be used, which could result in the potential to exceed the FTA building damage or vibration annoyance criteria. East of the intersection of Sepulveda Boulevard and Raymer Street, construction activity would primarily occur in the LOSSAN rail corridor that is surrounded by industrial buildings, which would have limited potential for vibration damage and annoyance.

The Alternative 5 tunnel would range in depth from approximately 30 feet to over 750 feet below ground surface. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. In residential areas in the mountain region between Sunset Boulevard and Valley View Boulevard, groundborne vibration from the TBM would not be perceptible because the tunnel would be very deep underground. Expected TBM vibration levels would be well below the strictest building damage threshold of 0.12 inches per second along the entire underground alignment. Construction of the proposed Metro E Line, Santa Monica Boulevard, Wilshire/Metro D Line, UCLA Gateway Plaza, Ventura Boulevard, Metro G Line, and Sherman Way Stations along the underground alignment would likely be cut-and-cover construction, which could at times occur within 25 feet of structures, potentially resulting in excessive vibration. The alignment would surface near the intersection of Raymer Street and Burnett Avenue. Nearby structures are primarily industrial and would be most similar to engineered and concrete masonry buildings with a 0.3 inches per second PPV vibration damage threshold. Vibration annoyance impacts are unlikely to occur in this area, as the uses are not vibration sensitive. However, due to the proximity of nearby buildings, there is potential for vibration damage to occur. East of the tunnel portal, construction activity would primarily occur in the LOSSAN rail corridor surrounded by industrial buildings, which would have limited potential for vibration damage and annoyance.

Alternative 6 tunnels would range in depth from approximately 40 feet to over 700 feet below ground surface, and it is anticipated that the Modified Alternative 5 tunnels would be at similar depths. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. In residential areas in the mountain region between Sunset Boulevard and Mulholland Drive, groundborne vibration from the TBM would not be perceptible, because the tunnels would be very deep underground. Expected TBM vibration levels would be well below the strictest building damage threshold of 0.12 inches per second along the entire alignment. Construction of the proposed Metro E Line, Santa Monica Boulevard, Wilshire/Metro D Line, UCLA Gateway Plaza, Ventura Boulevard, Metro G Line, and Van Nuys Metrolink Stations along the underground alignment would likely be cut-and-cover construction, which could at times occur within 25 feet of structures, therefore potentially resulting in excessive vibration. Regarding the mid-mountain shaft, the nearest structures would be located more than 500 feet to the east of construction activity, and there would be no potential for vibration damage or annoyance impacts to occur.

Construction of the Monorail Transit MSF Base Design, Monorail Transit MSF Design Option 1, and Electric Bus MSF is not predicted to result in vibration damage impacts. Construction of the HRT MSF for Alternatives 4, 5, 6, and likely Modified Alternative 5 would result in vibration levels that would exceed

0.2 inches per second PPV building damage criterion during operation of a vibratory roller along the southern property line of the MSF sites.

Implementation of MM VIB-1.1, MM VIB-3.1, MM VIB-4.2, MM VIB-5.2, and MM VIB-6.1 would minimize vibration exposure by requiring preparation of a Vibration Control Plan to determine if construction vibration would exceed vibration standards and to identify vibration-reducing methods.

Construction activities would have the potential to damage historic buildings near vibration-intensive construction activities. The Vibration Control Plans would also reduce the potential for permanent damage by requiring monitoring to determine if the vibration damage criterion of 0.12 inches per second PPV would be exceeded at historic resources. A pre-construction and post construction survey would be prepared, and any damage noted and restored in accordance with the requirements of the Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (NPS, 2017).

4.2.4 Ecosystems and Biological Resources

This summary addresses federally protected wildlife and plant species, critical habitat, wildlife corridors, and jurisdictional resources. Refer to the Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025g).

4.2.4.1 Wildlife and Plant Species

Wildlife species expected in the urbanized areas of the Project Study Area, such as the Valley to the north and the Westside communities to the south, are mostly regionally common species adapted to human disturbances. These common species include birds, reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, raccoons, skunks, bats), and larger mammals such as coyotes. Certain animal species receive federal protection under the ESA, the Bald and Golden Eagle Protection Act (i.e., bald eagle, golden eagle), the Migratory Bird Treaty Act (MBTA), and the California Endangered Species Act (CESA). Database searches identified 13 possible federal special-status wildlife species in the Project Study Area, although no suitable habitat in the Project Study Area was identified for 11 species. *Polioptila californica* (Coastal California gnatcatcher) is a federally threatened species with low potential to be present. While the Project Study Area is located within the species' range, suitable breeding habitat is generally absent. Vireo *bellii pusillus* (Least Bell's vireo) is a federally endangered species. Occupied nesting and foraging habitat is present within the Project Study Area within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek.

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Project Study Area include California annual grasslands, coyote brush shrubland, and land cover classes that include developed, ruderal, open water, and undifferentiated classes. Vegetation communities in the Santa Monica Mountains, which extend east-west through the middle of the Project Study Area, include ceanothus chaparral, laurel sumac shrubland, toyon shrubland, and various other native vegetation communities. Database searches identified 6 possible federal special-status plant species, although no suitable habitat in the Project Study Area was identified for three species. *Dodecahema leptoceras* (Slender-horned spineflower) is a federally endangered species with low potential to be present, although there are no occurrences of the species recorded in the Project Study Area. *Dudleya cymose ssp. ovatifolia* (Santa Monica dudleya) is a federally threatened species with low potential to be present, although the nearest occurrence (5 miles to the west) dates from 1960s. *Astragalus brauntonii*

(Braunton's milk-vetch) is a federally endangered species with moderate potential to be present because suitable habitat occurs within the Project Study Area and occurrences of the species have been recorded in Topanga State Park.

Operational Effects

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, because aboveground alignments occur in developed areas. The construction of and operational activities associated with the underground portions of Alternatives 4, 5, 6, and likely Modified Alternative 5 have no potential to interfere with wildlife habitats or vegetation. The following assessments pertain to Alternatives 1 and 3 and the aboveground portions of Alternative 4.

Invertebrates and Reptiles

Invertebrates and 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 aboveground alignments associated with Alternatives 1, 3, and 4 are primarily aerial and occur in mostly developed areas that are not suitable for these species. The areal extent of suitable habitat for special-status invertebrates and reptiles that overlaps with the Project alternatives is very limited. Habitat degradation due to edge effects where native habitats are removed would be limited due to the low amount of suitable habitat present along the alignment. Edge effects may include changes to the microclimate due to increased 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).

Birds and Bats

Nesting birds or roosting bats may be 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. Impacts from dust and noise to birds or bats are not anticipated during operation, since maintenance activities would primarily occur within developed or paved areas. MM BIO-1 and MM BIO-2 would minimize operations-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, conducting preconstruction nesting bird and bat surveys during the appropriate season, and installation and biological monitoring of no-disturbance buffers around nests or roosts to ensure the resource is adequately protected.

Mammals

Collisions between mountain lions and aerial monorail vehicles associated with Alternatives 1 and 3 are unlikely due to the height at which vehicles would be traveling (16.5 feet to 32 feet). While operational activities would reduce vehicle traffic on I-405, changes in vehicle traffic are not likely to substantially reduce the risk for a mountain lion attempting to cross the freeway. Alternatives 1 and 3 are 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 Alternatives 1 and 3, 11 percent (47.9 acres) of the total impacts are within non-developed natural areas in the Santa Monica Mountains (i.e., suitable habitat for mountain lions); 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 would be temporary (81 percent of suitable mountain lion habitat impacts, or 39 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 would not inhibit mountain lion survival or recovery in the wild. 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 6 months if impacts are observed.

Plants

Impacts to plants that would occur during aboveground operations 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 operations would result in impacts to plants, including from exposure to fugitive dust. One California protected 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 impacts are anticipated since Nuttall's scrub oak was not identified within the Ground Disturbance Area during the initial tree inventory. MM BIO-3 would reduce operational-related impacts to protected trees from vegetation maintenance through application of mitigation, as determined in the applicable local ordinance or policy.

Construction Effects

Construction activities have the potential to affect sensitive vegetation communities, as well as wildlife or plant species, both directly and through modifications to their habitat. While most of the vegetation that could be impacted consists of non-native and ornamental landscaping, some native vegetation is also present. Construction activities could impact wildlife, including nesting birds, special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potential impacts include injury or mortality of individuals, habitat loss due to permanent vegetation removal, and behavioral or health modifications from noise pollution or exposure to fugitive dust from prolonged heavy equipment operation. Other anticipated impacts related to the construction along Sepulveda Pass for Alternatives 1 and 3 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 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.

Invertebrates

Crotch's bumble bee, a protected species, has potential to be present 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 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 bees are likely to forage where preferred flowering plants are present 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. 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. Ground-disturbing impacts from grading and vegetation clearing would likely result in loss of suitable habitats that would be used for nesting, breeding, shelter, and/or foraging for Crotch's bumble bee.

Reptiles

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 suffocated or be crushed during grading activities; buried nests could be similarly 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, reptiles also may be subject to higher predation rates by opportunistic predators, such as common ravens (*Corvus corax*), coyote, or skunk, which could be attracted to work areas if food debris is present. 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 would be used for nesting, breeding, sheltering, and/or foraging.

Birds and Bats

Based on habitat requirements, protected birds are likely to be found 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. Additionally, if native birds are breeding within or adjacent to work areas, the 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. Furthermore, impacts associated with clearing and grading of vegetation adjacent to I-405 would likely result in loss of suitable habitat that would be used for nesting, breeding, sheltering, and/or foraging for the following nine special-status species and nesting birds protected under the MBTA.

Within the developed northern and southern ends of the Project Study Area, protected bats would be present in ornamental street trees or on existing infrastructure, such as bridges and buildings. Roosting

adults may be subject to injury or mortality if 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, 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.

Mammals

Three protected mammals were identified in the Project Study Area, 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 would 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. 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.

Special-Status Plants

Based on habitat requirements, protected plants are most likely to occur in chaparral and/or coastal sage scrub, which occurs on the Project in the Sepulveda Pass and would be in or proximate to work areas along I-405 in the Santa Monica Mountains. 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 protected plants.

Mitigation Measures

Mitigation measures would be implemented to reduce construction-related impacts to protected 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); 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 the 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-10). General construction measures to protect 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).

4.2.4.2 U.S. Fish and Wildlife Service Critical Habitat

No U.S. Fish and Wildlife Service- (USFWS) designated critical habitat coincides with the Project Study Area. Critical habitat areas are designated by USFWS for species listed under the federal ESA as areas essential for the conservation and recovery of listed species. These areas provide cover, shelter, food, water, light, minerals and other nutritional or physiological requirements for survival of the species. They also provide sites for breeding and rearing offspring and habitat that are protected from disturbances and are representative of the historical geographical distribution of the species.

4.2.4.3 Wetlands

There are no federally protected wetlands within the Ground Disturbance Area for any of the Project alternatives, inclusive of Modified Alternative 5. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where the Project alternatives traverse the river. Construction activities would occur outside of jurisdictional areas associated with the Los Angeles River for all Project alternatives. Impacts to aquatic resources would be avoided, minimized, and mitigated 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 practices (BMP) implementation to protect against sedimentation, worker education on sensitive aquatic resources, and avoidance of work near jurisdictional waters during and following rain events.

4.2.4.4 Tree Removal

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, 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 Project Study Area. Due to their location adjacent to roadways, there is potential for several of these native trees to be removed. In the central, less developed portion of the Project Study Area, native trees are more frequent, specifically to the east and west of the I-405 freeway from Valley Vista Boulevard to Getty Center Drive. Four local ordinances or policies protecting trees are present within the Project Study Area: City of Los Angeles Protected Tree and Shrub Ordinance, Los Angeles County Oak Tree Ordinance, City of Los Angeles Street Tree Policy, and the Metro Tree Policy.

Operational Effects

Each of the Project alternatives would require routine maintenance and trimming of trees necessitating coordination with various jurisdictions. The City of Los Angeles Ordinance requires permits for alterations made to protected tree and shrub species. Another permit is required from the City of Los Angeles Department of Public Works for modifications to oak trees covered by the County Oak Tree Ordinance. The Los Angeles Street Tree Policy requires coordination with the City of Los Angeles Department of Public Works for maintenance of trees within the public ROW. This policy does not apply to trees within private property, UCLA, or the Caltrans ROW. The Metro Tree Policy requires coordination with the landowners (e.g., private landowners, UCLA, Caltrans) to trim, prune, or remove trees. A Mitigation Plan would be developed in consultation with a Certified Arborist if operational activities may result in damaging or removing trees impacts resulted in a damaged or removed tree; decisions would be made in accordance with local ordinances identifying protected trees. Implementation of MM BIO-3 would minimize potential impacts to protected trees and shrubs through various protections.

Construction Effects

Construction activities for all Project alternatives would require tree and shrub removal. Table 4-11 provides a summary of the protected trees and shrubs potentially affected by Alternatives 1, 3, 4, 5, and 6. It is anticipated that Modified Alternative 5 would remove a similar number of trees as Alternatives 5 and 6. However, Modified Alternative 5 would avoid the need for the Stone Canyon Reservoir vent shaft and access road under Alternative 6 and therefore would likely affect fewer protected trees. Implementation of MM BIO-11, shown previously, for Alternatives 1 and 3 would minimize operational impacts to protected trees and shrubs through application of installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. MM BIO-12 is a similar measure for Alternatives 4 and 5, and MM BIO-13 is a similar measure for Alternative 6. It is anticipated that Modified Alternative 5 would require a measure similar to MM BIO-12 and MM BIO-13. Specific to Alternatives 1 and 3, 98 trees have been identified with the Santa Monica Mountains National Recreation Area (SMMNRA). Mitigation for potential impacts to these trees would be determined through coordination with applicable entities.

Table 4-11. Total and Protected Trees within the Ground Disturbance Areas

Alternative and/or Maintenance and Storage Facility	Total Trees	Protected Trees
Alternative 1	3,282	250
Alternative 3	2,926	98
Alternative 4	1,638	158
Alternative 5	1,225	145
Alternative 6	938	329
MSF Base Design for Alternatives 1 and 3	32	0
MSF Design Option 1 for Alternatives 1 and 3	206	0
Electric Bus MSF for Alternative 1	15	0
MSF for Alternatives 4 and 5	43	0
MSF for Alternative 6	36	0

Source: Metro, 2025g

4.2.5 Water Resources

This summary addresses water quality, drainage, floodplains, and groundwater. Refer to the Sepulveda Transit Corridor Project Water Resources Impacts Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025h).

4.2.5.1 Water Quality

The CWA 1972 establishes the basic structure for regulating discharges of pollutants into waters of the U.S. and gives EPA the authority to implement pollution control programs such as setting wastewater standards for industries. In most states, including California, EPA has delegated this authority to state agencies. The water resources study area includes surface water and groundwater resources within the Project Study Area. A variety of creeks, rivers, man-made reservoirs, and canals exist within the Project Study Area (Figure 4-1). In the northern portion of the Project Study Area, the Pacoima Wash extends to Vanowen Street between Sepulveda Boulevard and Van Nuys Boulevard. North of the Santa Monica Mountains, the Los Angeles River crosses the Project Study Area north of US-101. Encino Creek is located southwest of the I-405 and US-101 junction. Located outside and south of the Project Study Area, Ballona Creek, the Centinela Creek Channel, and the Sepulveda Channel cross near State Route 90. South of the Project Study Area, the Sepulveda Channel runs along the west side of I-405 and collects water from various catch basins and transports the water to Ballona Creek. Water from Ballona Creek

ultimately discharges at the Marina del Rey Harbor. There are several reservoirs largely concentrated in the Santa Monica Mountains. The Stone Canyon Reservoir is located to the east of I-405 in the Santa Monica Mountains, 13 miles northwest of downtown Los Angeles. This reservoir provides water to 400,000 people in Pacific Palisades, the Santa Monica Mountains, and West Los Angeles. The Encino Reservoir is located west of I-405 within the Santa Monica Mountains in the City of Los Angeles Community of Encino. The Sepulveda Dam Recreation Area is located north of the I-405/US-101 interchange in the Valley.

Figure 4-1. Watersheds in the Project Study Area



Source: Metro, 2025h

Operational Effects

Table 4-12 lists the estimated total impervious surface areas created, existing impervious surface areas, and amount of new impervious surfaces. Alternatives 1, 3, and 6 would increase impervious surface area in the Project Study Area. Alternatives 4 and 5 would decrease impervious surface area in the Project Study Area. It is anticipated that Modified Alternative 5 would also likely result in a decrease in impervious surface area.

All Project alternatives would be designed to incorporate several sustainability features in compliance with the City of Los Angeles Low Impact Development (LID) Ordinance, which would serve to reduce impervious area and promote infiltration, thereby improving water quality. It would also comply with all applicable federal, state, regional and local agency water quality protection laws and regulations, as well as commonly used industry standards. All Project alternatives would comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements, Statewide Stormwater Permit, the City of Los Angeles Municipal Code (LAMC) and all other applicable regulations for all operational activities, including adherence to an approved LID Plan, as applicable, which would identify the BMPs for operations. The types of LID BMP designs to be incorporated would be determined during the design phase. Although final design would dictate actual stormwater management aspects of the Project, potential BMPs would include, but would not be limited to, depressed landscape gardens for runoff retention and infiltration, permeable surfaces to reduce runoff volume, hardscape replacement with pervious or planted substitutions, bioswales or artistic water features that creatively convey runoff into planted or pervious areas, roof downspout discharges to vegetated areas, and rainwater cisterns and other on-site stormwater retention methods. These measures and practices would be incorporated at applicable component sites and would serve to promote infiltration.

Table 4-12. New Impervious Surface Area

Alternative	Existing Impervious Surface Area (sf)	Amount of New and Reconstructed Impervious Surface Area Site (sf)	Net Impervious Area (sf)
Alternative 1	457,853	709,856	252,003
Alternative 3	571,893	657,821	85,928
Alternative 4	473,986	460,489	-13,497
Alternative 5	430,675	408,127	-22,548
Alternative 6	Not Applicable	688,731	395,539

Source: Metro, 2025h

sf = square feet

The LID Plan would identify the BMPs for post-construction design as applicable (i.e., operational characteristics to control/treat runoff). All Project alternatives would include design elements that serve to infiltrate, capture and re-use stormwater in accordance with current LID requirements — thereby minimizing the potential for increased runoff rates and pollutant discharge. LID design features would slow (detain or retain) stormwater, which would reduce the runoff volume discharged and would decrease the peak runoff discharge velocity for design storms. Implementation of LID BMPs would offset any increases in runoff rates due to the creation of new impervious surface areas. As a result, less flow with fewer pollutants would be transported through the conveyance systems, and ultimately into surface waters, including ancillary exfiltration to the groundwater table. Additionally, natural treatment of infiltrated runoff would occur, thereby improving exfiltrated water from LID and water quality additions to the groundwater table, including treatment for potential pollutants (e.g., petroleum products/lubricants, metals, paints, solvents, and other products) used or generated during operations.

All Project alternatives are anticipated to require Industrial General Permit coverage for maintenance facilities, fueling operations, equipment cleaning/washing operations, and TPSSs. This permitting program was established by the State Water Resources Control Board (SWRCB) in accordance with CWA Section 402(p), which regulates municipal and industrial stormwater discharges under the NPDES program. An Industrial General Permit Stormwater Pollution Prevention Plan (SWPPP) would be prepared and submitted to the SWRCB prior to operations. The SWPPP includes discharge prohibitions,

effluent limitations, and receiving water limitations that must be adhered to during operations. SWPPP BMPs would include good housekeeping, prevention and maintenance activities, material handling and waste management, erosion and sediment controls, training, and recordkeeping. Other BMPs may also be employed, as appropriate, such as indoor/covered areas for maintenance, approved flammable/hazmat storage lockers for lubricants and other industrial liquids, drip/spill protection in maintenance areas and similar BMPs when conducting maintenance, dry cleanup practices, and dedicated enclosed areas for metal working, painting, and welding.

Maintenance activities associated with system operation, such as lubrication, would occur at each of the proposed MSFs and TPSS locations for the alignment. Pollutants (e.g., petroleum products/lubricants, metals, paints, and solvents) used or generated during operations and maintenance would contribute to water pollution if not properly dispensed, stored or disposed. Uncontrolled discharge of runoff carrying these potential pollutants would result in impacts to water quality in waterways, including the Pacoima Wash, Encino Creek, Ballona Creek, and the Los Angeles River, violating water quality standards and waste discharge requirements if not appropriately managed.

The potential for different operational effects between the Project alternatives related to surface water quality are minor due to the comprehensive permitting requirements associated with water quality. The Project alternatives with potential to generate the most surface runoff have the highest potential to impact water quality. These would be Alternatives 1 and 3, with Alternatives 4, 5, 6, and likely Modified Alternative 5 having less potential for surface water effects. However, the potential impacts would be equally minimized with adherence to existing regulations and proper implementation of stormwater compliance requirements.

Construction Effects

Construction activities such as demolition, excavation, and grading would temporarily expose bare soil, increasing the risk of erosion. Uncontrolled erosion and discharge of sediments and other potential pollutants, including the discharge of fill material, would affect water quality in receiving waters (e.g., the Pacoima Wash, Tujunga Wash, and Los Angeles River) if not appropriately managed by proper implementation of the construction SWPPP. In addition to sediments, other pollutants, including trash, concrete waste, and petroleum products, such as fuels, solvents, and lubricants, would degrade water quality and contribute to water pollution if not appropriately managed. The use of construction equipment and vehicles during the construction would result in spills of vehicle-related fluids that would contribute to water pollution. Improper handling, storage, or disposal of these materials or improper cleaning and maintenance of equipment would result in accidental spills and discharges that would contribute to water pollution.

Groundwater levels in the Project Study Area generally range from depths of approximately 16 to 115 feet below ground surface (bgs), with deeper groundwater at the base of the Santa Monica Mountains and shallower groundwater south of Victory Boulevard. Removal of nuisance groundwater that seeps into boreholes during construction may be required for pile installations. If dewatering is required during surface-based construction activities, dewatering activities would be conducted in compliance with the Los Angeles Regional Water Quality Control Board's (LARWQCB) NPDES dewatering permits, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order R4-2018-0125) (LARWQCB, 2018) and Waste Discharge Requirements for Specified Discharges to Groundwater in the Santa Clara River and Los Angeles River Basins (Order No. 93-010) (LARWQCB, 1993), as applicable. In such cases, temporary pumps and filtration systems would be used in

compliance with the applicable NPDES permits. The temporary system would be required to comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. Water removed from the boreholes would be containerized and analyzed to determine the proper disposal method or possible treatment and re-use on-site. The treatment and disposal of the dewatered water would occur in accordance with the requirements of NPDES Order R4-2018-0125 and Order No. 93-010, as applicable. The waste discharge requirements require that waste be analyzed prior to being discharged in order to determine if it contains pollutants in excess of the applicable Basin Plan water quality objectives. Or if possible, the dewatered water would potentially be treated and reused on-site (e.g., for dust control or cleaning equipment) rather than being disposed.

There is potential for groundwater to be encountered during tunnel boring activities in areas where the tunnel invert is below groundwater level; however, proposed tunnel boring activities would not be expected to require dewatering, because tunnel boring would involve a closed mode machine that would operate under the water table, and a precast concrete tunnel liner (designed for full hydrostatic pressure) would be installed post-excavation. Both of these features would substantially reduce (if not eliminate) groundwater ingress during construction. The watertight systems (e.g., secant pile, slurry wall) to be employed during station construction would minimize groundwater intrusion, and any residual impacts would be managed under the established regulatory framework.

Improper handling, storage, or disposal of construction materials used during construction activities of underground components, such as sediments, concrete waste, grouting materials, and petroleum products, would result in accidental spills and discharges that would contribute to groundwater pollution. Grouting operations, in particular, may involve the use of chemical additives and materials that, if not properly contained, could infiltrate groundwater or surface water systems. These materials may include bentonite, cement-based grouts, and chemical additives, which could alter water chemistry if discharged improperly. Uncontrolled discharge of groundwater carrying these potential pollutants would result in degradation of groundwater and surface water if it is not properly managed during construction activities. If groundwater containing contaminants is encountered during dewatering activities, additional treatment or special disposal methods would be required to comply with applicable regulatory requirements and prevent contamination of receiving waters. BMPs would be implemented to ensure proper containment and disposal of grouting materials and wastewater, as well as regular monitoring and adaptive management.

All Project alternatives would be required to comply with all applicable water quality protection laws and regulations at the federal, state, regional, and local levels, as well as commonly used industry standards. These include the CWA, Porter-Cologne Water Quality Control Act, State of California Antidegradation Policies, NPDES General Construction Permit requirements, the Municipal Separate Storm Sewer Systems (MS4) Permit, the NPDES Statewide Stormwater Permit and the Construction Site Best Management Practices Manual (Caltrans, 2024b), and the City of Los Angeles LID Ordinance. In addition, all Project alternatives would be required to comply with a Construction General Permit and/or Industrial General Permit to minimize potential effects to surface water bodies. These permitting programs were established by the SWRCB in accordance with CWA Section 402(p), which regulates municipal and industrial stormwater discharges under the NPDES program.

In accordance with mandated permitting requirements, all Project alternatives would be required to prepare and submit a construction SWPPP, which must be submitted to the SWRCB prior to construction and adhered to during construction. The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. BMPs categories include erosion control, sediment control, tracking control, wind erosion, stormwater and non-stormwater

management, and materials management. Although specific temporary construction-related BMPs would be selected at the time of SWPPP preparation, potential BMPs likely include fiber rolls, bonded-fiber matrix hydroseeding, soil furrowing, water bars and check dams for erosion control, inlet protection (sand/gravel bags and geotextiles) silt fencing, sediment traps/basins for sediment controls, soil berms around disturbed areas, phasing of soil disturbance during the wet season (i.e., limiting widespread grading), and implementation of Rain Event Action Plans for effectively managing erosion and pollutant discharge during significant rainfall events.

The potential for different construction effects between the Project alternatives related to surface water quality is minor due to the comprehensive permitting requirements associated with water quality. The Project alternatives with potential to generate the most surface runoff have the highest potential to impact water quality. These would be Alternatives 1 and 3. However, the potential for impacts would be equally minimized with adherence to existing laws and proper implementation of stormwater compliance requirements.

4.2.5.2 Drainage

The Project Study Area is urbanized and largely covered with impervious surfaces associated with areas of asphalt, concrete, buildings, and other land uses that concentrate storm runoff. Most local drainage networks are controlled by structural flood control measures. There is a large portion of the Project Study Area that is undeveloped, pervious lands in the open space area of the Santa Monica Mountains. The general stormwater drainage pattern in the southern portion of the Project Study Area is from north to south. The majority of stormwater runoff drains into the Los Angeles County Flood Control District Sepulveda Channel, which starts at the upper reach of the Ballona Creek Watershed as a large diameter storm drain pipe that crosses under the I-405 several times. It then transitions to a large drainage box culvert and then south of the Project Study Area to an open channel before connecting with Ballona Creek, which is a Los Angeles County Flood Control District flood control channel. The general stormwater drainage pattern in the northern portion of the Project Study Area in the Upper Los Angeles River Watershed is from south to north in developed storm drain systems. From the ridge of the Sepulveda Pass going north, the majority of Project Study Area stormwater drains to a Caltrans storm drain main line that connects to a Los Angeles County Flood Control District large drainage box culvert that discharges to the Los Angeles River, which is a Los Angeles County Flood Control District flood control channel.

Operational Effects

Alternatives 1 and 3 would primarily operate in the public ROW and on impervious/paved surfaces with the exception of stations constructed on landscaped areas and undeveloped hillsides. The proposed roadway modifications to the I-405 would increase impervious surfaces and stormwater runoff. Existing drainage systems would be modified or removed to accommodate the proposed roadway modifications. Alternatives 4, 5, 6, and Modified Alternative 5 would primarily operate in tunnels and have less potential to affect drainage patterns, although some components would be on the surface (e.g., the MSF). The Project alternatives would be designed to incorporate several sustainability features and would be required to comply with the LID standards, which would serve to reduce impervious area and promote infiltration, thereby reducing runoff needed for drainage. A LID Plan would identify the BMPs for the post-construction design as applicable (i.e., operational characteristics to control/treat runoff). LID design features would slow (detain or retain) stormwater, which would reduce the runoff volume discharged and decreases the peak runoff discharge velocity for design storms—also ultimately reducing the amount of stormwater runoff burden into the city's stormwater conveyance systems. As a result, less flow with fewer pollutants would be transported through the conveyance systems, and ultimately

into surface waters. Additionally, natural treatment of infiltrated runoff would occur, thereby improving exfiltrated water from LID and water quality additions to the groundwater table, including treatment for potential pollutants (e.g., petroleum products/lubricants, metals, paints, solvents, and other products) used or generated during operations.

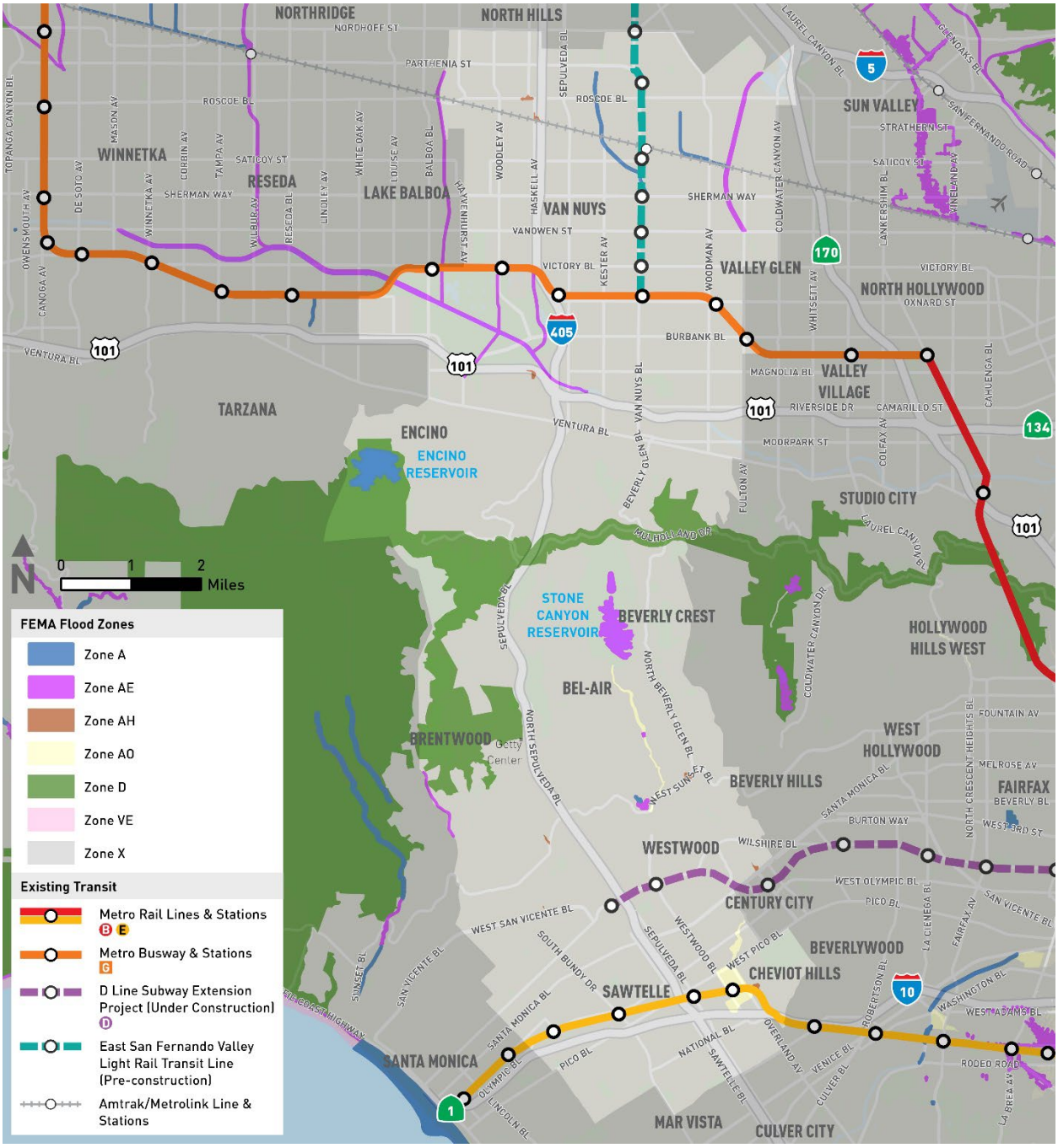
Construction Effects

Construction activities for all Project alternatives such as demolition of existing site structures and excavation for foundations would temporarily expose bare soil thereby affecting drainage. Construction of the proposed roadway modifications to the I-405 associated with Alternatives 1 and 3 would increase stormwater runoff along their respective alignments. Construction of the Stone Canyon Reservoir vent shaft and other ancillary facilities near the reservoir under Alternative 6 may temporarily affect the natural drainage pattern. Placement of construction equipment and materials may temporarily affect existing drainage patterns, which would be effectively managed by a properly implemented construction SWPPP. In accordance with the permitting requirements, all Project alternatives would be required to prepare and submit a construction SWPPP, which must be submitted to the SWRCB prior to construction and adhered to during construction. The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. BMPs categories would include erosion control, sediment control, tracking control, wind erosion, stormwater and non-stormwater management, and materials management with regular monitoring. Although specific temporary construction-related BMPs would be selected at the time of SWPPP preparation, potential BMPs would likely include fiber rolls, bonded-fiber matrix hydroseeding, soil furrowing, water bars, and check dams for erosion control, inlet protection (sand/gravel bags and geotextiles), silt fencing, sediment traps/basins for sediment controls, soil berming around disturbed areas, and phasing of soil disturbance during the wet season (i.e., limiting widespread grading) for effectively managing erosion and pollutant discharge during significant rainfall events. The potential for impacts would be equally minimized with adherence to existing regulations and proper implementation of design requirements.

4.2.5.3 Floodplains

Under EO 11988, all federal agencies are directed to avoid to the extent possible long-and short-term adverse impacts associated with the occupancy and modification of floodplains. In addition, federal agencies should avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The 100-year floodplain is defined as areas that will be inundated by the flood event having a one percent chance of being equaled or exceeded in any given year. The Federal Emergency Management Agency (FEMA) provides floodplain information to allow local jurisdictions to regulate development in and around floodplains through Flood Insurance Studies and their associated Flood Insurance Rate Maps. Figure 4-2 depicts all flood hazard zones within the Project Study Area.

Figure 4-2. FEMA Flood Zones



Source: Metro, 2025h

Operational Effects

All Project alternatives, including ancillary facilities, would primarily operate outside of the FEMA-designated 100-year floodplain. A small segment of the Project Study Area for all Project alternatives at the ridgetop of the Santa Monica Mountains, located at Mulholland Drive, and open space areas owned by Los Angeles County is located in an area of undetermined flood hazard. Other small portions within the Study Area and east of Overland Avenue are subject to inundation by a 1-percent-annual-chance of shallow flooding. There are no 500-year floodplains within the Project Study Area.

Los Angeles River and Ballona Creek are the major flood control measures for draining stormwater and directing it safely to the San Pedro Bay and Santa Monica Bay, respectively. The risk related to flooding is considered low because the Project alternatives are located along well-developed areas that maintain storm drainage and water runoff control. The Project alternatives would not alter the ability of floodways to convey the 100-year flows and there would be negligible change to the floodplain extents.

The Specific Plan for the Management of Flood Hazards (Flood Hazard Specific Plan) (Ordinance No. 172081, effective July 3, 1998) (City of Los Angeles, 1998) qualifies the City of Los Angeles to be in the Regular Status classification of the National Flood Insurance Program. This plan qualifies property owners for greater coverage limits and generally lower flood insurance premium rates. It establishes standards necessary to carry out the provisions and intent of the Specific Plan. The Flood Hazard Specific Plan requires specific construction limitations based on the location of the development in the Special Hazard Areas (Ordinance 172081, Section 5).

The Stone Canyon and Encino Reservoirs are located in the Santa Monica Mountains and have a one percent-annual-chance of flooding since they retain a significant amount of water. The Stone Canyon Reservoir is located approximately 1.3 miles from Alternatives 1 and 3 and the Encino Reservoir is located approximately 2.1 miles from Alternatives 1 and 3. Any oscillation and subsequent release of water in the reservoir as part of a seiche would not inundate Alternatives 1 and 3 given the distance from the reservoirs. Alternatives 4, 5, 6, and Modified Alternative 5 would be subterranean alignments and would not be subject to flooding from these reservoirs.

The potential for different operational effects between the Project alternatives related to flooding is minor because the alignments would primarily operate outside of the FEMA-designated 100-year floodplain. The potential for impacts to flooding would be minimal for all Project alternatives.

Construction Effects

Similar to operational impacts, all Project alternatives, including ancillary facilities, would primarily be constructed outside of the FEMA-designated 100-year floodplain. The potential risk related to flooding is low because the Project alternatives are located along well-developed areas that maintain storm drainage and water runoff control. Related to Alternative 6, construction activities during construction of the Stone Canyon Reservoir vent shaft and other ancillary facilities near the reservoir may temporarily increase the potential for a release of construction-related pollutants during inundation.

4.2.5.4 Groundwater

The Project Study Area is within the San Fernando Valley Groundwater Basin and Santa Monica Subbasin within the Coastal Plain of Los Angeles. The Sustainable Groundwater Management Act designated the Santa Monica Subbasin as medium priority, and the San Fernando Valley Groundwater Basin as very low priority based on the basin prioritization. Sources of water supply in Los Angeles County include groundwater.

Operational Effects

Surface-based operations for the Project alternatives would not result in groundwater extraction or use of groundwater supply. The Project alternatives would not decrease groundwater supplies or interfere substantially with groundwater recharge to the extent that they may impede sustainable groundwater management. Depending on final design features, exfiltration from LID BMPs may improve groundwater recharge characteristics in the Project Study Area.

Specific to Alternatives 4, 5, 6, and Modified Alternative 5, operation of underground stations and tunnels would not be expected to impact groundwater supplies or groundwater recharge. A precast concrete tunnel liner designed for full hydrostatic pressure would be installed post-excavation, which would substantially reduce (if not eliminate) groundwater ingress during operations. Groundwater intrusion into underground facilities is not anticipated. These alternatives would be designed to incorporate several sustainability features, such as pervious pavement, native landscaping/soil improvements, landscaped stormwater conveyance, on-site retention, and other appropriate and applicable design features that serve to capture, treat, and re-use stormwater in compliance with current LID requirements, promoting infiltration and groundwater recharge (after treatment). These measures and practices would be incorporated at applicable component sites. The Project alternatives would be required to comply with all applicable federal, state, regional, and local agency water quality protection laws and regulations, and water quality control and/or sustainable groundwater management plans. Additionally, operation of the underground stations would not involve the extraction of any groundwater. Therefore, these Project alternatives would not be expected to result in a decrease in groundwater supplies or interfere substantially with groundwater recharge to the extent that they may impede sustainable groundwater management. Depending on final design features, exfiltration from LID/treatment BMPs is anticipated to improve groundwater recharge characteristics of the area. Additionally, natural treatment of infiltrated runoff would occur, thereby improving exfiltrated water from LID and water quality additions to the groundwater table.

Construction Effects

Groundwater levels in the Project Study Area generally occur at depths ranging from approximately 20 to 110 feet bgs, with deeper groundwater depths occurring at the base of the Santa Monica Mountains. Construction depths associated with Alternative 1 range just below surface level to 80 feet below pile depth. The train tunnels would be deeper than 100 feet except near stations.

Where needed, temporary pumps and filtration systems would be used for dewatering in compliance with the NPDES permit. This includes the removal of nuisance water from the Stone Canyon Vent Shaft constructed for Alternative 6. Dewatering activities have the potential to lower the groundwater table and contaminate groundwater resources. Contaminated groundwater may contain pollutants listed for Reach 5 of the Los Angeles River and Ballona Creek on the 2020 - 2022 303(d) list. Dewatering activities, including those associated with grouting, would be conducted in accordance with applicable regulations. Removal of nuisance seepage water from the boreholes would be conducted in compliance with relevant NPDES requirements related to construction and discharges from dewatering operations. Nuisance water would be containerized and analyzed consistent with existing applicable regulations to determine the proper disposal method. The treatment and disposal of the dewatered water would occur in accordance with the requirements of the LARWQCB's Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (LARWQCB, 2018). The potential for impacts to groundwater would be minimized with adherence to existing regulations.

4.2.6 Visual Resources

This summary addresses scenic vistas, scenic resources, visual quality and character, and light and glare. Refer to the Sepulveda Transit Corridor Visual Quality and Aesthetics Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025i).

4.2.6.1 Scenic Vistas

The term "scenic vista" refers to visual access to, or the visibility of, a particular sight from a given vantage point or corridor. The subjects of valued or recognized views may be focal (meaning of specific individual resources), or panoramic (meaning broad geographic area). Panoramic views are typically associated with scenic vistas that provide a sweeping geographic orientation.

Scenic views within the Project Study Area include the Santa Monica Mountains, hillsides, and the Los Angeles River. Sweeping views of the Santa Monica Mountains and hillsides are considered panoramic and can be seen from designated vantage points, public hiking trails, and public ROW. Panoramic views from the "flatlands" are not readily available, due to the existing street grid pattern and built environment. Rather, panoramic vantage points are primarily located within hilly areas. The Stone Canyon Overlook is located on the south side of Mulholland Drive and provides panoramic south-facing views of the Santa Monica Mountains and the Stone Canyon Reservoir. In addition, the Johnson Overlook is located north of the Stone Canyon Reservoir on the north side of Mulholland Drive. Visitors can take in north-facing views of the Valley, and the Santa Susana and San Gabriel Mountains. These views represent the scenic views available from various publicly accessible locations in the Santa Monica Mountains, and other hilly areas within the Project Study Area. The perspective and visibility may change depending on various factors, such as the viewer location, elevation, bad air quality, or weather. Limited focal views of the Santa Monica Mountains and the hillsides within the lower areas are available along various north-south streets and I-405. However, most of the views to the Santa Monica Mountains and the hillsides are blocked by intervening buildings, street trees, and, on some streets, overhead utility lines. In summary, public panoramic and focal scenic views are currently available in the Project Study Area, but the quality of the views can vary significantly.

Operational Effects

The aerial components associated with Alternatives 1, 3, and 4 would present new vertical features in the landscape that would be highly visible. However, views of the San Gabriel Mountains and Santa Monica Mountains would not be substantially obscured and would continue to be limited by the surrounding urban development. As such, views of scenic vistas would not be substantially affected with implementation of Alternatives 1, 3, and 4. Alternative 4 components that would primarily be located underground would not block views of scenic vistas. The primary visual elements of Alternatives 5, 6, and Modified Alternative 5 would be station entrances and the MSF sites. Views of the proposed stations would be limited, and the low-rise structures would not be visually obtrusive. Views of scenic vistas would not be obstructed. Alternative 6 would also construct a mid-mountain vent shaft facility within the Santa Monica Mountains and would be visible from limited vantage points in the surrounding residential areas. Although the proposed mid-mountain vent shaft facility is a large structure that would be introduced into the visual environment, the mid-mountain vent shaft would not change the natural topography or obstruct views of the Santa Monica Mountains as a whole.

Construction Effects

Construction activities generally cause a contrast to and disruption in the general order and aesthetic character of an area. Although temporary in nature, construction activities may create a visually

unappealing quality in a community. Construction of each of the Project alternatives would introduce visually disruptive elements, including excavation, roadway/bridge demolition and reconstruction, structural falsework, tree removal, security fencing, stockpiled building materials, safety and directional signage, station platforms and plazas, and ancillary facilities. Large, heavy equipment may include cranes, bulldozers, scrapers, and trucks. These construction activities could be visible to pedestrians and motorists on adjacent streets, as well as to viewers within nearby buildings. Construction activities, while a visual nuisance, would not substantially obstruct views of the Santa Monica Mountains or San Gabriel Mountains because activities would be temporary and intermittent and limited to the immediate area.

4.2.6.2 Scenic Resources

Scenic resources include striking or unusual natural features, the Pacific Ocean, Santa Monica Mountains, and San Gabriel Mountains, and unique urban or historic features as seen from designated scenic highways. No California-designated scenic highways or scenic parkways (or proposed state scenic highways or parkways) are located within the Project Study Area. Additionally, no State of California-designated scenic highways provide views of the Project Study Area. The closest eligible state scenic highway is State Route 1 (SR-1) (the Pacific Coast Highway in Southern California), which is approximately 2 miles west of the Project Study Area, and the closest officially designated state scenic highway is State Route 27 (SR-27) (Topanga Canyon Boulevard), which is approximately 6 miles west of the Project Study Area.

Operational Effects

The aerial guideway for Alternatives 1, 3, and 4 would travel through designated scenic portions of Sepulveda Boulevard, Santa Monica Boulevard, Sherman Way, and Mulholland Drive. The aerial guideways would not travel through the designated scenic portion of Beverly Glen Boulevard or Sunset Boulevard. Sepulveda Boulevard provides views of the old cross mountain road with a tunnel that travels under Mulholland Drive, as well as views of mountains and the valley. Sherman Way provides views of scenic resources, such as a wide street and landscaped median, as well as the Sherman Way Street Trees historical resource located along Sherman Way between Woodley Avenue and Sherman. No specific scenic features or resources are listed for Santa Monica Boulevard. The proposed aerial guideway has been designed to travel along or parallel to I-405, and it is expected that visual change associated with the aerial guideway at these locations would not be readily noticeable given the existing structures associated with I-405 and background conditions.

In addition, the aerial guideway for Alternatives 1 and 3 would travel beneath the designated scenic Mulholland Drive Bridge, which provides opportunities for multiple scenic views as it winds up the Santa Monica Mountains. Specifically, the City of Los Angeles Mobility Plan 2035 (DCP, 2016) states that Mulholland Drive provides panoramic views and a “ribbon of park.” Development near Mulholland Drive is also subject to design review guidelines pursuant to the Mulholland Scenic Parkway Specific Plan (DCP, 2026). The Mulholland Scenic Parkway Specific Plan has designated 14 major vista points along Mulholland Drive that are maintained by the City of Los Angeles Bureau of Street Services. The inner corridor of the Mulholland Scenic Parkway Specific Plan area is designated as part of the SMMNRA, and the Mountains Recreation and Conservation Authority (MRCA) also maintains seven scenic overlooks along Mulholland Drive. The nearest major vista point (also the nearest overlook) is the Johnson Overlook, which is located approximately 0.9 miles east of the Alternatives 1 and 3 alignments. The nearest MRCA-maintained scenic overlook is The Groves Overlook, which is located approximately 1 mile west of the Alternatives 1 and 3 alignments. The alignments for Alternatives 1 and 3 would not be

visible from the Johnson Overlook or the Groves Overlook due to distance, vegetation, existing structures (i.e., I-405), and background conditions.

For Alternatives 1 and 3, the proposed aerial guideways have been designed to travel along or parallel to I-405, and it is expected that visual change associated with the aerial guideway would not be readily noticeable given the existing structures associated with I-405 and background conditions. In addition, the aerial guideways would not be located on Mulholland Drive, which provides protection to potential views of scenic resources. Alternatives 1 and 3 would also meet all of the requirements and obligations of the City of Los Angeles in ensuring preservation of a number of important values related to Mulholland Drive.

For Alternatives 3 and 4, the aerial guideway would travel through the City of Los Angeles-designated scenic highway along Sunset Boulevard, which provides views of the mountains, estates, and the UCLA campus. However, this portion of the alignment would be located underground and any potential views of the station entrance of the UCLA Gateway Plaza Station would be minimal from Sunset Boulevard.

Alternative 4 would travel beneath designated scenic portions of Sepulveda Boulevard, Santa Monica Boulevard, Sunset Boulevard, and Mulholland Drive. Alternative 4 does not travel through the designated scenic portion of Beverly Glen Boulevard. Sepulveda Boulevard provides views of the old cross mountain road with a tunnel that travels under Mulholland Drive, as well as views of mountains and the valley. Sunset Boulevard provides views of the mountains, estates, and the UCLA campus. No specific scenic features or resources are listed for Santa Monica Boulevard.

Construction Effects

No scenic highways, scenic parkways, or proposed state scenic highways or parkways are located within the Project Study Area. The Project alternatives would require tree removal during construction, which would create noticeable changes, exposing previously screened views of infrastructure and construction sites. However, these changes would be temporary and would not be located within a state scenic highway.

4.2.6.3 Visual Quality and Character

Visual character is used to describe, not evaluate, the following: form, line, color, texture, dominance, scale, diversity, and continuity. Visual quality refers to the aesthetics of the landscape, which is based in part on the viewer's values and notions about what constitutes a quality setting. Table 4-13. lists six generalized landscape units, or landscapes within the Project Study Area, and the summaries of the visual characters. The visual descriptions are based on public views, meaning what is visible from a sidewalk, roadway, or other public ROW. Figure 4-3 illustrates the boundaries of the areas assessed for visual character and quality.

Table 4-13. Landscape Unit Visual Character

Landscape Unit	Extent	Key Views	Summary
1	National Boulevard to Ohio Avenue	Century City, Interstate 405	The primary viewers consist of motorists, pedestrians, residents, transit commuters, and patrons of commercial businesses. Visual impacts are assessed based on changes to views from publicly accessible locations or public views.
2	Ohio Avenue to Sunset Boulevard	Century City, Santa Monica Mountains, Federal Building, Westwood Recreation Center, Bad News Bears Field, Los Angeles National Cemetery, buildings along Wilshire Boulevard, University of California, Los Angeles campus, I-405	The primary viewers consist of motorists, pedestrians, patrons of commercial businesses, and patrons of UCLA. Distant north-facing views of the Santa Monica Mountains are from north–south oriented streets. UCLA patrons also have background views of Century City from certain areas of the main campus.
3	Sunset Boulevard to Mulholland Drive	Santa Monica Mountains, Getty Center, Mulholland Drive, Stone Canyon Reservoir, undeveloped land	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. A portion of the Mulholland Drive is located in this area. Views consist of the Santa Monica Mountains, Century City, the Valley, and the Stone Canyon Reservoir. On clear days, it may be possible to see the Pacific Ocean.
4	Mulholland Drive to US-101	Santa Monica Mountains, Mulholland Drive, Stone Canyon Reservoir, undeveloped land	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. A portion of the Mulholland Drive is also located in this area. Looking north from Mulholland Drive, views consist of the Santa Monica Mountains in the foreground and middle ground and Van Nuys in the background. In addition, long-range views of the San Gabriel Mountains to the north are also visible from certain portions of Mulholland Drive where there is limited vegetation.

Landscape Unit	Extent	Key Views	Summary
5	US-101 to Victory Boulevard	San Gabriel Mountains, Los Angeles River, I-405, US-101	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. Views in the southern portion of the area looking south are predominately of the elevated segment of US-101. Long-range views of the Santa Monica Mountains are also visible in some areas, but they are few because of the relatively flat topography and intervening urban development. Public views of the Los Angeles River from the surrounding Project Study Area are obscured by existing development and are generally not available except on Hazeltine Avenue just south of the US-101 overpass. Typical views include the Van Nuys Boulevard and Sepulveda Boulevard commercial corridors and views of I-405 are also visible from Sepulveda Boulevard. Traveling north along Van Nuys Boulevard and Sepulveda Boulevard, long-range views of the San Gabriel Mountains are visible. In addition, traveling south, long-range views of the Santa Monica Mountains are visible.
6	Victory Boulevard to LOSSAN rail corridor ROW	San Gabriel Mountains, Los Angeles River, I-405, LOSSAN rail corridor ROW	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. Typical views include the Van Nuys Boulevard commercial corridor, which is bordered by parking areas, sidewalks, street trees, commercial buildings, and additional buildings visible in the background. Traveling north along Van Nuys Boulevard, long-range views of the San Gabriel Mountains are visible. Traveling south, long-range views of the Santa Monica Mountains are visible; however, views of the Santa Monica Mountains are dominated by other features in the landscape.

Source: Metro, 2025i

Figure 4-3. Visual Areas of Analysis



Source: Metro, 2025i

Operational Effects

The Project alternatives would be located in an urbanized area. The zoning ordinances governing scenic quality of each jurisdiction do not directly regulate the design of transportation infrastructure elements. However, the zoning ordinances, general plans, community plans, and specific plans contain overarching policies that govern the aesthetics of the area. These policies ensure that new development aligns with the community's visual and architectural standards. Additionally, the jurisdictions do not have policies or regulations that specifically govern visual quality during construction activities. The Project alternatives would be designed to be consistent with all Metro policies related to visual resources, including the Metro Systemwide Station Design Standards Policy.

Aboveground Project elements would result in visual contrasts. These elements, including aerial guideways and soundwalls, would be relatively the same height as the existing transportation infrastructure (i.e., I-405 freeway, elevated freeway ramps) and commercial structures, which are already experienced in the existing conditions. For example, Figure 4-4 shows the before and after simulation for Alternatives 1 and 3 looking south toward I-405 and the Skirball Center on the right. Because of the highly urban characteristics of the area, these railway structures are typically more visually tolerable. As such, these facilities would be similar to existing transportation infrastructure and commercial structures that already exist in the urban landscape and would not be visually disruptive or incompatible with existing public views. Therefore, the Project alternatives would not substantially degrade the existing visual character or quality of public views of the site and surroundings.

Figure 4-4. Before and After Simulation View, View Looking South Toward I-405 and the Skirball Center on the Right



Source: HTA, 2024

For Alternative 1, the Federal Building, listed in the National Register of Historic Places (NRHP), is located adjacent to the Wilshire Boulevard/Metro D Line Station. The aerial structure on the western side of I-405 would not substantially limit views of the Federal Building. The new aerial structure would introduce a new visual element but would not change the visual character of the building or materially impair its ability to convey its historic significance. The alteration of the setting with the new visual element of the aerial structure would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Due to the highly urbanized characteristics of the area, the aerial structures are generally more visually tolerable. As such, no impacts to the Federal Building are anticipated because these facilities would be similar in scale and appearance to existing transportation infrastructure and commercial structures within the urban landscape. They would not be visually disruptive or incompatible with existing public views of the Federal Building, and they would not impair its historic significance.

For Alternatives 3, 4, 5, 6, and Modified Alternative 5, the proposed UCLA Gateway Plaza Station would not be highly visible and would be complementary and appropriate to the scale and character of the existing buildings on the UCLA campus (Figure 4-5). The UCLA Physical Design Framework describes the approach for development of buildings, infrastructure, and landscape on the campus within the context of the physical planning objectives contained in the UCLA Plan (UCLA, 2018). The setting would be similar to existing infrastructure and commercial structures that already exist in the urban landscape and would not be visually disruptive or incompatible with the UCLA Design Framework. As such, the aboveground components would be similar to infrastructure that already exists in the urban landscape and would not be visually disruptive or incompatible.

Figure 4-5. Before and After Simulation View, View Looking Southeast Toward the Primary Station Entrance of the UCLA Gateway Plaza Station



Source: HTA, 2024

The Alternative 4 tunnel portal would be rectangular-shaped passageway structures without a dissipative design that would blend into the natural topography of the hillside. The tunnel portals would not be visually obtrusive. The portal construction may leave the concrete structure surfaces, shotcrete surfaces, and freshly cut rock surfaces at the portal site permanently exposed. However, these exposed surfaces may be treated to appear naturally formed and weathered to help blend into the surrounding environment.

Alternative 6 would operate underground; however, the Mid-Mountain Vent Shaft structure would be a new visible aboveground structure (Figure 4-6). 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. Although the proposed Mid-Mountain Vent Shaft would be a large structure that would be introduced into the visual environment, the Mid-Mountain Vent Shaft would not change the natural topography of the Project Study Area. The graded access road would be distantly visible. In addition, the Mid-Mountain Vent Shaft structure and associated graded access road would not obstruct views of or alter the visual character and quality of the Santa Monica Mountains, because the Mid-Mountain Vent Shaft structure and the associated access road would be largely obstructed by existing trees and other dense vegetation within the Santa Monica Mountains. Modified Alternative 5 would not include this Mid-Mountain Vent Shaft structure.

Figure 4-6. Before and After Simulation View, View Looking South Toward the Vent Shaft and Stone Canyon Reservoir



Source: HTA, 2024

Construction Effects

Construction activities would include similar equipment to other construction projects in the City of Los Angeles, such as mid-rise buildings and other transportation infrastructure. Certain areas may be fenced off with construction barriers and sound walls, resulting in a contrast and change in visual character from the existing conditions. MM AES-1 would include temporary privacy screens to minimize impacts from construction barriers and sound walls. In addition, the designated construction areas along the alignment would experience additional truck traffic compared to existing conditions, with trucks moving materials on- and off-site, and work crews and construction equipment moving around the alignment and between Project components. A portion of the Alternatives 1 and 3 alignment includes a line of mature trees presently between I-405 and Firmament Avenue, which would be removed to accommodate the placement of the proposed aerial guideway infrastructure. Implementation of MM BIO-11 would minimize potential impacts associated with Alternatives 1 and 3 by requiring the preparation and implementation of a tree removal and replacement plan, ensuring that removed trees are replaced with appropriate vegetation to maintain visual connectivity and minimize long-term visual disruption caused by tree removal. MM BIO-12 is similar to MM BIO-11, although specific to Alternatives 4 and 5. MM BIO-13 is similar to MM BIO-11, although specific to Alternative 6. It is anticipated that Modified Alternative 5 would require a similar measure to MM BIO-11.

4.2.6.4 Light and Glare

North of US-101, the Project Study Area is generally located within the Sherman Oaks and Van Nuys neighborhoods of the City of Los Angeles, and encompasses commercial, industrial, and residential development with ambient nighttime lighting typical of urbanized settings. Common light sources include the streetlights, vehicle lights, building entrance lighting, parking structure lighting, illuminated signage/billboards, and general illumination from lights shining through windows of structures lining the Sepulveda Corridor.

South of US-101, nighttime lighting is more limited in the Santa Monica Mountains. In the developed portions of the Santa Monica Mountains, lighting sources include pedestrian-scaled streetlights, security and decorative wall lighting at residential homes, vehicle headlights, and interior building illumination. By contrast, the undeveloped portions of the Santa Monica Mountains have little to no light or glare sources, other than vehicle headlights.

South of Sunset Boulevard, the Project Study Area is generally located within Westwood and West Los Angeles neighborhoods of the City of Los Angeles, as well as within the City of Santa Monica. The adjacent commercial, industrial, and residential development, as well as cultural and institutional facilities, such as the UCLA campus, contribute to ambient nighttime lighting typical of urbanized settings. As mentioned in the preceding paragraphs, light sources include the streetlights, vehicle lights, building entrance lighting, parking structure lighting, illuminated signage/billboards, and general illumination from lights shining through windows of structures lining the Sepulveda Corridor.

Operational Effects

Each of the Project alternatives would include several elements (e.g., glass or metal surfaces) that would create new sources of glare at proposed station areas during the day. For all Project alternatives, new nighttime light would primarily emanate from station areas (e.g., station plazas, TPSSs, entryways, platforms, and parking facilities), which would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights, and parking facilities) currently exist. For Alternatives 1 and 3, lighting from monorail vehicles on aerial structures is not expected to extend beyond the aerial guideway or roadway ROW. In accordance with Metro's Rail

Design Criteria, or equivalent, all light sources at the proposed surface parking lots and stations would be directed downward to minimize potential spillover onto surrounding properties, including light-sensitive uses. In addition, according to Metro's Rail Design Criteria and the Systemwide Station Design Standards Policy, Metro's design principles aim to keep illumination and glare from striking adjacent properties, where feasible. Compliance with these requirements would ensure that permanent operations-related light sources at the proposed station areas would be directed downward or feature directional shielding to minimize spillover onto adjacent properties, including residential uses and other light-sensitive uses.

Construction Effects

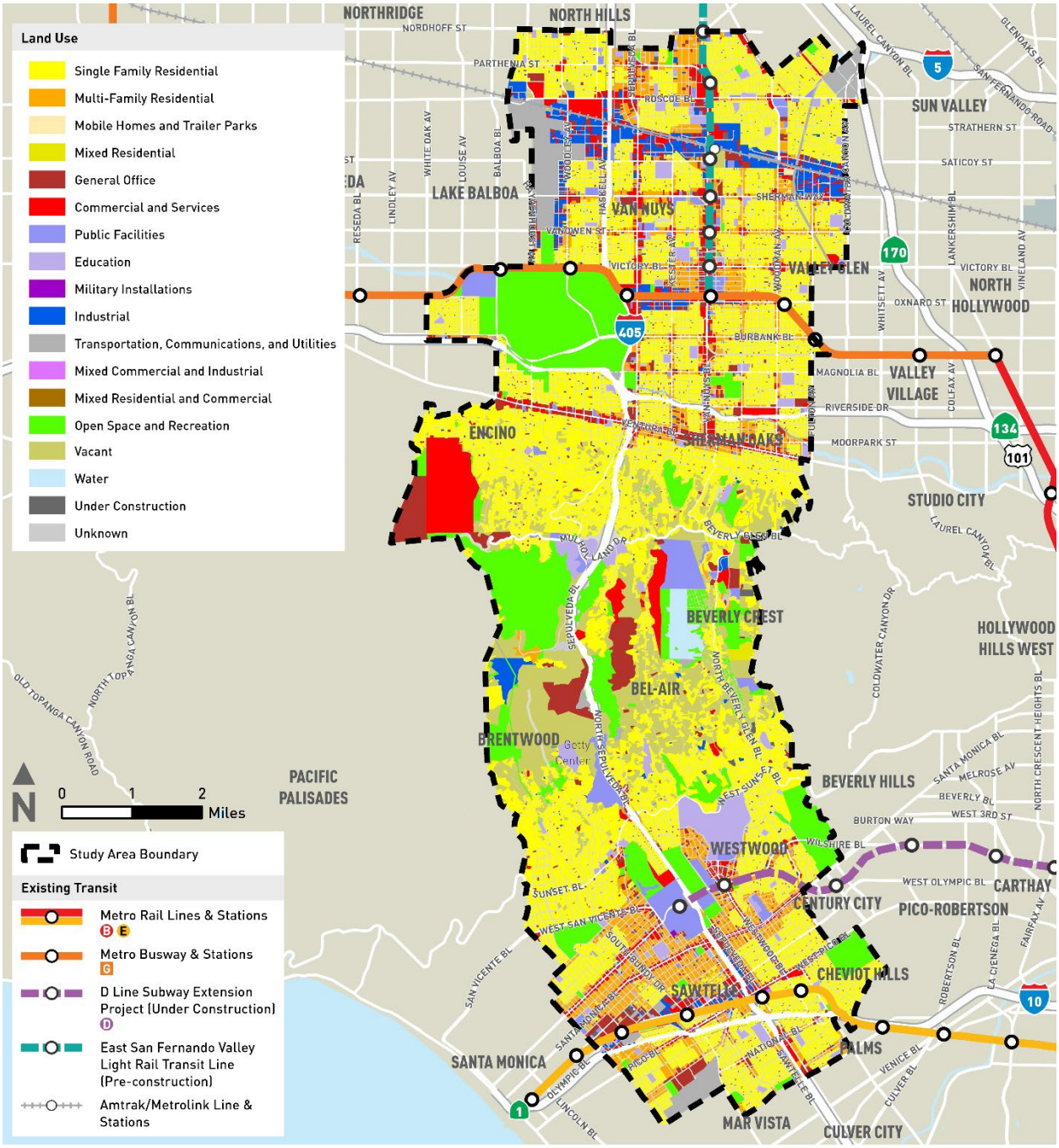
Construction activities associated with each of the Project alternatives would primarily occur during daytime hours, with nighttime construction a possibility for I-405. Nighttime and weekend construction, if any, would comply with local ordinance restrictions. Such activities may include, but are not limited to, tunneling, columns and trackwork, and stockpiling materials. Construction lighting would be directed toward the construction areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. In addition, construction-related illumination would be temporary and limited to safety and security purposes. Construction of the aerial guideway, freeway modifications, and aerial stations as part of the Project alternatives would not be a substantial source of light and glare as several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination).

4.2.7 Land Use

The following summary addresses land uses in the Project Study Area and Project consistency with land use plans. Refer to the Sepulveda Transit Corridor Land Use and Development Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025j).

While residential land uses are spread throughout the Project Study Area, commercial land uses (both retail and office) that support high levels of employment tend to be clustered in a limited number of geographic areas, primarily in the Westside area. This type of land use pattern can result in frequent travel by residents outside of their communities for work, leisure, or educational purposes. Patterns of population and employment density follow from the distribution of land uses: areas with high concentrations of residential land uses, particularly multi-family residential uses, have high population densities; similarly, areas with high concentrations of commercial land uses, particularly office uses, have high employment densities. Existing land uses within the Project Study Area are shown on Figure 4-7. They include single- and multi-family residential, commercial and services, industrial, open space and recreation, facilities, general office, mixed commercial and industrial, and mixed residential and commercial.

Figure 4-7. Existing Land Use Within the Project Study Area



Source: Metro, 2025j

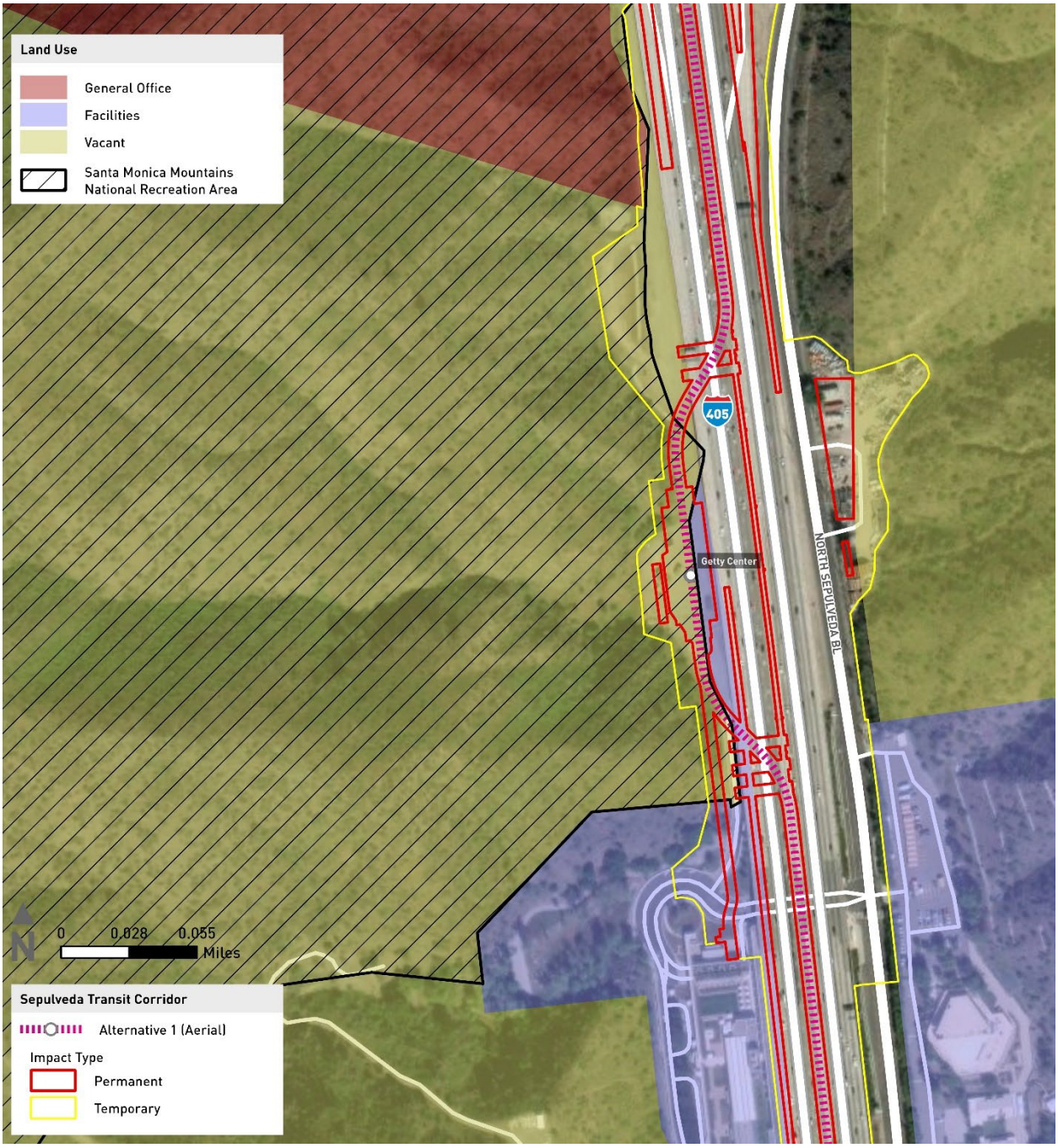
Operational Effects

Each of the Project alternatives supports goals and policies identified in local land use plans that prioritize public transportation improvements and reductions of vehicle trips. The Project is identified in SCAG's 2024-2050 RTP/SCS Project List (SCAG, 2024). The Project supports the 2024-2050 RTP/SCS goal to provide a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern.

The Project would support the public transportation Goal 10 to "develop a public transit system that improves mobility with convenient alternatives to automobile travel" and Objective 10-2 to "increase the work trips and non-work trips made on public transit" in accordance with the Brentwood-Pacific Palisades Community Plan (DCP, 1998a). Furthermore, the Project would support Objective 11-1 in the Van Nuys-North Sherman Oaks Community Plan (DCP, 1998b), which is "to encourage…rail facilities." Additionally, Policy 11-2.1 intends to "develop an intermodal mass transportation plan to implement linkages to future rail service." Related to the Bel Air-Beverly Crest Community Plan (DCP, 1996), the Project would be supportive of the community's objective to "proposed a public transportation corridor in the vicinity of the San Diego Freeway and Sepulveda Boulevard. This corridor should be utilized for appropriate public transportation. There is a need, through continuing studies, for finding means of facilitating cross-mountain transportation." Related to the West Los Angeles Community Plan (DCP, 1999), the Project would be supportive of the community's Goal 11 to "encourage alternative modes of transportation over the use of single occupant vehicles to reduce vehicular trips." Additionally, Policy 11-1.4 seeks to "promote the development of transportation facilities and services that encourage transit ridership, increase vehicle occupancy, and improve pedestrian and bicycle access."

Alternatives 1 and 3 would conflict with the Santa Monica Mountains Comprehensive Plan (Santa Monica Mountains Comprehensive Commission, 1979) and the Brentwood-Pacific Palisades Community Plan and Van Nuys-North Sherman Oaks Community Plan (DCP, 1998a, 1998b). Alternatives 1 and 3 would acquire open space properties within the Santa Monica Mountains, which would conflict with Policy 4-1.1, which states that "natural resources should be preserved… on state parkland" as presented in the Brentwood-Pacific Palisades Community Plan (DCP, 1998a). Figure 4-8 shows the open space land that would be acquired for the Getty Center Station under Alternatives 1 and 3. Specific to Alternatives 1 and 3, the acquisition of open space for the proposed aerial guideway and stations, TPSS site locations, and retaining walls in the Santa Monica Mountains would not be consistent with the Santa Monica Mountains Comprehensive Plan (Santa Monica Mountains Comprehensive Commission, 1979). The priority for the Resource Protection Policy within the Conservation Element of the Santa Monica Mountains Comprehensive Plan states that: "the natural resources of the Santa Monica Mountains should be protected. To the extent possible, all development should be compatible with this goal. Conflicts between development and natural resource values should be resolved by giving priority to protecting the resource unless benefits of overriding regional importance would otherwise be lost." The proposed aerial alignment, stations, and TPSS site locations for Alternative 1 would conflict with the Resource Protection Policy of protecting natural resources of the Santa Monica Mountains.

Figure 4-8. Alternatives 1 and 3: Open Space Acquired for Getty Center Station



Source: Metro, 2025j

Alternative 1 would require a partial acquisition of the Teichman Family Magnolia Park in Sherman Oaks, which is designated and preserved as open space and recreational. Implementation of Alternative 1 would conflict with Objective 5-1 of the Van Nuys-North Sherman Oaks Community Plan that seeks "to preserve existing open space resources and where possible develop new open space." The conversion of land uses proposed by Alternative 1 would conflict with the applicable LAMC requirements.

The Alternative 4 alignment would travel west of Sepulveda Boulevard for approximately 1,680 feet between Del Gado Drive just south of the I-405 northbound Sepulveda Boulevard off-ramp and Greenleaf Street. This portion of the alignment of Alternative 4 would acquire single-family residences and the Highland at Sherman Oaks apartment building, which the City of Los Angeles designates as single- and multi-family residential, respectively and public facilities to accommodate the proposed footprint where the underground tunnel transitions to an aerial guideway and straddle bents to support the Ventura Boulevard Station. Alternative 4 would support Objective 11-1 in the Van Nuys-North Sherman Oaks Community Plan, which is "to encourage…rail facilities," and Policy 11-2.1, which seeks to "develop an intermodal mass transportation plan to implement linkages to future rail service."

Alternatives 1, 3, 4, 5, and 6 include an MSF that conflicts with LADWP plans that identify the site for the Mid-Valley Water Facility project. For Alternatives 1 and 3, the location proposed for MSF Design Option 1 would avoid this conflict. The MSF for Modified Alternative 5, selected by the Metro Board of Directors as the LPA, would also avoid conflicting with the Mid-Valley Water Facility project.

Modified Alternative 5 would not conflict with LADWP Stone Canyon facilities. However, specific to Alternative 6, the land use identified for the proposed access road and ventilation shaft located east of the Stone Canyon Reservoir is designated as restricted public open space (Santa Monica Mountains Comprehensive Commission, 1979) and open space (SCAG, 2024). However, the areas surrounding the Stone Canyon Reservoir include built up features, including the access road and supporting building; therefore, Alternative 6 would not conflict with existing land uses or policies for preserving open space resources located within the Santa Monica Mountains. The elements of Alternative 6 would be generally consistent with future commercial, industrial, mixed residential and commercial, and public facilities land uses.

The proposed belowground UCLA Gateway Plaza Station would be consistent with the UCLA Plan (UCLA, 2018) in providing better transit and pedestrian access for its students, staff, and visitors, including closer access to the hospital facilities.

Each of the Project alternatives would generally be consistent with regional and local transportation goals and policies of providing enhanced transportation access and reducing pollutant emissions. Alternatives 1 and 3 would conflict with the Brentwood-Pacific Palisades and Van Nuys-North Sherman Oaks Community Plans (DCP, 1998a, 1998b), and the Santa Monica Mountains Comprehensive Plan (Santa Monica Mountains Comprehensive Commission, 1979), which prioritize protecting natural resources and open space. The property acquisitions located within the Santa Monica Mountains for the proposed alignment, stations, and TPSS sites in Alternatives 1 and 3 would not be consistent with applicable land use plans, policies, or regulations.

Alternatives 1 and 3 would be required to implement MM LUP-1, requiring Metro to coordinate with the Santa Monica Mountains Conservancy (SMMC) and the City of Los Angeles to amend the applicable plans, and work with the City of Los Angeles to amend the LAMC to bring the Project into conformity with those planning and zoning requirements. However, the impact would remain because Metro cannot guarantee that SMMC and the City of Los Angeles would adopt the necessary amendments, and Alternatives 1 and 3 necessitate the acquisition of open space in the Brentwood and Van Nuys-North

Sherman Oaks communities, as well as in the Santa Monica Mountains. These acquisitions inherently conflict with local land use plans, policies, and regulations designed to protect and preserve open space.

Construction Effects

Each of the Project alternatives would require construction easements and encroachment permits for construction. Construction easements and encroachment permits would vary along the guideway alignments and proposed stations depending on the type of construction and adjacent land use. The properties under construction easements would retain their original land use designation and zoning classifications. The construction easements would consist of properties with land use designated as commercial, public facilities, residential, industrial, vacant, and institutions. Construction activities would be temporary and would not alter the distinct residential character and integrity of the affected communities. These properties would typically return to their original use upon termination of the construction easement. Refer to Section 4.2.9, Community Impacts, for discussions related to property access and community division.

Specific to Alternative 5, properties located in land uses designated as industrial and public facility near the intersection of Raymer Street and Burnet Avenue in the Van Nuys Community would be utilized to accommodate the proposed tunnel portal footprint, facilitating the alignment's transition from an underground to an aerial configuration. However, development of acquisitions is not part of this Project and would be subject to local jurisdiction development plans. Alternative 5 would not conflict with the applicable LAMC requirements with approval of zoning code amendments.

4.2.8 Parks and Recreational Facilities

This summary addresses Project effects to parks and recreational facilities. Refer to the Sepulveda Transit Corridor Project Parklands Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025k).

The Project Study Area includes approximately 72 park and recreational facilities and open space areas, totaling approximately 5,091 acres. The 72 park and recreational facilities in the Project Study Area include 44 parks; 22 nature/wildlife preserves and regional open spaces; 4 public golf courses; 1 botanical garden; and 1 amusement park. Of the identified facilities, 54 are located in the City of Los Angeles, 9 are in the City of Santa Monica, 1 is in the City of Beverly Hills, and the botanical garden is located at UCLA. Several agencies own and manage the park and recreational facilities identified, including the U.S. Army Corps of Engineers (USACE), Los Angeles County, City of Los Angeles, City of Santa Monica, MRCA, SMMC, Mountains Restoration Trust, Los Angeles Neighborhood Land Trust, California Department of Parks and Recreation, UCLA, and the Colorado Center.

The existing bicycle facilities in the Project Study Area consist of a network of approximately 117 miles of Class I, Class II, and Class III bicycle facilities, including approximately 18 miles of Class I bicycle facilities, approximately 57 miles of Class II bicycle facilities, and approximately 42 miles of Class III bicycle facilities. There are no Class IV bicycle facilities within the Project Study Area. Future planned bicycle facilities in the Project Study Area would comprise approximately 180 miles of additional bicycle facilities, including approximately 21.1 miles of Class I bike paths, 51.3 miles of Class II bike lanes, 80.6 miles of Class III bike routes, and 26.9 miles of Class IV separated bikeways. Refer to Section 3.15, Transportation, of the DEIR (Metro, 2025) for additional information on active transportation facilities. Off-road bicyclists also have access to unpaved roads and trails in the Santa Monica Mountains, including Getty View Park and Trailhead, which spans several ridges and canyons within the Project

Study Area. Approximately 13 miles of recreational hiking trails are identified in the parklands and open space areas within the Project Study Area.

Operational Effects

All Project alternatives would provide a new mode of transportation, accessibility, and connectivity in the surrounding communities. As a transportation infrastructure project that does not include housing, the Project alternatives would not directly generate permanent residences or increase the existing residential population of the surrounding communities that would increase the use of existing parks and recreational facilities or result in substantial adverse physical effects associated with the provision of new or physically altered parks or other recreational facilities. The Project would improve accessibility to nearby parks and recreational facilities located within 0.5 miles of the stations. Project alternatives would also help achieve Metro's First/Last Mile Guidelines (Metro, 2021b) objectives to facilitate bicyclists' accessibility, provide connectivity to the station areas and surrounding communities, and enhance the existing active transportation corridors for the cities.

Occasional large community events typically increase the use of parks, recreational facilities, and bicycle facilities such that recreational users may originate beyond the surrounding communities. During such events, the use of parks, recreational facilities, and bikeways may potentially increase. However, the increased use would be occasional and specific to the community event. Thus, the Project alternatives would provide improved connections to such community events and would not directly accelerate or result in a substantial deterioration of existing parks, recreational facilities, or bicycle facilities.

Alternatives 1 and 3 would cross over portions of Sherman Oaks Castle Park and Teichman Family Magnolia Park. Alternative 1 would cross over portions of the following Class I bike paths: Exposition Corridor Bikeway and the Metro G Line Bikeway. Alternatives 1 and 3 would require partial property acquisitions of land designated as open space or recreational land. The potential permanent acquisition of these open space and recreational areas would not affect existing buildings or change the primary function of the existing use. No permanent acquisition of parkland or recreational facilities would be required under Alternatives 4, 5, 6, or anticipated under Modified Alternative 5.

The potential partial acquisitions associated with Alternatives 1 and 3 would not cause physical deterioration of the parks to occur or be accelerated, because parks and open space land to be acquired would consist of small strips of land along the property boundaries of the affected resources where there are no recreational facilities. Alternatives 1 and 3 would comply with all applicable federal and state requirements, including the Uniform Relocation Assistance and Real Property Acquisition Act of 1971 and Public Park Preservation Act of 1971. USDOT environmental review would trigger the requirements of Section 4(f) of the USDOT Act of 1966, including review of these open space and parkland resource property acquisitions.

Construction Effects

Construction of all Project alternatives would be temporary and would not generate permanent residences that would increase the use of existing parks and recreational facilities resulting in accelerated physical deterioration of the facilities or require the expansion of existing recreational facilities. While construction workers may utilize nearby parks and recreational facilities during lunchtime breaks, such use would be temporary and nominal.

Construction of all Project alternatives would require temporary street detours at Sepulveda Boulevard. Bicycle movements would be maintained during construction, but lane reductions and street closures would inhibit the flow of bicycle traffic and may require detours. Additionally, the existing bike lane

along Sepulveda Boulevard in the Sepulveda Pass would be removed and rebuilt under Alternatives 1 and 3. As a result, the sidewalk would be relocated and temporarily decommissioned, and bicycle routes would be temporarily disrupted during construction and would require detours to maintain continuity with other portions of the bike lanes. Implementation of MM TRA-4 would minimize potential impacts associated with all Project alternatives by requiring a TMP during construction activities that specifies measures to limit disruption during construction (such as establishing detour routes). Construction activities would not affect access or use of surrounding recreational hiking trails.

4.2.9 Community Impacts

This summary addresses if the Project would physically divide an established community. A physical division would occur if construction or operation of the Project results in the creation of physical barriers within an established community or neighborhood or the disruption of access to community assets. Refer to the Sepulveda Transit Corridor Land Use and Development Technical Report (Metro, 2025j) and Sepulveda Transit Corridor Project Communities and Neighborhoods Technical Report (Metro, 2025l) for information related to existing conditions and the applicable regulatory environment.

Operational Effects

Each of the Project alternatives would operate within or parallel to existing transportation corridors that are designated as public facilities. While the Project would introduce new physical elements to the existing setting, these elements would be located within or adjacent to I-405 and the LOSSAN rail corridor ROW, or City of Los Angeles roadway ROW. Importantly, all Project alternatives would improve transit accessibility. None of the proposed MSF designs would require the closure of any primary vehicle routes critical to circulation within a community or between communities, and it would be located primarily on existing parcels designated for industrial uses. Surrounding land uses would continue to have access to the surrounding roadway, bicycle, and sidewalk network, and would continue to be accessible to users.

The aerial guideways associated with Alternatives 1, 3, and 4 would be consistent with the surrounding public facilities land uses and would not cause physical division of existing neighborhoods, communities, or land uses to the extent they would be disrupted or isolated. The height of the proposed aerial guideway and stations would be sufficient to maintain access to surrounding uses at pedestrian and vehicle crossings and nearby intersections, thereby maintaining connection and access to existing land uses. Additionally, the proposed aerial guideway and stations would provide sufficient clearance between supporting columns to maintain access to surrounding uses for motor vehicle and pedestrian traffic. At signalized intersections, left-turning traffic would be maintained, and pedestrian access would be maintained via crosswalks. The aerial segment of the proposed alignments and stations located in the Van Nuys community would be located adjacent and parallel to the LOSSAN rail corridor ROW. Alternatives 1, 3, and 4 would not preclude the existing accessibility for vehicle and non-vehicle users at signalized intersections, undercrossings, and the Metrolink Van Nuys Station. Furthermore, the existing pedestrian bridge at Raymer Street would be left in place. Therefore, communities located north and south of the aerial guideway, where it is parallel to the LOSSAN rail corridor ROW, would not be physically divided at this area. Communities would maintain access to local businesses and amenities by traveling along Sepulveda Boulevard, which is parallel to I-405. Additionally, I-405, Sepulveda Boulevard, and Ventura Boulevard would maintain access to existing communities during operations at signalized intersections and crosswalks located along Sepulveda Boulevard and Van Nuys Boulevard; thus, implementation of the proposed stations and MSF sites would not physically divide an established community. The aboveground Project elements of Alternatives 1, 3, and 4 would not restrict access

within established communities and would not cause division of communities to the extent they would be disrupted or isolated.

Alternative 1 would permanently close Dickens Street between Ventura Boulevard and Sepulveda Boulevard to vehicle traffic for the construction of a bus loop and transit plaza and would require the closure of the existing I-405 southbound on-ramp from eastbound Sunset Boulevard.

Portions of the proposed Alternative 4 aerial guideway would be placed along the center median lane of Sepulveda Boulevard, which is currently a two-way left-turn lane. In addition, the aerial guideway would require installation of a raised median or similar barrier along the length of Sepulveda Boulevard to provide protection for the aerial guideway support columns and limit vehicle movements across the center of the roadway due to sight distance conflicts. As a result, all midblock left-turn movements along Sepulveda Boulevard would be eliminated, thus diminishing access to businesses and residential development with driveway access from Sepulveda Boulevard. In addition, proposed straddle bents would be situated within existing sidewalks affecting pedestrian circulation and affecting driveway access. Approximately 50 commercial driveways and 22 residential driveways would be affected by the physical presence of the aerial guideway and associated median/column protection, by restricting left-turn in/left-turn out movements. The restriction on left turns along Sepulveda Boulevard would result in inconvenient vehicle circulation, particularly for local residents seeking access to community-serving business and residences along Sepulveda Boulevard. However, the proposed aerial guideway and stations would provide sufficient clearance between the support columns to maintain access to surrounding uses for motor vehicles. While the center left-turn lane along Sepulveda Boulevard would be removed to accommodate the columns, motorists would still be able to make left turns at major intersections, thereby ensuring access to surrounding land uses. Additionally, pedestrian access would be maintained via the sidewalk network through crossings at signalized intersections located along Sepulveda Boulevard. The neighborhoods west of Sepulveda Boulevard share a similar development pattern to neighborhoods east of Sepulveda Boulevard. The proposed aerial guideway, stations, raised median, and other Project elements associated with Alternative 4 would introduce new vertical structures that could alter the visual character of the Sepulveda commercial corridor. However, Alternative 4 incorporates Project Measures (PM) LU-1 and LU-2, which aim to enhance urban design and maintain community cohesion along Sepulveda Boulevard. PM LU-1 would provide circulation improvements, such as left-turn breaks in the median where feasible, to help maintain accessibility and connectivity for businesses and residents. PM LU-2 would introduce urban design enhancements, including landscaping, decorative lighting, wayfinding improvements, and streetscape elements that could help soften the visual presence of the new infrastructure and integrate it more harmoniously into the community setting.

Specific to Alternatives 4 and 5, an existing pedestrian bridge located west of Van Nuys Boulevard that connects Willis Avenue to Raymer Street over the LOSSAN rail corridor would be removed to accommodate the Project. Removal of this pedestrian bridge would still enable communities located north of the LOSSAN rail corridor ROW and south of Keswick Street to have access to schools on either side of the tracks via alternative roadways including Van Nuys Boulevard, Sepulveda Boulevard, and Saticoy Street. Surrounding land uses would continue to be accessible to vehicle and non-vehicle users via the surrounding roadway, bicycle, and sidewalk network through crossings at signalized intersections located along Van Nuys Boulevard. Travel across Sepulveda Boulevard at major intersections and access to all land uses within the Van Nuys community would be maintained.

Alternatives 5, 6, and Modified Alternative 5, being primarily underground, would maintain access to surrounding uses at pedestrian and vehicle crossings and nearby intersections, thereby maintaining

connection and access to existing communities and businesses. This also pertains to the underground portion of the Alternative 4 alignment south of the Valley. Alternatives 5, 6, and Modified Alternative 5 would not restrict access within established communities that would cause a division of communities to the extent they would be disrupted or isolated. In addition, the Project would not conflict with the predominant uses present in the surrounding areas and would provide a transportation option to the surrounding community. Overall, the Project alternatives would not physically divide an established community through their operation.

Construction Effects

Each of the Project alternatives would require temporary street detours to accommodate the proposed aerial guideway and stations, retaining wall, and I-405 on- and off-ramp construction. The proposed aerial guideway and stations would be constructed within or adjacent to I-405, within city streets, and within the existing LOSSAN rail corridor ROW. In locations where the alignment is adjacent to the I-405 corridor or the LOSSAN rail corridor or where I-405 widening is necessitated for the Project, temporary street detours and encroachment permits would be required, which would temporarily limit access to established communities. Additional street and sidewalk closures may limit property access between established communities. However, these closures would be temporary and periodic and would not permanently restrict access to or from an established community because alternative routes would be provided as needed. The Project would follow Metro standard practices that include scheduling of lane and/or road closures to minimize disruptions and require preparation of a construction TMP to reduce the disruption caused by construction work zones (MM TRA-4). Metro and the contractor would notify and work with surrounding communities regarding the construction schedule and would use wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways.

Alternatives 1 and 3 would permanently close Dickens Street between Ventura Boulevard and Sepulveda Boulevard to vehicle traffic for the construction of a bus loop and transit plaza. In addition, the existing I-405 southbound on-ramp from eastbound Sunset Boulevard would be closed. Construction of Alternative 4 would require a raised median along Sepulveda Boulevard in the Valley to accommodate aerial guideway columns, resulting in the removal of left turns along Sepulveda Boulevard to and from La Maida Street, Valleyheart Drive South, Hesby Street, Hartsook Street, Archwood Street, Hart Street, Leadwell Street, Covello Street, and several driveways. Alternative 5 would require the closure of Cabrito Road and at-grade LOSSAN rail corridor near Extra Space Storage off of Raymer Street for the aerial guideway. Street and sidewalk closures associated with all Project alternatives during construction would temporarily limit property access between established communities. However, these closures would be temporary and periodic and would not permanently restrict access to or from an established community because alternative routes would be provided as needed. Nevertheless, without mitigation, temporary closures could result in impact related to access or from an established community. To address these potential impacts, all Project alternatives would be required to implement of MM TRA-4, which would require preparation and implementation of a TMP to reduce the impacts of construction work zones, provide wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways, and require Metro and the contractor to notify and coordinate with surrounding communities regarding the construction schedule.

Alternatives 4 and 5 require the removal of the Willis Avenue Pedestrian Bridge, which during construction would temporarily affect pedestrian connectivity across the LOSSAN corridor. However, alternative roadways, including Van Nuys Boulevard, Sepulveda Boulevard, and Saticoy Street, would maintain access during this period. Surrounding land uses would remain accessible to vehicle and non-vehicle users via the surrounding roadway, bicycle, and sidewalk network at signalized intersections.

Access across the LOSSAN rail corridor would be maintained during removal of the bridge via alternative routes. In addition, a construction TMP required by MM TRA-4 would minimize any potential access and circulation impacts caused by construction activities.

4.2.10 Cultural Resources and Tribal Cultural Resources

This summary addresses built historic resources, archaeological resources, discovery of human remains, and tribal cultural resources (TCR). Refer to the Sepulveda Transit Corridor Project Cultural Resources and Tribal Cultural Resources Technical Report for information related to existing conditions, applicable regulatory environment, methodology, and regional setting (Metro, 2025m).

4.2.10.1 Built Historic Resources

Historic and archival research was undertaken to determine the presence of previously identified historic properties that may be affected by the Project. Archival research and field surveys identified 68 historical resources that may be affected by Alternative 1. Research also identified 64 historical resources associated with Alternative 3, 65 historical resources associated with Alternative 4, 54 historical resources associated with Alternative 5, and 53 historical resources associated with Alternative 6. The historical resources associated with Modified Alternative 5 will be determined during the upcoming design process and are anticipated to be similar to Alternatives 4, 5, and 6. The resources include residential, commercial, institutional, government, and industrial properties primarily along existing transportation corridors. There are five historic districts, two historic linear landscapes, and three historic structures. To date, a Section 106 consultation process has not been initiated; thus, key Section 106 consultation with the State Historic Preservation Officer (SHPO) has not occurred to establish the eligibility of newly identified historic properties. The identification of historic properties will be revisited when there is federal involvement.

Operational Effects

Operation and maintenance of the Project alternatives would not physically demolish, destroy, relocate, or alter any of the identified historical resources. Activities would be limited to the operation and maintenance of the alignment, and these would not cause direct impacts to historical resources. Potential operational impacts on historical resources would be indirect (i.e., visual, audible, or atmospheric intrusions) and related to operation and maintenance, and new pedestrian traffic within the environs of the station locations. Specific to Alternative 1, operations include a potential visual impact to the West Los Angeles VA Historic District and its setting. MM CUL-2 would be implemented to address design treatments to avoid alterations to the West Los Angeles VA Historic District during the construction stage that could result in permanent visual impacts during operation.

Construction Effects

Construction activities would include property acquisitions, demolition of historical resources, and new construction of permanent features. Construction impacts on historical resources could be direct and indirect. Direct impacts include the physical demolition, destruction, relocation, or alteration of historical resources. Indirect impacts during construction could include temporary visual, audible, or atmospheric intrusions affecting the surroundings of historical resources. This assessment also considers the permanent impacts of new infrastructure, such as its visual and physical presence within the setting of historical resources. These impacts are treated as construction-related impacts, rather than operational impacts, because these project changes are directly tied to the introduction of the infrastructure during the construction phase. For historical resources where construction activities would not result in physical demolition, destruction, relocation, or alteration, and where the setting

would remain unaffected by the new infrastructure, impacts are not considered significant. Similarly, where visual and physical changes would not materially impair the historical significance of a resource, the impacts are not considered significant. Table 4-14 provides a summary of impacts for Alternatives 1, 3, 4, 5, and 6, including potential significant effects to the built environment. The potential impacts associated with Modified Alternative 5 will be determined during the upcoming design process. Discussion of historical resources with significant impacts is provided in the following information.

Table 4-14. Summary of Potential Impacts to Built Historic Resources

Map #	Resource Name	Location	Alternative 1 Impact	Alternative 3 Impact	Alternative 4 Impact	Alternative 5 Impact	Alternative 6 Impact
7	14746 Raymer Street	14746 Raymer Street	**Potential Impact**	**Potential Impact**	**Potential Impact**	**Potential Impact**	NA
8	The Performing Arts Center	7735 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
9	Valley Animal Hospital	7721 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
10	Lancer Lion II Apartments	7657 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
11	Air Raid Siren No. 110	Northeast corner of Covello Street and Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
12	Sherman Way Street Trees	Along either side of Sherman Way between Woodley Avenue and Sherman Circle	**Potential Impact**	**Potential Impact**	**Potential Impact**	**Potential Impact**	NA
13	6833 Sepulveda Boulevard	6833 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
14	Van Nuys Boulevard Street Trees	Between Sherman Way along Sherman Circle and Hamlin Street on Van Nuys Boulevard	**Potential Impact**	**Potential Impact**	No Impact	**Potential Impact**	No Impact
17	6160 Sepulveda Boulevard	6160 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
18	Air Raid Siren No. 117	South side of Oxnard Street, west of Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
19	Cabana Motel	5764 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
20	El Cortez Motel	5746 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
21	5724 Sepulveda Boulevard	5724 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
22	Kauai Surf	15232 Martha Street	NA	No Impact	**Potential Impact**	No Impact	NA
23	5450 Sepulveda Boulevard	5450 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA

Map #	Resource Name	Location	Alternative 1 Impact	Alternative 3 Impact	Alternative 4 Impact	Alternative 5 Impact	Alternative 6 Impact
24	Cathedral of St. Mary Church	5335 N. Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
25	Lt. Patrick H. Daniels United States Army Reserve Center	5161 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	**Potential Impact**	NA
27	4700 Sepulveda Boulevard	4700 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
30	15233 Ventura Boulevard	15233 Ventura Boulevard	No Impact	No Impact	**Potential Impact**	No Impact	NA
31/ 33	15300 Ventura Boulevard	15300 Ventura Boulevard	**Potential Impact**	**Potential Impact**	**Potential Impact**	No Impact	NA
35	Da Siani Ristorante (Sherwood Coiffeurs)	4511 Sepulveda Boulevard	**Potential Impact**	**Potential Impact**	**Potential Impact**	No Impact	NA
36	4506 Saugus Avenue	4506 Saugus Avenue	NA	No Impact	No Impact	**Potential Impact**	NA
44	Bill's Valley Car Wash	7530 Van Nuys Boulevard	NA	NA	NA	NA	**Potential Impact**
55	5958 Van Nuys Boulevard	5958 Van Nuys Boulevard	NA	NA	NA	NA	**Potential Impact**
68	10811 Ambazac Way	10811 Ambazac Way	NA	**Potential Impact**	NA	NA	NA
72	UCLA Historic District (P-19-175802)	Encompasses the east-west axis of the campus and is bounded by Westwood Boulevard and Circle Drive	No Impact	No Impact	No Impact	No Impact	**Potential Impact**
73	UCLA Ackerman Hall (P-19-190591)	308 Westwood Plaza	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**	**Potential Impact**
86	West Los Angeles Veterans Affairs Historic District (P-19-173043)	11301 Wilshire Boulevard	**Potential Impact**	**Potential Impact**	NA	NA	NA
87	UCLA Veterans Rehabilitation Services (P-19-189982)	1000 Veteran Avenue	No Impact	**Potential Impact**	No Impact	No Impact	No Impact
93	10940 Weyburn Avenue	10940 Weyburn Avenue	No Impact	**Potential Impact**	No Impact	No Impact	No Impact

Map #	Resource Name	Location	Alternative 1 Impact	Alternative 3 Impact	Alternative 4 Impact	Alternative 5 Impact	Alternative 6 Impact
94	Chatam Restaurant	10930 Weyburn Avenue	No Impact	**Potential Impact**	No Impact	No Impact	No Impact
103	Gayley Center	1101 Gayley Avenue	No Impact	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**
104/105	Linde Medical Building (P-19-189273)	10921 Wilshire Boulevard	No Impact	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**
106	Tishman Building	10950 Wilshire Boulevard	No Impact	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**
108	Westwood Federal Building (P-19-189274)	11000 Wilshire Boulevard	No Impact	**Potential Impact**	NA	NA	NA
122	Photo Electronics Corp. Building	1944 Cotner Avenue	**Potential Impact**	**Potential Impact**	NA	NA	NA
123/124	Dual Ultimate Pharmacy	2020 Cotner Avenue	**Potential Impact**	**Potential Impact**	NA	NA	NA
125	2114 Cotner Avenue	2114 Cotner Avenue	**Potential Impact**	**Potential Impact**	NA	NA	NA
132	Laemmle Theater	11521 Santa Monica Boulevard	NA	NA	NA	NA	**Potential Impact**

Source: Metro, 2025m

NA = not applicable

14746 Raymer Street (Map Reference #7)

The property at 14746 Raymer Street is a large industrial building constructed in 1967. It is significant for its Modern design. Under Alternatives 1, 3, 4, and 5, the proposed aerial guideway would be constructed approximately 40 feet from the north elevation of the building. The aerial structure would be over Raymer Street, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the north elevation's current viewshed is of Raymer Street and the existing railroad alignment. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building or its setting to materially impair its significance. However, construction of the guideway, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

The Performing Arts Center (Map Reference #8)

The Performing Arts Center at 7735 Sepulveda Boulevard is a commercial property. It is significant for its 1961 Googie design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 40 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibrated related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Valley Animal Hospital (Map Reference #9)

The Valley Animal Hospital building at 7721 Sepulveda Boulevard is significant for its 1968 Modern design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 70 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and

lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact this historical resource. The construction activities adjacent to this resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Lancer Lion II Apartments (Map Reference #10)

The Lancer Lion II Apartments located at 7657 Sepulveda Boulevard is a multi-family apartment building significant for its association with the Live Better Electrically and Medallion Homes program and the electrical history of Los Angeles. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 37 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Air Raid Siren No. 110 (Map Reference #11)

The Air Raid Siren No. 110 is a pole-mounted structure installed in 1940 that is significant for its association with World War II and Cold War military infrastructure. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 50 feet west

of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Sherman Way Street Trees (Map Reference #12)

The Sherman Way Street Trees comprise a linear historical resource. The trees are significant for their associations with the street planting plan for Sherman Way (paved between 1911 and 1913), a major streetcar and automobile route that was the main corridor from central Los Angeles to Van Nuys. Under Alternatives 1, 3, 4, and 5, the proposed aerial Sherman Way Station would be constructed within the boundary of this linear historical resource. The proposed aerial station would introduce a new visual element but would not change the defining characteristics of this resource, such as its linear alignment, continuity, or the presence of the street trees along the Sepulveda Corridor. The overall historic character and visual aesthetic of the linear resource would be preserved and its ability to convey its historical significance would not be materially impaired. However, construction of the alignment, station, and construction staging areas has the potential to alter or destroy existing contributing street trees associated with this historical resource at this location if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by ensuring the protection of contributing street trees through pre-construction assessments, monitoring, and protective measures that preserve the historical integrity of the resource.

6833 Sepulveda Boulevard (Map Reference #13)

The multiple-family building at 6833 Sepulveda Boulevard is significant for its association with the post-World War II housing crisis and for its 1967 Modern and Stucco Box/Dingbat design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 40 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical

resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Van Nuys Boulevard Street Trees (Map Reference #14)

The Van Nuys Boulevard Street Trees comprise a linear historical resource. They are significant for their association with the street planting plan for Sherman Way (paved between 1911 and 1913; parts of which were renamed Van Nuys Boulevard and Chandler Boulevard), which was the main automobile and streetcar corridor from central Los Angeles to Van Nuys. Under Alternatives 1, 3, and 5, the proposed aerial guideway would be constructed at the western boundary of the resource, on Victory Boulevard. The aerial guideway structure would be sited on the eastern side of the I-405 freeway and would introduce a new visual element into the resource's setting. However, the linear resource's key defining characteristics, including its alignment, continuity, and relationship to its surroundings would remain intact. The resource's visual presence as a continuous linear corridor would remain discernible, and its historical association with transportation infrastructure would not be materially impaired. However, the alignment construction and the construction staging areas have the potential to alter or destroy existing contributing street trees associated with this historical resource at this location if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by ensuring the protection of contributing street trees through pre-construction assessments, monitoring, and protective measures that preserve the historical integrity of the resource.

6160 Sepulveda Boulevard (Map Reference #17)

The industrial property at 6160 Sepulveda Boulevard is a large industrial building constructed in 1953. It is significant for its association with the post-World War II industrial development of Van Nuys. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 45 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical

resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Air Raid Siren No. 117 (Map Reference #18)

The Air Raid Siren No. 117 is a pole-mounted structure installed in 1940 that is significant for its association with World War II and Cold War military infrastructure. Under Alternative 4, the proposed aerial Metro G Line Sepulveda Station and roadway improvements would be constructed approximately 100 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The siren would not be physically demolished, destroyed, relocated, or altered. The proposed aerial station and elevated alignment adjacent to the resource would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed aerial station and elevated alignment would introduce permanent visual elements directly in front of the siren, the relative height (approximately 30 feet) of the station and alignment would not block significant views of the historical resource. The existing setting would be left largely intact. Because the setting of the siren is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction adjacent to the resource also has the potential to inadvertently impact character-defining features (e.g., design elements) if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Cabana Motel (Map Reference #19)

The Cabana Motel at 5764 Sepulveda Boulevard is a 1946 commercial property. It is significant for its association with Los Angeles's post-World War II car culture and for its Modern design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 25 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to the construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently

impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

El Cortez Motel (Map Reference #20)

The El Cortez Motel at 5746 Sepulveda Boulevard is a 1949 commercial property. It is significant for its association with Los Angeles's post-World War II car culture and for its Modern design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 20 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

5724 Sepulveda Boulevard (Map Reference #21)

The multiple-family property at 5724 Sepulveda Boulevard is significant for its association with the post-World War II housing crisis and for its 1949 Modern and Stucco Box/Dingbat design. Under Alternative 4, aerial guideway columns and roadway improvements would be constructed approximately 60 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical

resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Kauai Surf (Map Reference #22)

The multiple-family property at 15232 Martha Street is significant for its association with the post-World War II housing crisis and for its 1962 Modern and Stucco Box/Dingbat design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 70 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

5450 Sepulveda Boulevard (Map Reference #23)

The residential building at 5450 Sepulveda Boulevard is significant for its 1953 Monterey design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 100 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently

impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Cathedral of St. Mary Church (Map Reference #24)

The Cathedral of St. Mary Church at 5335 N Sepulveda Boulevard is significant for its 1961 Byzantine Revival design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 50 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to this resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Lt. Patrick H. Daniels United States Army Reserve Center (Map Reference #25)

The Lt. Patrick H. Daniels United States Army Reserve Center at 5161 Sepulveda Boulevard is a governmental property constructed in 1959. It is significant for its association with the Army Reserves in Los Angeles during the Vietnam War and for its Modern design. Under Alternatives 4 and 5, a partial property acquisition would occur, and the proposed aerial guideway columns and roadway improvements would be constructed approximately 60 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce permanent visual elements directly in front and to the side of the building, the relative height (approximately 30 feet) of the elements would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at

this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

4700 Sepulveda Boulevard (Map Reference #27)

The multiple-family property at 4700 Sepulveda Boulevard is significant for its 1952 Eclectic Streamline Moderne design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 80 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

15233 Ventura Boulevard (Map Reference #30)

The commercial property at 15233 Ventura Boulevard is significant for its 1964 International Style design. Under Alternative 4, the proposed aerial Ventura Boulevard/Sepulveda Boulevard Station and aerial guideway would be constructed approximately 500 feet from the west elevation of the building. The aerial structure would be sited on the east side of I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is residential, and the west elevation's current viewshed includes I-405 and Sepulveda Boulevard. The proposed aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, vibration related to construction of the guideway, potential use of pile driving at this location, and the construction staging areas could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

15300 Ventura Boulevard (Map Reference #31/33)

The commercial building and its associated parking garage at 15300 Ventura Boulevard are significant for its 1964 International Style design. Under Alternatives 1, 3, and 4, the proposed aerial Ventura Boulevard/Sepulveda Boulevard Station would be constructed approximately 20 feet from the rear (west elevation) of the commercial building. The building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the rear elevation's current viewshed includes I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. Therefore, although the proposed aerial structure would introduce a new visual element, it would not change the historic character of the building or its setting in a manner that materially impairs its significance. However, vibration related to construction of the station, potential use of pile driving at this location, and the construction staging areas could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features, including the associated parking garage, if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by requiring pre-construction assessments, vibration-reducing construction techniques, and continuous monitoring to prevent damage to character-defining features.

Da Siani Ristorante (Sherwood Coiffeurs) (Map Reference #35)

The Da Siani Ristorante building is a one-story commercial building significant for its 1950 Modern design. Under Alternatives 1, 3, and 4, the property would be acquired and demolished for the construction of an aerial structure parallel to I-405. Physical demolition would materially impair the significance of the historical resource. Implementation of MM CUL-4 and MM CUL-5 would reduce this impact by ensuring archival documentation and public interpretation of the resource's historical significance. However, because these measures cannot prevent the demolition itself, they cannot reduce the significant impact.

4506 Saugus Avenue (Map Reference #36)

The multiple family building at 4506 Saugus Avenue is eligible for listing in the NRHP and California Register of Historical Resources under Criterion C/3 for its Contemporary design. Under Alternative 5, the proposed aerial Van Nuys Metrolink Station would be constructed approximately 40 feet from the west elevation of the building. The proposed aerial station would introduce a new visual element but would not change the historic character of the resource. The alteration of the setting with the new visual element of the aerial structure would not materially impair its ability to convey its significance. The proposed station adjacent to the building would introduce new visual, audible, and atmospheric elements within the building's immediate surroundings. Although the proposed elements would introduce permanent visual elements to the west of the building, these elements would not block significant views of the historical resource. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the station and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Bill's Valley Car Wash (Map Reference #44)

The Bill's Valley Car Wash building at 7530 Van Nuys Boulevard is a commercial property. It is significant for its role in the commercial and industrial development of Van Nuys and for its 1962 Googie design. Under Alternative 6, the property would be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. Modified Alternative 5 could also potentially demolish this resource; however, ongoing design development could reduce or avoid this impact. Physical demolition would materially impair the significance of the historical resource. Implementation of MM CUL-4 and MM CUL-5 would reduce this impact by ensuring archival documentation and public interpretation of the resource's historical significance. However, because these measures cannot prevent the demolition itself, they cannot reduce the impact to a less than significant level.

5958 Van Nuys Boulevard (Map Reference #55)

The building located at 5958 Van Nuys Boulevard is a commercial building significant for its One-Part Commercial Block design. Under Alternative 6, the proposed TPSS 15 and 16 would be located along Van Nuys Boulevard between Emelita Street and Califa Street. The TPSS would be underground and located immediately under the commercial building. The building would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Van Nuys Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, vibration related toconstruction of the station and roadway improvements, as well as the potential use of pile driving at this location, could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by

establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

10811 Ambazac Way (Map Reference #68)

The residential building at 10811 Ambazac Way is significant for its 1931 Monterey Revival design. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, vibration related to construction of the station and construction staging areas could impact this historical resource. The construction activities adjacent to this resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

UCLA Historic District (Map Reference #72)

The UCLA Historic District includes 15 contributing resources and landscape features, and two non-contributing resources. The district is significant as the first public institution of higher education in Southern California, and for its design. Under Alternative 6, the proposed UCLA Gateway Plaza Station would be built within the boundaries of the historic district. The station would be underground, and none of the contributing buildings or landscape elements would be physically demolished, destroyed, relocated, or altered. The historical resource's setting is the UCLA campus and roadways. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historic district or its setting are anticipated from the addition of the station or the underground alignment. However, vibration related to construction of the station and construction staging areas could impact the historical district. The construction activities within the district also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

UCLA Ackerman Hall (Map Reference #73)

The UCLA Ackerman Hall building is a multi-story education property. It is significant for its association with the history of UCLA and for its 1961 Modern design. Under Alternative 3, 4, 5, and 6, the proposed underground UCLA Gateway Plaza Station and roadway improvements would be constructed approximately 30 feet west of the resource. The construction would include excavation of the station box, building construction, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The station portal adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elements would introduce a permanent visual element adjacent to the building, these elements would not block significant views of the historical resource, would be smaller scale in nature compared to the proposed station, and the building would not be obscured from view. Further, existing

trees and vegetation between the proposed station and the building itself would be left intact and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, vibration related to construction of the station, potential use of pile driving at this location, roadway improvements, and the construction staging areas could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

West Los Angeles Veterans Affairs Historic District (Map Reference #86)

The West Los Angeles Veterans Affairs Historic District is significant for its association with the government's development of health care and for its distinctive architecture. The district includes 66 contributing resources and 44 noncontributing resources. Under Alternatives 1 and 3, the proposed aerial guideway and the proposed aerial Wilshire Boulevard/Metro D Line Station would be constructed within roughly 20 to 150 feet of the historic district, east of Dowlen Drive. Construction methods may use heavy equipment, including excavators, cranes, tractor trailer rigs, loaders, earthmovers, asphalt milling machines, asphalt paving machines, loaders, bulldozers, dump trucks, compactors/rollers, and concrete trucks. During construction of Alternative 1, the historic district would not be physically demolished, destroyed, relocated, or altered. However, due to the aerial nature of the project components, permanent visual impacts on this historic district and its setting are anticipated from the guideway and station. For Alternative 1, implementation of MM CUL-1, MM CUL-2, and MM CUL-3 would reduce this potentially significant impact by ensuring that project design is compatible with the Secretary of the Interior's Standards, protecting contributing landscape elements, and incorporating construction monitoring and vibration controls to minimize physical and visual impacts to the historic district. For Alternative 3, implementation of MM CUL-1 would reduce this potentially significant impact to a less than significant level by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

UCLA Veterans Rehabilitation Services (Map Reference #87)

The UCLA Veterans Rehabilitation Services building is a commercial property. It is significant for its 1960 Contemporary design and as a work of a master, Welton Beckett and Associates. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

10940 Weyburn Avenue (Map Reference #93)

The commercial building at 10940 Weyburn Avenue is significant for its 1934 Spanish Colonial Revival design. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Chatam Restaurant (Map Reference #94)

The Chatam Restaurant building at 10930 Weyburn Avenue is significant for its 1940 One Part Commercial Block design. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, construction of the station and construction staging areas have the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Gayley Center (Map Reference #103)

The Gayley Center located at 1101 Gayley Avenue is a larger commercial property. It is significant for its Late Modern commercial architecture and as work of noted architects Krisel Shapiro & Associates. Under Alternatives 4, 5, and 6, the proposed Wilshire Boulevard/Metro D Line Station would be constructed approximately 4 to 5 feet east from the west elevation of the building. The station would be underground, and the Gayley Center would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Gayley Avenue. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Linde Medical Building (Map Reference #104/105)

The Linde Medical Building, located at 10921 Wilshire Boulevard is a large commercial property. It is significant for its 1962 International Style design. As designed, affected portions of the property entrance will be restored in accordance with the California Historical Building Code and all applicable requirements. Under Alternatives 4, 5, and 6, the proposed Wilshire Boulevard/Metro D Line Station would be constructed adjacent to the west elevation of the building. The station would be underground, and the Linde Medical Building tower would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Gayley Avenue and Wilshire Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction adjacent to the resource also has the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Tishman Building (Map Reference #106)

The Tishman Building located at 10950 West Wilshire Boulevard is a large commercial property. It is significant for its Corporate Modern high-rise architecture and as the work of master architect Welton Becket. Under Alternatives 4, 5, and 6, the proposed Wilshire Boulevard/Metro D Line Station would be constructed approximately 60 feet north from the north elevation of the building. The station would be underground, and the Tishman Building would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Wilshire Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Westwood Federal Building (Map Reference #108)

The Westwood Federal Building is a multi-story office building. It is significant for its 1966 New Formalist design and association between master architects Welton Becket and Associates with Paul R. Williams and A. C. Martin and Associates. Under Alternative 3, the proposed underground Wilshire Boulevard/Metro D Line Station and a TPSS site would be constructed approximately 420 feet northeast from the side (east elevation) of the building, at the corner of Wilshire Boulevard and Veteran Avenue. An additional TPSS site would be constructed about 178 feet southeast of the south elevation. The building would not be physically demolished, destroyed, relocated, or altered. The new station and TPSS sites would introduce a new visual element but would not change the historic character of the building because its character defining features, such as its architectural design, materials, and fenestration,

would not be altered or obscured. The distance of the new elements from the building minimizes their effect on its immediate setting, and the new features would not fundamentally alter the existing urban context of the area. The building's primary elevations and overall historic integrity would remain visible and intact. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Photo Electronics Corp. Building (Map Reference #122)

The Photo Electronics Corp. Building at 1944 Cotner Avenue is an industrial building. It is significant for its 1967 Modern design. Under Alternatives 1 and 3, the proposed aerial guideway would be constructed approximately 50 feet from the west elevation of the building. The aerial structure would be sited along the west side of Cotner Avenue and I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the west elevation's current viewshed includes I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, vibration related to construction of the guideway, potential use of pile driving at this location, and the construction staging areas could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Dual Ultimate Pharmacy (Map Reference #123/124)

The Dual Ultimate Pharmacy at 2020 Cotner Avenue is a commercial building. It is significant for its 1966 Modern design. Under Alternatives 1 and 3, the proposed aerial guideway would be constructed approximately 60 feet from the west elevation of the building. The aerial structure would traverse Cotner Avenue, east of I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the west elevation's current viewshed includes Cotner Avenue and I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, vibration related to construction of the guideway, potential use of pile driving at this location, and the construction staging areas could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

2114 Cotner Avenue (Map Reference #125)

The industrial building at 2114 Cotner Avenue is significant for its 1969 Modern design. Under Alternatives 1 and 3, the proposed aerial guideway would be constructed approximately 100 feet from the west elevation (façade) of the building. The aerial structure would be sited along the east side of I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the west elevation's current viewshed includes I-405 and Cotner Avenue. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, vibration related to construction of the guideway, potential use of pile driving at this location, and the construction staging areas could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Laemmle Theater (Map Reference #132)

The Laemmle Theater at 11521 Santa Monica Boulevard is a commercial property constructed in 1923. It is significant for its Italian Renaissance design. Under Alternative 6, the proposed Santa Monica Boulevard Station would be constructed approximately 20 feet from the south elevation of the building. The station would be underground, and the Laemmle Theater would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the north elevation's current viewshed includes the commercial corridor along Santa Monica Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, vibration related to construction of the station and construction staging areas could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

4.2.10.2 Archaeological and Paleontological Resources

The archaeological sensitivity of the areas to be disturbed by the Project alternatives is considered to range from low to moderate for Alternatives 1, 3, 4, and 5, and low to high for Alternative 6. The degree and depth of previous ground disturbances across the Resource Study Area (RSA) are not known, but most of the area has been subject to prior construction and development. While the exact depth and degree of previous subsurface ground disturbances are not known, grading for roads, rails, and parking lots, and previous construction activities for utilities and building foundations found across the RSA are likely to have impacted approximately 5 feet bgs.

A total of 10 previously identified archaeological resources were identified within the RSA through a combination of archival and field research. Of those previously identified resources, the South Central Coastal Information Center (SCCIC) records search identified one previously recorded archaeological

resource (P-19-003803) within the RSA. This archaeological resource was also the only previously identified resource that has been determined eligible for listing in the NRHP.

Operational Effects

Operation and maintenance of the Project alternatives would not physically destroy, relocate, or alter any previously recorded archaeological resources. Any post review discovery archaeological resources encountered during construction of any Project alternatives would be evaluated, and impacts would be mitigated as needed during the construction phase. Operation and maintenance would not result in the destruction, relocation, or alteration of post review discoveries mitigated during construction.

Construction Effects

Under Alternative 1, 3, 4, and 5, an assessment of archaeological sensitivity for the RSA indicates construction activities associated with the alignments would have low to moderate potential to encounter previously unidentified archaeological resources below ground surface. No portion of the RSA was determined to have high potential because no intact significant archaeological resources have been identified within or directly adjacent to the RSA. Construction activities associated with the Alternative 6 alignment would have low to high potential to encounter previously unidentified archaeological resources below ground surface. Portions of the RSA in proximity to P-19-000382 were determined to have high potential because intact significant archaeological resources have been identified directly adjoining to the RSA.

No prehistoric archaeological sites have been identified and only one historic-age archaeological site has been identified directly within or adjacent to the RSA. The one resource documented within the RSA (P-19-003803) has been determined to no longer be present within the footprint of the alignment. However, the sediments present across the alignments consist of younger and older quaternary alluvium, which have potential to contain archaeological deposits. Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as where components would be constructed at great depth, and those in areas with high levels of previous subsurface ground disturbance. Locations considered to have moderate potential to encounter archaeological deposits are those in younger soils, such as components constructed in shallower depths and with low or unknown levels of previous disturbance. Proximity to previously recorded archaeological resources, important prehistoric resource areas, and water sources also increases sensitivity.

Archival research and field survey determined that one recorded historic-age resource (P-19-003803) was previously recorded in the RSA but has likely been removed as a result of prior construction activity in the area. Archaeological resources of prehistoric and historic age have been documented in the RSA and within a 0.5-mile radius of the RSA. They were often encountered in the context of subsurface construction activity, indicating there is potential in the area to encounter additional resources in a similar manner. Alternative 3 activities during construction of the alignment would include property acquisitions, demolition of historical resources, and new construction of permanent features.

Buried archaeological resources may exist within the RSA, and it is possible these resources could be unearthed during excavation activities. The proposed alignments are largely within the public ROW that has already been disturbed with utility and street construction, but those disturbances were relatively shallow. Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as tunnel locations where project components would be constructed at great depth. Shallow construction work associated with the alignments would have limited potential to encounter intact archaeological resources. Other proposed construction activities, such as mass

excavation required for new stations, footings, at-grade alignment segments, portions of tunnel construction, and ancillary facilities with excavation depths greater than 5 feet have the potential to encounter intact archaeological deposits below the shallow previous ground disturbance and are considered to have moderate archaeological sensitivity.

Based on this analysis, construction has the potential to cause a substantial adverse change in the significance of an archaeological resource. MM CUL-6 includes cultural resource training for personnel involved in ground-disturbing activities, and implementation of MM CUL-7 would minimize potential impacts by requiring archaeological monitoring to protect any previously unidentified archaeological resources.

Construction activities have the potential to encounter and disturb paleontological resources. To address this significant impact, MM GEO-6 through MM GEO-9 would be implemented. These measures include the use of onsite paleontological monitors who can quickly identify and protect resources until any discovered localities can be safely removed. These mitigation measures are designed to minimize impacts to paleontological resources by ensuring that any discoveries are properly documented, evaluated, and protected during construction activities.

4.2.10.3 Human Remains

The Los Angeles National Cemetery is located within the Project Study Area. In addition, the Gabrieliño Village site of Koruuvanga is located approximately 0.03 to 0.8 miles west of the Project alternatives. At least two burials have been identified at the site, along with grave goods and other Native American material culture.

Operational Effects

Project activities during operations would be limited to the operation and maintenance of the alignment. These types of operational activities would not involve excavation and would not have the potential to disturb any human remains, including those interred outside of dedicated cemeteries.

Construction Effects

Project activities during construction would include property acquisitions, demolition of historical resources, and new construction of permanent project features. Potential construction impacts on human remains, including those interred outside of dedicated cemeteries, would be related to ground-disturbing activities. It is possible burials could be unearthed during project excavation activities. One known cemetery, the Los Angeles National Cemetery, is located within the RSA. However, the probability of encountering human remains during construction is low because the Los Angeles National Cemetery is located outside of the Project footprint, and no construction activities would occur within the cemetery grounds. While unlikely, because of the age of the cemetery and the documentation of at least one interment in the area prior to the official founding of the cemetery, there is potential for unmarked and forgotten graves to lie outside of the existing cemetery footprint. At least two indigenous burials have been encountered within the previously recorded site of P-19-000382, located near the RSA. The ethnographic village site provides evidence that there is potential to encounter Native American human remains in the vicinity. While no evidence of human remains has been previously identified within the Project alignments, unknown human burials may exist within the RSA, and it is possible these burials could be unearthed during project excavation activities. Implementation of MM CUL-8 would minimize potential impacts by requiring the suspension of work should human remains be discovered and the mandatory contact of the Los Angeles County Coroner.

4.2.10.4 Tribal Cultural Resources

The specialized RSA for tribal cultural resources was delineated based on the proposed physical configuration of the Project alternatives and MSF sites. The Tribal Cultural RSA is defined as the geographic area where the Project has potential to have direct and indirect impacts to tribal cultural resources. The Tribal Cultural RSA includes areas where temporary or permanent ground disturbance may occur, such as all proposed ROW, acquisition and construction areas, TBM launch sites; stations; power substations; parking facilities; and MSF sites. Where new above-grade elements, such as the overhead contact system or elevated structures, are proposed in landscapes identified as significant to tribal representatives through consultation, the Tribal Cultural RSA includes a buffer adjoining the alignment within a reasonable viewshed of the new construction. The buffer is included because the introduction of new infrastructure would have the potential to cause new visual, audible, or atmospheric intrusions on the setting of adjacent tribal cultural resources.

There are no federally recognized Native American tribes in Los Angeles County. The tribal cultural sensitivity is considered to range from low to high in the Tribal Cultural RSA related to Native American tribes recognized by the State of California. While no tribal cultural resources have been formally documented in the Tribal Cultural RSA, there may be ethnohistoric villages, burials, important prehistoric travel routes, and natural resource areas nearby. In addition, the region contains Native American cultural resources, Traditional Cultural Properties, and/or tribal cultural resources. The site of a sacred spring associated with an ethnohistoric village is located less than 200 feet from Alternative 6 and has potential to encompass previously undisturbed, buried, cultural deposits in the area. Tribal representatives indicated the importance of the landscape to their cultural heritage during the California-required consultation process for the Project. A literature review of ethnographic and historic sources, historic maps, and reporting on contemporary Native American knowledge and connection to the landscape resulted in the identification of two features, the Sepulveda Pass and the Los Angeles River, which exhibit potential to be tribal cultural resources. In addition, confidential information shared by tribal representatives and review of cultural resource management gray literature suggest a portion of the Tribal Cultural RSA may encompass a sacred location. In addition, the Gabrieliño Village site of Koruuvanga is located within 1 mile of the Project alternatives. At least two burials have been identified at the site, along with grave goods and other Native American material culture.

Operational Effects

None of the Project alternatives would have direct operational impacts to tribal cultural resources within the Sepulveda Pass or the Los Angeles River. However, operational and maintenance activities and increased pedestrian traffic at station locations associated with Alternatives 1, 3, and 4 would result in visual, audible, or atmospheric intrusions on the Sepulveda Pass and Los Angeles River. The Sepulveda Transit Corridor Project Final Visual Quality and Aesthetics Technical Report (Metro, 2025i) assessed the potential for visual and aesthetic impacts to the Santa Monica Mountains, including the Sepulveda Pass, and Los Angeles River. The existing view of the Sepulveda Pass and Los Angeles River would not be substantially affected by the aerial guideway constructed near these resources and none of the Project alternatives would impact these scenic vistas. Based on the current assessment of existing conditions and potential visual impacts, operational impacts would not change the significance of tribal cultural resources.

Construction Effects

The alignments for each Project alternative are largely within the public ROW that has already been disturbed during utility and street construction, but these disturbances were relatively shallow. Shallow construction work, such as for the at-grade portions of the alignment, has limited potential to encounter intact archaeological deposits because of the prior shallow disturbances. In addition, the tunnels are

likely too deep to encounter deposits. However, other proposed construction activities, such as mass excavation required for new stations, MRT or HRT footings, at-grade alignment segments, TBM launch and extraction sites, and ancillary facilities, have the potential to encounter deeper, intact archaeological deposits. Furthermore, while an archaeologist may place greater importance on the intact nature of archaeological deposits, tribes may be concerned with the potential to identify and protect prehistoric resources, regardless of scientific value. Implementation of MM TCR-1 and MM TCR-2 would minimize potential impacts by requiring Native American monitoring during ground disturbance, work stoppage and consultation if Tribal Cultural Resources or human remains are encountered, and the implementation of protective measures to ensure culturally appropriate treatment and compliance with legal requirements. Additionally, MM CUL-1, MM-CUL-6, MM CUL-7 and MM CUL-8 require construction personnel training on identifying and responding to cultural and Tribal Cultural Resources, archaeological monitoring in sensitive areas, work stoppage and treatment protocols for discovered artifacts, and procedures for the respectful handling of human remains in accordance with legal and tribal requirements.

4.2.11 Geotechnical Considerations

This summary addresses seismicity, liquefaction, and soil stability. Refer to the Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025n).

4.2.11.1 Seismicity

The entire Southern California region is seismically active. A network of major regional faults and minor local faults crisscrosses the region. The state passed the Alquist-Priolo Earthquake Fault Zoning Act of 1972 “to regulate development near active faults so as to mitigate the hazard of surface fault rupture.” State geologists are required to delineate Earthquake Fault Zones around active and potentially active faults to reduce fault-rupture risks to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults. Cities and counties must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Typically, structures for human occupancy are not allowed within 50 feet of the trace of an active fault. The Santa Monica Fault in West Los Angeles is the only active fault located within 1 mile of the Project alternatives.

Operational Effects

The potential for operational impacts associated with seismic events is similar for the Project alternatives because there are known active faults near each of the alignments. The Alquist-Priolo Earthquake Fault Zoning Act prohibits the construction of structures for human occupancy (i.e., houses, apartments, offices, etc.) on the surface trace of active faults. However, the Alquist-Priolo Earthquake Fault Zoning Act does not prohibit the construction of non-habitable structures (i.e., not suitable to be lived in such as carports, roads, train tracks, bridges, etc.). The Project alternatives would construct a fixed guideway within the Alquist-Priolo Earthquake Fault Zone. The Project alternatives would be designed to comply with current seismic safety standards, including structural engineering measures to account for the potential impacts of seismic activity. As such, the operational components of the Project alternatives would not exacerbate fault rupture risks or contribute to the potential for loss, injury, or death associated with known earthquake faults. Operational activities would not directly or indirectly cause strong seismic ground shaking including liquefaction. This is because operational activities, such as the movement of monorail vehicles along the guideway and electric bus operations, would not involve

ground-disturbing activities or the application of forces that could affect geological processes. While operational activities would not exacerbate fault rupture risks, the Project alternatives would be constructed in a way to reduce the risk of loss, injury, or death as a result of a fault rupture through compliance and adherence to existing regulations and incorporation of seismic-resistant design recommendations that come from the final geotechnical engineering reports.

Construction Effects

The potential for construction impacts associated with seismic events is similar for the Project alternatives because there are known active faults near each of the alignments. Construction activities would be carried out in compliance with the regulatory requirements as defined in PM GEO-1 to account for the potential effects of ground shaking and the portion of Alternative 1 within the Santa Monica Fault.

4.2.11.2 Liquefaction

Liquefaction involves a sudden loss in strength of a saturated, cohesionless, uniformly particle-sized soil, typically caused by ground shaking activities, which causes temporary transformation of the soil to a fluid mass. In rare instances, groundborne vibrations can cause liquefaction from activities such as pile driving or tunnel boring. If the liquefying layer is near the ground surface, the effects may resemble those of quicksand. If the layer is deep below the ground surface, it may provide a sliding surface for the material above it and/or cause differential settlement of the ground surface, which may damage building foundations by altering weight-bearing characteristics. During a liquefaction event, soils behave similarly to liquids, losing bearing strength. Structures built on these soils may tilt or settle when the soils liquefy. Liquefaction more often occurs in earthquake-prone areas underlain by young sandy alluvium where the groundwater table is less than 50 feet bgs.

Operational Effects

The potential for operational impacts associated with liquefaction is similar for the Project alternatives because they all traverse liquefaction zones. Liquefaction occurs when a mass of saturated soil loses significant strength and stiffness due to applied stress, usually from an earthquake. The Project alternatives could experience earthquake-induced ground shaking activity because of its proximity to known active faults. However, operational activities would not directly or indirectly cause strong seismic ground shaking, including liquefaction. This is because operational activities, such as the movement of monorail vehicles along the guideway and electric bus operations, would not involve ground-disturbing activities or the application of forces that could affect geological processes. Further, the design and construction of the Project would comply with applicable seismic and geotechnical regulations, which require infrastructure in liquefaction-prone areas to incorporate engineering measures, such as reinforced foundations for the elevated guideway, to ensure that the design is capable of withstanding seismic forces during operation. Adherence to the provisions listed in the CBC and the Metro Rail Design Criteria (MRDC) or equivalent would substantially reduce potential structural damage and the risk to public safety from seismic events.

Construction Effects

While construction activities for the underground alignments of Alternatives 4, 5, 6, and Modified Alternative 5 would involve subsurface work at depths where liquefaction could potentially occur, these activities would not directly or indirectly cause seismic ground shaking or induce liquefaction, because the construction processes would not be of sufficient intensity to cause geological processes such as faults or liquefaction. The construction of Alternative 3 would adhere to seismic and geotechnical

regulations, which would require appropriate engineering measures to ensure that liquefaction risks do not exceed unacceptable levels.

4.2.11.3 Soil Stability

This analysis addresses impacts related to unstable soils as a result of subsidence, differential settlement, lateral spreading, or collapse. Subsidence involves a sudden sinking or gradual settling and compaction of soil and other surface material with little or no horizontal motion. Expansive soils have a significant amount of clay particles that can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils. The occurrence of these soils often is associated with geologic units having marginal stability. Expansive soils can be dispersed widely, found in hillside areas, as well as low-lying areas in alluvial basins.

Collapsible soils undergo a rearrangement of their grains and a loss of cementation resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges where Holocene-age alluvial fan and wash sediments have been deposited during rapid runoff events. Soils prone to collapse are commonly associated with man-made fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods.

Lateral spreading is a phenomenon where large blocks of intact, non-liquefied soil move downslope riding on a liquefied substrate of large extent. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff and can occur on slope gradients as gentle as 1 degree.

Operational Effects

The potential for operational impacts associated with soil stability is similar for the Project alternatives because of similarities in existing soil conditions along the alignments; however, specific impacts may vary depending on whether the alignment is elevated or underground, as these configurations interact with soil stability in different ways. The Project alternatives are not located on a geographic unit or soil that is unstable, or that would become unstable, potentially resulting in lateral spreading, subsidence, liquefaction, or collapse. Using unsuitable materials for fill and/or foundation support would have the potential to create future heaving, subsidence, spreading, or collapse problems leading to building settlement and/or utility line and pavement disruption. Structural engineering standards to address geological conditions are part of standard construction requirements and standard construction practices. The Project alternatives would be designed in accordance with and equivalent to the MRDC Section 5, Structural, or equivalent; Metro's Supplemental Seismic Design Criteria (2017) or equivalent; and the California Seismic Hazards Mapping Act. The Project alternatives would be designed in accordance with recommendations developed in a detailed geotechnical report prepared during final design, which would provide site-specific information pertaining to the depths and areal extents of lateral spreading, subsidence, or collapse. During the design process, if it is determined that these conditions identified in the geotechnical report could result in an unacceptable soil or structural response, the final geotechnical engineering would include recommendations consistent with standard practice to address unstable geologic and related conditions present along the alignment. This may include deep foundations and/or ground improvements such as dynamic compaction, stone columns, jet grouting, and cement deep soil mixing and compaction grouting. Given compliance with these regulatory and design requirements, operational activities would not result in adverse effects related to soil stability.

Construction Effects

The potential for construction impacts associated with soil stability is similar for the Project alternatives because of similarities in existing soil conditions along the alignments; however, specific impacts may vary depending on whether the alignment is elevated or underground, as these configurations interact with soil stability in different ways. Construction activities would involve foundation support installation and earthwork along the alignment. Certain construction activities, such as drilling for the aerial guideway (Alternatives 1, 3, and 4) or tunneling (Alternatives 3, 4, 5, 6, and Modified Alternative 5), could affect soil stability leading to ground movements (both lateral movements and settlements) or subsidence. Additionally, the use of unsuitable materials for fill and/or foundation support could have the potential to create future heaving, subsidence, spreading, or collapse problems leading to foundation or roadway settlement. Implementation of MM GEO-1 through MM GEO-5 would reduce effects associated with the exposure of people or structures to hazards associated with unstable geologic units or soils.

4.2.12 Hazards and Hazardous Materials

This summary addresses hazardous materials, hazardous sites, methane zones, and airport hazards. Refer to the Sepulveda Transit Corridor Project Hazards and Hazardous Materials Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025o).

4.2.12.1 Hazardous Materials Transport, Use, or Disposal

For purposes of this section, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined by federal regulations as “a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 CFR 171.8).

Operational Effects

It is not anticipated that substantial quantities of hazardous materials would be routinely transported, used, stored, or disposed of during operation of any alternative. Operation of stations, the guideway, and MSF would involve the use of small amounts of hazardous substances such as oil, grease, solvents, paints, and common cleaning materials. As mandated by PM HAZ-1, cleaning and maintenance products would be required to be labeled with appropriate cautions and instructions for handling, storage and disposal, and do not represent a significant threat to human health and the environment. Staff would be required to use, store, and dispose of these materials properly in accordance with label directions.

Construction Effects

Construction of all Project alternatives could expose the public or the environment to hazardous materials if the following situations occurred: improper handling or use of hazardous materials or hazardous wastes (particularly if used or handled by untrained personnel); transportation accident; environmentally unsound disposal methods; or fire, explosion, or other emergencies. The severity of potential effects would vary with the activity conducted, the concentration of and type of hazardous material or wastes present, and the proximity of sensitive receptors. The types and amounts of hazardous materials would vary according to the nature of the construction activity. Construction activities would require use of typical construction equipment (e.g., gasoline- or diesel-powered machinery) and vehicles containing fuel, oil, and grease, as well as use and transport of these materials. There is an established, comprehensive federal, state, regional, and local framework that is intended to reduce the risks associated with the use, transport, and disposal of hazardous materials. Transportation of hazardous materials on area roadways is regulated by the CHP and Caltrans. Metro would be required

to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. As mandated by PM HAZ-2, transportation of hazardous materials would comply with state regulations governing hazardous materials transport as stated in the California Vehicle Code (Title 13 of the California Code of Regulations), the State Fire Marshal Regulations (Title 19 of the California Code of Regulations), and Title 22 of the California Code of Regulations. Restrictions on haul routes can be incorporated into the construction specifications according to local permitting requirements. Contaminated soils and hazardous building materials and wastes would be disposed of in accordance with federal, state, and local requirements. Adherence to federal and state regulations stipulated by PM HAZ-2 reduces the risk of exposure to hazardous materials used during construction. Each of these regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a more coordinated, quicker response to emergencies.

4.2.12.2 Hazardous Sites

Operational Effects

The hazardous site conditions for all Project alternatives related to Government Code Section 65962.5, commonly known as the Cortese List, are associated with contaminated soils and groundwater. Any health risks to the public and/or the environment associated with release of hazardous materials would be mitigated during construction and not occur after construction is complete. During operations, no ground-disturbing activities would occur at the Cortese-listed hazardous materials sites such that hazardous releases of contaminated soils could create a significant hazard to the public or the environment.

Construction Effects

A search of regulatory databases identified several sites in the surrounding area as being contaminated or having the potential to become contaminated from the release of hazardous substances (e.g., leaking underground storage sites). In addition, construction activities, such as grading and excavation, could result in the exposure of construction personnel and the public to previously unidentified hazardous substances in the soil. Exposure to unanticipated hazardous substances could occur from previously unidentified soil contamination caused by the contaminants originating at nearby listed sites (e.g., roadways and industrial uses) or from construction-related soil contamination caused by spillage and/or mixing of construction trash and debris into the soil. Several sites in the Project Study Area as being contaminated or having the potential to become contaminated from the release of hazardous substances. If sources of contamination are encountered during demolition, grading, or excavation, the removal activities required could pose health and safety risks capable of resulting in various short-term or long-term adverse health effects in exposed persons. The risks are particularly heightened during tunneling activities, which would involve deeper excavation and may encounter legacy contamination or naturally occurring hazardous materials that are less likely to be present near the surface.

If tunneling is advanced through contaminated soil or groundwater, the excavated soil/slurry mix could be considered hazardous, depending on the levels of contamination encountered. Parcels within 0.25 miles of these activities may have subsurface contamination from undocumented releases associated with current and/or historical use of the property(ies) (e.g., gas stations, dry cleaners, or industrial properties). During construction, there is the potential to encounter, dewater, and dispose of contaminated groundwater during ground-disturbing activities, shallow excavation, tunnel boring, excavation for the underground guideway, or relocation of utilities. This risk is heightened when performing shallow excavations, utilities relocation, or construction that requires dewatering. If

contaminated groundwater is encountered, it would be managed and disposed of in compliance with local, state, and federal regulations. This could include treating the contaminated groundwater on-site or off-site or transporting it to a wastewater treatment facility capable of handling hazardous materials.

The San Fernando Valley (Area 4) Pollock Operable Unit Superfund site is a 5,860-acre area with areas of contaminated groundwater near the LADWP Pollock Well Field in Los Angeles. Historical manufacturing work in the Valley groundwater basin, dating back to World War II, contaminated the groundwater in the region with VOC, including trichloroethylene and tetrachloroethylene. The regional plume of the Area 4 Pollock Operable Unit of the Valley Superfund Site could potentially affect the northern portions of all alternatives north of Saticoy Street. Contaminated groundwater poses the greatest risk at this site during construction activities such as excavation, tunneling, dewatering and grouting operations. The Valley Area 4 groundwater contamination is being addressed through the coordination of federal, state and municipal agencies. EPA conducted rounds of indoor sampling in the Atwater Village area (outside of the Project Study Area) and determined that the pollutants migrating from the groundwater did not impact the area. Based on these results, it can be inferred that pollutants would not affect proposed stations.

Specific to Alternative 6 and Modified Alternative 5, there are two open cases of hazardous sites within 100 feet of construction activities. The Miller Infinity Site is located at 5455 Van Nuys Boulevard and is listed as a gasoline-impacted soil and groundwater site with an open-remediation status under the leaking underground storage tank database. Groundwater flows toward the northeast. Several monitoring wells appear to be in or adjacent to the Alternative 6 footprint. Winall Station #17, located at 4441 Van Nuys Boulevard, is listed as gasoline-impacted soil, soil vapor, and groundwater contamination with a Remediation Plan status.

Polychlorinated biphenyls (PCB) were commonly used through 1979 in the small capacitor within fluorescent light ballasts. These fluorescent light bulbs would be of concern if leaking PCBs expose workers handling the fixtures to a variety of adverse health effects. As set forth in PM HAZ-4, identification and remediation of PCB-containing transformers would be the responsibility of the utility owner.

Implementation of MM HAZ-1 through MM HAZ-5 would ensure that workers have a clear understanding of hazardous materials that may occur in the construction area as well as procedures and plans for safely handling, transporting, and disposing of hazardous materials, and would minimize potential exposure of construction workers and the public to hazardous conditions through the disturbance or improper handling and/or disposal of hazardous building materials during demolition activities.

4.2.12.3 Methane Zones

Operational and Construction Effects

Methane and other flammable or toxic gases (notably hydrogen sulfide) are often associated with naturally occurring petroleum deposits, or from former or active oil fields. In such areas there is a potential for methane and other volatile gases to occur in the subsurface. In high concentration, methane and hydrogen sulfide can be an explosion hazard to the public. In the City of Los Angeles, there are two types of methane hazard zones: methane zones and methane buffer zones. A methane zone is closer to the source of the subsurface methane gas and/or hydrogen sulfide, whereas a methane buffer zone surrounds the outer limits of a methane zone. These zones are mostly a result of naturally surfacing tar and crude oil. The Santa Monica Boulevard Station and the Wilshire/Metro D Line Station

would be within the methane hazard zone. Under Alternative 1, all stations would be above street level and there would be no potential hazards associated with methane and/or hydrogen sulfide. The tunnel alignments for Alternatives 3, 4, 5, 6, and Modified Alternative 5 would encounter the methane and methane buffer zones. In addition, for Alternative 6 and likely Modified Alternative 5, there is a small methane and methane buffer zone at the location of an abandoned oil exploration well (Leadwell Well No. 1) that is very near the tunnel alignment. Pursuant to Section 91.7104.1 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619) and as outlined in PM HAZ-3, all construction would implement the city's methane and/or hydrogen sulfide mitigation measures to reduce the potential impacts. These measures include subsurface testing of geological formations, compliance with Methane Mitigation Standards established by the Superintendent of Building, and installation of methane and/or hydrogen sulfide mitigation systems for all underground structures, such as stations and tunnels. During tunneling, they also include monitoring for methane and/or hydrogen sulfide concentrations and maintaining ventilation systems to minimize accumulation of gas.

4.2.12.4 Airport Hazards

Operational Effects

Alternatives 1 and 3 are located 0.9 miles from the Van Nuys Airport at the nearest Project component, Alternatives 4, 5, 6, and likely Modified Alternative 5 are located 1.3 miles from the Van Nuys Airport at the nearest Project component. The Santa Monica Municipal Airport is not considered because the Santa Monica City Council approved a plan in 2023 to formally close the airport in 2028 (City of Santa Monica, 2023). Both the Van Nuys Airport Plan and Los Angeles County Airport Land Use Plan indicate that all alternatives are located outside each Airport Influence Area, which is the area where current or future airport-related noise, overflight, safety, or airspace protection factors may substantially affect land uses or necessitate restrictions on those uses (LA County Planning, 2023a, 2023b, respectively). Because the alignments and MSFs would be outside of each Airport Influence Area, there are no airport land use plans applicable to the Project alternatives.

Construction Effects

Alternatives 4, 5, and possibly Modified Alternative 5 potentially include a 55-acre temporary staging area located north of the Van Nuys Airport, north of Roscoe Boulevard, and within the Airport Influence Area, and a 7-acre temporary staging area would potentially be located north of the Santa Monica Airport runway and within the Airport Influence Area. Staging areas are used principally for the operation of contractors' equipment, receipt of deliveries and storage of materials, site offices as well as other construction activities such as maintenance, parking, and removal of spoils. There would be no other construction equipment or activities that could penetrate the Airspace Protection Zone or create visual, electronic, or wildlife hazards. There are no safety compatibility policies related to temporary construction staging.

4.2.13 Safety and Security

This summary addresses fire protection, police protection, emergency evacuation, and wildfire risk. Refer to the Sepulveda Transit Corridor Safety and Security Impacts Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025p).

4.2.13.1 Fire Protection

The Los Angeles Fire Department (LAFD) is the Authority Having Jurisdiction and has primary responsibility for fire and emergency services within the City of Los Angeles. The Los Angeles County Fire

Department is the Authority Having Jurisdiction within the VA. The City of Los Angeles would provide essential emergency and non-emergency services to the VA under mutual aid.

Operational Effects

The Project alternatives would introduce elements to the existing setting that could affect fire services. For alternatives with aerial components, the height of the proposed aerial guideway and clearance between supporting columns would be sufficient to maintain access for fire and emergency vehicle crossings. At signalized intersections, left-turning traffic would be maintained. Operation of the aerial alignments and stations would not materially impact fire protection response times because those segments include elevated heights that would not affect emergency vehicles traveling on the roadway network.

During operations of all Project alternatives, there would be low potential for increased demand on fire response services due to incidents or emergencies, which could result in an increase in overall response calls within the local jurisdictions. The City of Los Angeles has a duty under the California Constitution to provide adequate fire and emergency service (Cal. Const., art. XIII, § 35, subd. (a)(2)). Funds are allocated to these services during the annual monitoring and budgeting process to ensure that fire protection services are responsive to changes in the City of Los Angeles. Similarly, the LAFD evaluates staffing levels during the annual budgetary process, and personnel are hired, as needed, to ensure that adequate fire protection and emergency response services are maintained.

Adequate fire flows would be required by the fire code prior to construction. Sufficient water supply and hose systems would be provide protection to suppress fire hazards for all project elements. Stations would be equipped with a fire alarm control system in each station facility, , as well as signaling and fire detection systems, fire alarm panels, and sprinkler systems.

The proposed alignments and stations would be designed in accordance with the MRDC or equivalent criteria, including the Fire/Life Safety Criteria to ensure safety and minimize potential hazards at all locations. Metro's Fire/Life Safety Criteria outlines specific requirements for fire protection at stations, along the alignments, and within rail vehicles. Metro's standard fire/life safety certification process ensures that stations are designed and constructed to ensure safe and secure operation, including use of non-combustible construction materials, adequate emergency ventilation in below-grade portions, emergency lighting, emergency egress, emergency access, emergency backup power, fire detection and suppression, and communications. Train vehicles would be built using vehicle specifications to minimize fire hazards that include use of materials with minimum burning rates, smoke generation, and toxicity characteristics. Further, compliance with code requirements pertaining to emergency vehicle access and building standards also ensures that response times are maintained at acceptable levels.

While fires are not anticipated, there is the potential that a fire could occur at a station, along the alignment, at the MSF, or at a TPSS location. In the event of an emergency situation, LAFD personnel would respond, and the fire station to respond would be dependent on the location of the emergency along the alignment. In accordance with the guidance set forth by the National Fire Protection Association (NFPA), the authority responsible for the safe and efficient operation of a fixed guideway transit or passenger rail system would anticipate and plan for emergencies that could involve the system. An Emergency Procedure Plan would be followed in the event of a fire. The risk of fire would be minimized within the station locations and along the alignment by adhering to the requirements of NFPA 130 and the Los Angeles City Fire Code or design equivalent. In addition, as typically done by Metro, PM SAF-2 would ensure that LAFD evaluates Project designs so that emergency access for fire protection services is maintained at acceptable levels.

Alternative 4 would require a partial take of an existing fire protection response facility at the LAFD Fire Station Number 88 at 5101 Sepulveda Boulevard, Sherman Oaks, CA 91403. Roadway improvements would widen the back of sidewalk by 4 feet and the aerial guideway would place three straddle-bent columns within the existing station's property. While Alternative 4 would necessitate physical alterations of the outer limits of the LAFD's property where landscaping exists, the LAFD Fire Station Number 88 building itself would not require physical alteration and would not affect the access or egress for LAFD vehicles during operations. Alternative 4 would install aerial guideway columns and protective raised medians on Sepulveda Boulevard in the Valley, between Ventura Boulevard and Raymer Street. The existing center lane along Sepulveda Boulevard is primarily striped as a two-way left-turn lane. The installation of the viaduct's supporting columns and raised medians would affect the sight distance for emergency vehicles when making left turns on or onto Sepulveda Boulevard and potentially increase response times. However, design standards set forth by state and local agencies establish roadway engineering criteria to ensure that minimum sight distances are maintained for motorists (including emergency response vehicles) to pass other vehicles safely and comfortably. Alternative 4 roadway design would conform to geometric design standards set forth by the Caltrans Highway Design Manual (Caltrans, 2020) and the LADOT so that the line of sight would not be impaired for emergency vehicles making turn movements on Sepulveda Boulevard. The raised medians would also prohibit left turns on or onto Sepulveda Boulevard from Hartsook Street, Hesby Street, Archwood Street, Hart Street, Leadwell Street, La Maida Street, South Valleyheart Drive, and Covello Street. The removal of left turns would have the potential to increase response times for fire protection. Pursuant to PM SAF-2, LAFD would evaluate the design of Alternative 4 to ensure that emergency access and fire protection response times remain at acceptable levels.

Construction Effects

Construction of the Project alternatives would potentially temporarily increase demands on fire protection as a result of new workers, construction equipment, and construction materials, as well as periodic construction-related street closures or detours. Although temporary lane closures could interfere with fire service response times, this temporary condition would not necessitate the construction of new or physically altered governmental facilities. A TMP would be prepared and approved in coordination with local fire and police departments prior to construction, including the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic movement. The nearest local first responders would be notified, as appropriate, of traffic control measures in the plan during construction to coordinate emergency response routing.

Alternative 4 would require partial property acquisition at LAFD Fire Station Number 88 to widen the back of the sidewalk by 4 feet to accommodate the aerial guideway's columns and foundations. Construction of the aerial guideway would require roadway detours on Sepulveda Boulevard to support drilling of the CIDH foundations, forming and pouring bent columns and bent caps, and placing the precast guideway elements. Additionally, Alternative 4 would install three columns within the existing LAFD Fire Station Number 88 property currently dedicated for landscaping. While the station building would not be physically altered, the sidewalk would be widened and require improvements of two existing driveways serving LAFD Fire Station Number 88. Such construction work has the potential to be disruptive to the operations of LAFD Fire Station Number 88 and can result in an increase in response times. However, construction work would be temporary and intermittent and would not necessitate the construction of new or physically altered governmental facilities. A TMP would be prepared and approved in coordination with local fire departments prior to construction, including the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic

movement. The nearest local first responders would be notified, as appropriate, of traffic control measures in the TMP during construction to coordinate emergency response routing. Therefore, Metro and the contractor would coordinate with LAFD Fire Station Number 88 when working in proximity.

The Project alternatives would be required to create a Fire Prevention Plan that identifies potential fire hazards and their proper handling and storage procedures, potential ignition sources (such as welding, smoking and others) and their control procedures, and the type of fire protection equipment or systems that can control a fire involving them. A training program would inform employees of the fire hazards of the materials and processes to which they are exposed. The contractor would review with each worker upon initial assignment those parts of the Fire Prevention Plan that the employee must know to protect the worker in the event of an emergency. The written plan would be kept in the workplace and made available for employee review.

4.2.13.2 Police Protection

Police services would be provided by the Los Angeles Police Department (LAPD) and Los Angeles County Sheriff's Department (LASD) under Metro's existing contract service agreements with these agencies. Metro has contracted the LASD and LAPD Transit Services Division to provide policing services on the Metro within the City of Los Angeles. The UCLA Police Department (UCLA PD), Veterans Affairs Police Department, CHP, and Federal Protective Services would patrol and provide services in their respective jurisdictions or properties.

Operational Effects

During operation of all Project alternatives, there would be low potential for increased demand for police protection services from incidents or emergencies occurring at the proposed stations or transit vehicles, which could result in an increase in overall response calls within the local jurisdictions. Operational activities would be monitored by Metro, which has implemented a multi-policing model inclusive of Metro's transit security officers and contract security personnel. Metro's transit security officers are Metro's own security team and are deployed to specific locations with high frequencies of public-safety issues. Transit security officers enforce the Metro Code of Conduct, ensuring riders follow the rules and norms of the system. Additionally, Metro deploys trained contract personnel on Metro's buses, bus stops, trains, and stations to provide customer support. Ambassadors are unarmed and travel the system or are present at stations to promote safety for riders and operators. While not acting as security officers or replacing security officers, they provide a visible presence and support riders by connecting them with resources they may need such as providing directions or connecting them to other agencies and services as appropriated or warranted. They also help Metro to respond to issues more quickly by reporting maintenance, cleanliness, or safety concerns directly to the appropriate Metro department. The purpose of this multi-agency approach is to achieve higher visibility, enhanced response time, improved customer experience, and deployment of specifically trained officers to engage patrons with special needs. In addition, the UCLA PD would provide support police services at the UCLA bus station associated with Alternative 1 and the UCLA Gateway Plaza Station with Alternatives 3, 4, 5, 6, and Modified Alternative 5.

Alternative 4 would install aerial guideway columns and protective raised medians on Sepulveda Boulevard in the Valley. The existing center lane along Sepulveda Boulevard is primarily striped as a two-way left-turn lane. The installation of the aerial viaduct's supporting columns and raised medians would affect the sight distance for police vehicles when making left turns on or onto Sepulveda Boulevard and potentially increase response times. However, design standards set forth by state and local agencies establish roadway engineering criteria to ensure that minimum sight distances are maintained for

motorists to pass other vehicles safely and comfortably. Alternative 4 roadway design would comply with geometric design standards set forth by Caltrans' Highway Design Manual (Caltrans, 2020) and the LADOT (LADOT, 2010) so that the line of sight would not be impaired for police vehicles making turn movements on Sepulveda Boulevard. The raised medians that would protect the columns for the aerial guideway would also prohibit left turns on or onto Sepulveda Boulevard at Hartsook Street, Hesby Street, Archwood Street, Hart Street, Leadwell Street, La Maida Street, South Valleyheart Drive, and Covello Street. The removal of left turns would have the potential to increase response times for police protection. PM SAF-2 would ensure that LAPD evaluates the design of Alternative 4 so that emergency access for police services is maintained at acceptable levels.

Metro MSFs are typically fenced off and access is restricted. In addition, security cameras and nighttime lighting are typical security measures.

Construction Effects

Police service agencies in the area — including the LAPD, LASD, UCLA PD, and CHP — allocate funding from tax revenues to maintain adequate staffing levels and response times. Project operations would not require the construction of new or expanded police facilities, as existing service capacity is anticipated to accommodate any potential changes in demand. During construction, relevant police service agencies would review Health and Safety Plans, which include safety measures such as nighttime lighting, clear signage, and pedestrian detour routes. Agencies may also assess fees to support police protection services as needed. Metro standard practices require that lane and roadway closures be scheduled to minimize disruptions, with a TMP prepared and approved in coordination with local police departments prior to construction. The contractor would coordinate with first responders and emergency service providers to minimize any impacts on emergency response.

4.2.13.3 Emergency Evacuations

Disaster routes play a primary role in disaster response and recovery. During a disaster and immediately following, disaster routes are used to transport emergency equipment, supplies and personnel into an affected area. Disaster routes are also utilized by fire, emergency medical services, and others involved with public safety for life saving measures. Disaster routes are prioritized for clearing, repairing, and restoring over all other roads. The County of Los Angeles identifies I-405 and Sepulveda Boulevard as disaster routes.

Operational Effects

Alternatives 1 and 3 would operate within and adjacent to I-405. Alternative 4 features an aerial configuration on Sepulveda Boulevard in the Valley. For Alternatives 1, 3, and 4, I-405 and Sepulveda Boulevard would be kept accessible to emergency vehicles and fire equipment due to the height of the proposed aerial alignments and stations. Alternatives 5, 6, and Modified Alternative 5 would operate underground and would not affect conditions on surface streets.

All new guideways, stations, and crossings would be designed in accordance with MRDC or equivalent design criteria, including Fire Life Safety Criteria, to ensure safety and minimize potential hazards at all locations of the Project elements. Further compliance with applicable county and city design criteria pertinent to emergency vehicle access, as well as the California Fire Code standards, would ensure that sufficient ingress and egress routes would be provided at all station areas.

All Project alternatives would comply with NFPA guidance to reduce the potential physical interference with an Emergency Response or Evacuation Plan. The authority responsible for the safe and efficient operation of a fixed guideway transit or passenger rail system would anticipate and plan for

emergencies. Participating agencies would be invited to assist with the preparations of the Emergency Procedure Plan. Such coordination efforts with emergency services personnel would be agreed upon through third-party agreements or Memoranda of Understanding to ensure the Project alternatives would not physically interfere with or substantially impair an adopted emergency response or evacuation plan. In addition, the All-Hazards Mitigation Plan for the County of Los Angeles (CoLA CEO, 2020) and the City of Los Angeles 2018 Local Hazard Mitigation Plan (DCP, 2018) address procedures for large-scale emergency situations, such as natural disasters and technological incidents and not normal day-to-day emergencies. These emergency preparedness documents are for large-scale emergency situations (e.g., earthquakes, wildfire) that would be applicable to the entire County of Los Angeles and the City of Los Angeles.

Construction Effects

Temporary short-term effects on the I-405 would occur for the construction of Alternatives 1 and 3. Temporary short-term effects on Sepulveda Boulevard would occur for all Project alternatives due to roadway improvements and construction of the stations, and construction staging yards. Construction activities would necessitate roadway improvements to provide sufficient space for the guideway, stations, TPSS sites, the MSF, and construction staging yards. Roadway improvements within I-405 and Sepulveda Boulevard would result in a temporary and intermittent reduction of the number of lanes or temporary closure of roadways. MM TRA-4 requires that lane and/or roadway closures are scheduled to minimize disruptions and that a TMP be prepared in coordination with local fire and police departments prior to construction, including the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic movement. The nearest local first responders would be notified, as appropriate, of traffic control plans during construction to coordinate emergency response routing.

All Project alternatives would comply with the provisions set forth under the California Code of Regulations Title 8 and California Division of Occupational Safety and Health that require the creation of an Emergency Action Plan that covers designated actions that employers and employees must take to ensure employee safety from fire and other emergencies. The following elements, at a minimum, would be included in the plan:

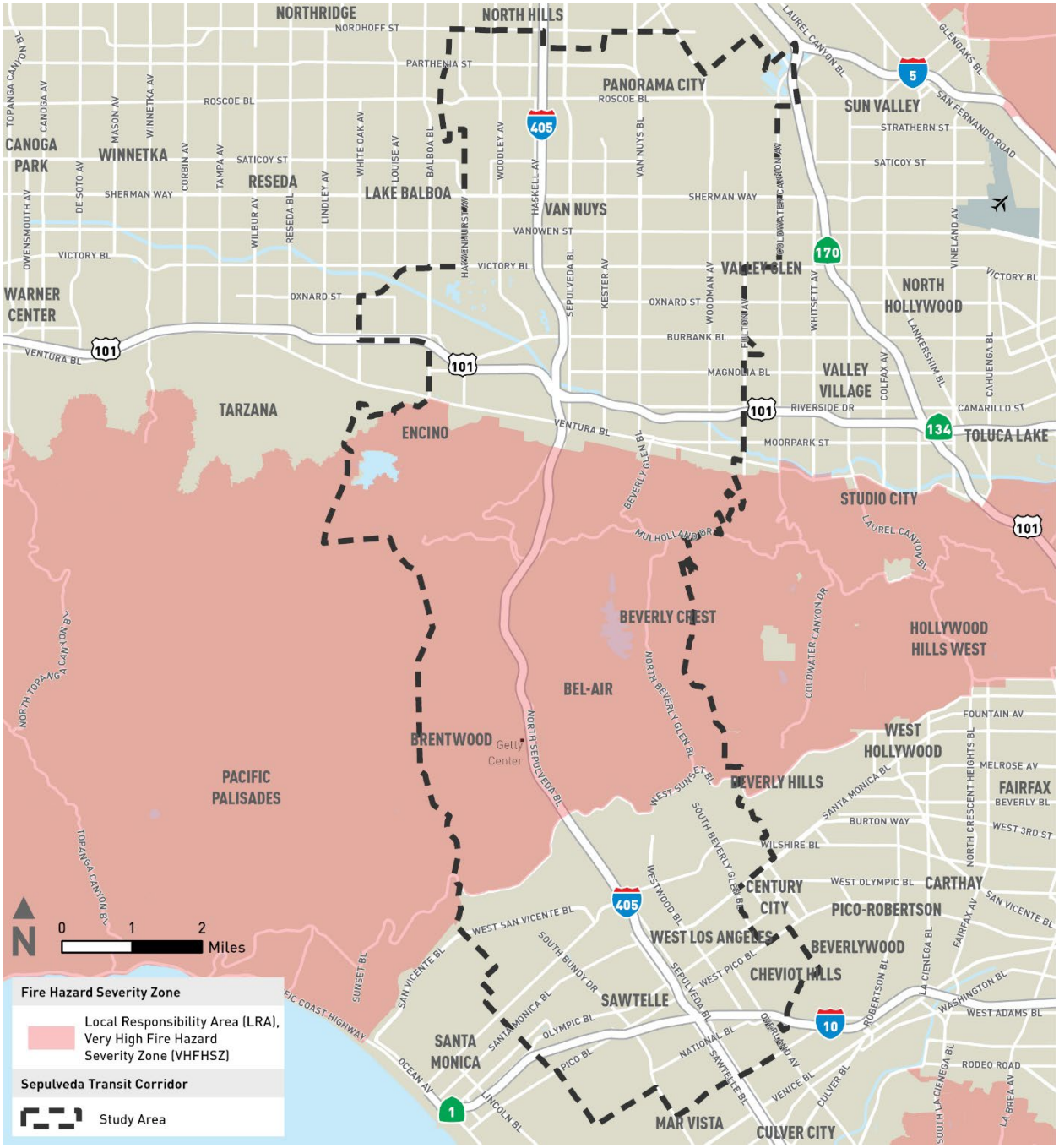
- Procedures for emergency evacuation, including type of evacuation and exit route assignments
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
- Procedures to account for all employees after emergency evacuation has been completed
- Procedures to be followed by employees performing rescue or medical duties
- The preferred means of reporting fires and other emergencies
- Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan

Adherence to existing laws, regulations, preparedness plans, and implementation of the TMP under MM TRA-4 would ensure that Project alternatives would provide adequate access for emergency vehicles and not impede an adopted Emergency Response Plan or Emergency Evacuation Plan.

4.2.13.4 Wildfire Risk

As shown on Figure 4-9, the project area is partially located in a Very High Fire Hazard Severity Zone as designated by the California Department of Forestry and Fire Protection (VHFHSZ) (CAL FIRE, 2011). Additionally, as shown on Figure 4-10, this segment of the Santa Monica Mountains has historically experienced wildfires, including the 2025 Palisades Fire, 2025 Sepulveda Fire, 2019 Getty Fire, and the 2017 Skirball Fire. The surrounding geography, climate, and environmental conditions contribute to risk of wildfire.

Figure 4-9. Wildfire Hazard Zones in the Project Study Area



Source: HTA, 2024

Figure 4-10. Historical Wildfires in the Project Study Area



Source: HTA, 2024

Operational Effects

Alternatives 1 and 3 feature aerial alignments that would be located within the median of the I-405 and its adjacent landscape in the VHFHSZ. Both alternatives have a risk of harm to project occupants because of increased exposure to wildfires and their pollutants. Alternatives 4, 5, 6, and Modified Alternative 5 would feature underground guideway within the VHFHSZ. Due to the depth of the proposed alignment, Alternatives 5, 6, and Modified Alternative 5 would not expose Project occupants to wildfires or their pollutants. While a majority of the Alternative 4 alignment within the Wildfire Hazard Zone is underground at a depth that would not expose Project occupants, the tunnel portal south of the proposed Ventura Boulevard Station would be located in a developed area with some open space areas. This could potentially lead to direct health impacts related to smoke and fire, as well as the potential of destruction of nearby property. In addition, all Project alternatives would require maintenance of roads, fuel breaks, emergency water sources, and other utilities associated infrastructure to support Project elements. Additionally, if a wildfire would occur in the Santa Monica Mountains, Metro would suspend operations of Alternatives 1 and 3. Provisions associated with the NFPA guidance require the operator of all Project alternatives to develop a passenger evacuation protocol.

PM SAF-1 would minimize wildfire risks through compliance with all regulations of the California Health and Safety Code Sections 13000 et seq. and the LAMC pertaining to fire protection systems during operations.

Construction Effects

Potential ignition sources during construction of all Project alternatives include hot exhaust from a vehicle parked on dry grass or welding during high winds, which could send sparks traveling through the air and land and igniting dry grass. Construction activities would comply with existing regulations that restrict periods of activity to times that are not a high fire risk. MM SAF-1 and MM SAF-2 provide construction-related protocols that would curtail work under red-flag warning days and maintain and monitor potential sources of fuel and ignition in order to reduce impacts related to exacerbating wildfire risks to a less than significant level. Additionally, in the event of a wildfire in the Santa Monica Mountains, the construction contractor would halt construction activities if the wildfires posed a threat to human health.

4.2.14 Real Estate and Acquisitions

This summary addresses acquisitions and displacements. Refer to the Sepulveda Transit Corridor Real Estate and Acquisitions Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025q).

The Project would affect existing properties and result in property acquisitions and displacements. The parcels acquired for the Project would involve either full or partial acquisition. Full acquisition would require the use of the entire property. Partial acquisition would occur if the Project would use a portion of a given property but would not require the entirety of the property. Types of partial acquisition include partial “fee simple” acquisitions and various types of permanent and temporary easements. For a “fee simple” acquisition, Metro would purchase a “fee simple interest” for the portion of the property and would become owner for that portion of the property. An easement provides one party with the right to use another party's property for a stated purpose. Table 4-15. summarizes typical causes of property acquisitions and displacement that could occur as a result of the Project.

Table 4-15. Typical Causes of Property Acquisition and Displacement for the Project

Source of Acquisition	Type of Acquisition	Cause/Process
Horizontal Alignment	Full/Partial Fee Simple	Insufficient existing ROW for construction and operation.
Aerial Alignment	Permanent Easement	A condition for a non-exclusive access agreement or easement (either permanent or temporary) for aerial alignments to allow access to a property or facility.
Vertical Circulation (e.g., stairs)	Partial Fee Simple	Area needed to bring passengers from the ground level to a station platform at an aerial (elevated) structure.
Property Encroachment	Full/Partial Fee Simple	Unauthorized use of private property. Resolution through boundary survey and potential relocation of use.
Access to a Residential or Non-Residential Use (driveway or road)	Full Fee Simple/ Permanent Easement	Permanent easement would be needed to provide residential units or non-residential uses access to a road; full acquisition may be required if reduced or restricted access would disrupt use of residences or non-residential uses.
Street/Intersection Improvements; Grade Crossing/Separation; Drainage and Utility Improvements	Partial/Full Fee Simple	Additional area/lanes required to maintain traffic volumes, turn lanes and sidewalk widths; additional area required to upgrade drainage facilities or to improve utility.
Station Entrance	Full Fee Simple / Partial Fee Simple/ Permanent Easement	Area needed to provide passenger access to an at-grade or aerial station.
Parking Facility	Partial/Full Fee Simple	Area required for station parking.
Maintenance and Storage Facility	Partial/Full Fee Simple	Area required to perform maintenance activities.
TPSS and Ancillary Facilities	Partial/Full Fee Simple	TPSS's and ancillary facilities would be located within the station footprints. However, there might specific locations along the alignment where partial/full takes are needed to make sure that all required infrastructure would be in place to support the efficient operation of the Sepulveda rail line.
Construction Activities	Temporary Construction Easements	Area used for staging materials and equipment, as well as cut-and-cover and tunneling activities, during the construction period; property would be returned at the end of construction.
Construction Access, Staging and Laydown	Partial/Full Fee Simple	Area required for staging materials and equipment, as well as cut-and-cover and tunneling activities, during the construction period; would be used for station parking or other permanent use after construction has been completed.

Source: Metro, 2025q

Operational Effects

Table 4-16 provides a summary of the potential businesses and housing units identified for displacement and relocation under Alternatives 1, 3, 4, 5, and 6. This summary includes acquisitions associated with each MSF. The potential for displacement and relocation associated with Modified Alternative 5 will be determined during the upcoming design process. Attachment A of the Sepulveda Transit Corridor Project Real Estate and Acquisitions Technical Report presents parcel-specific data, and Attachment B

provides exhibits that identify the parcels that would potentially be acquired along the alignments (Metro, 2025q).

Table 4-16. Summary of Potential Displacement Units by Alternative

Land Use		Alternative 1[a]	Alternative 3[b]	Alternative 4	Alternative 5	Alternative 6
Commercial	Parcels	14	14	19	26	41
	Units	14	14	97	86	44
Industrial	Parcels	10	10	11	11	2
	Units	9	8	12	19	1
Institutional/Public Facilities	Parcels	2	2	1	1	1
	Units	2	2	1	1	1
Vacant/Undeveloped	Parcels	2	1	1	1	10
	Units	0	0	0	0	0
Mixed Use	Parcels	0	0	1	1	1
	Units	0	0	2 businesses 34 residential units	2 businesses 34 residential units	2 businesses 3 residential units
Multi-Family Residential	Parcels	0	0	3	0	1
	Units	0	0	168	0	124
Single-Family Residential	Parcels	1	1	9	0	0
	Units	1	1	10	0	0
Total Parcels		**28**	**27**	**45**	**40**	**55**
Total Residential Units		**1**	**1**	**212**	**34**	**127**
Total Business Units		**23**	**22**	**111**	**107**	**46**

Source: HTA, 2024

[a] Includes the MSF Base Design and Electric Bus MSF. The parcels that would be used for MSF Design Option 1 would be acquired for the Alternative 1 or Alternative 3 alignment and are therefore also included.

[b] Includes the MSF Base Design. The parcels that would be used for MSF Design Option 1 would be acquired for the Alternative 1 or Alternative 3 alignment and are therefore also included.

Non-residential and residential displacements would occur to accommodate project components. Property displacements are determined by evaluating the extent to which Project alternatives would affect existing properties and identifying those properties where the current use would not be possible if the Project is constructed. Elements associated with the Project alternatives that were evaluated include direct effects on structures, assessment of property-specific elements (i.e., available parking, access to and traffic circulation within the property, and other aspects specific to the type of business and residential unit affected), and components that may disrupt a business' ability to conduct its primary function after implementation of the Project.

Permanent jobs may be lost as a result of the relocation. Metro will work with specialty businesses (e.g., businesses that cater to the local community or need a particular location to operate) to understand their specific relocation needs and provide them with information on available replacement sites, financial assistance, and other advisory assistance. Metro would work with these businesses as early in the process as possible to allow them additional lead time.

Residents of properties that would be fully acquired by Metro would need to be relocated. Residents of parcels affected by partial acquisitions would not be required to relocate. However, these affected residents may make a case that the remaining property is no longer compatible with their intended use and may choose to relocate, which may result in the need to relocate some residents.

Metro would compensate owners at fair market value to purchase the required property and would also need to compensate owners for damage to the remainder property. Metro would provide displaced and eligible businesses and residents with relocation assistance and benefits.

Where acquisition and relocation are unavoidable, Metro would comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) (42 U.S.C. Chapter 61) and California Relocation Act (Government Code Section 7260 et seq.). Real property acquired by Metro would be appraised to determine its fair market value. Just compensation, which shall not be less than the amount determined by an approved appraisal, would be offered by Metro. Each homeowner, renter, business, or nonprofit organization displaced would be given advance written notice and would be informed of the eligibility requirements for relocation assistance and payments. Each displaced entity will receive a notice of not less than 90 days to vacate the acquired property.

The Project Study Area is urbanized with a number of existing buildings for sale or lease. Given the availability of existing buildings/structures and non-residential properties, it is expected that most of the non-residential uses that would be displaced would relocate to existing commercial and industrial buildings and/or other non-residential properties in the surrounding area. It is expected that displaced residents would relocate to existing residential units in the surrounding area.

Construction Effects

Temporary acquisitions would be required for parcels that would only be used as temporary construction easements. Depending on the location and size of the temporary construction easements, existing structures on parcels could either remain in place or be demolished. For parcels where structures would be demolished, existing non-residential uses and residents would be relocated. For parcels where structures would not be demolished, non-residential use could temporarily be displaced during construction, but no permanent displacement would occur. These parcels would be returned to pre-construction conditions once construction is completed. Generally, parcels that would be used for construction access, staging, and laydown would be permanently acquired and, thus, these parcels would not be returned to pre-construction conditions once construction is completed. Table 4-17 summarizes the parcels that would be affected by construction of the Project alternatives. It is anticipated that Modified Alternative 5 will result in construction-related acquisitions similar to Alternatives 5 and 6.

Table 4-17. Parcels to be Used During Construction for the Project Alternatives

Alternative	Permanent Acquisition (Fee Simple and/or Easement)[a]	Temporary Construction Easement[b]
Alternative 1	38	6
Alternative 3	43	7
Alternative 4	87	36
Alternative 5	26	32
Alternative 6	46	125

Source: Metro, 2025q

[a] Parcels that would be permanently acquired for operations and also be used during construction, such as for access, staging, and/or laydown.

[b] Parcels from which the acquisition of temporary construction easements may be required.

Parcels that would be temporarily acquired (e.g., for temporary construction easements) and permanently acquired (e.g., a parcel that would be used for a temporary construction easement or construction staging and laydown during construction would also be used as an easement for the

alignment or a station during operations) would be appraised to determine the fair market value of the portion that would be used temporarily during construction, and just compensation not less than the amount recommended/determined by an approved appraisal would be made to each property owner.

4.2.15 Economic and Fiscal Considerations

This summary compares the potential for the Project alternatives to affect the local and regional economies. Refer to the Sepulveda Transit Corridor Economic and Fiscal Considerations Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025r).

Each of the Project alternatives is expected to enhance economic development in the Los Angeles region by improving connectivity between the Valley and the Westside. By linking the Van Nuys Metrolink Station in the north with the Metro E Line in the south, the Project alternatives would facilitate smoother and faster commutes and reduce travel times compared to automobile travel along regularly congested I-405. This enhanced connectivity is expected to attract businesses and workers, which would foster a more dynamic and integrated regional economy. The convenience of rapid transit access would likely stimulate real estate development and boost property values along the Sepulveda Corridor. Throughout the construction period, the Project alternatives are anticipated to increase employment for the region. Jobs would range from construction and engineering roles to on-going operational and maintenance positions, providing a healthy boost to local employment. Additionally, the Project alternatives would contribute to the long-term resiliency of the City of Los Angeles. The region would be better positioned to withstand economic shocks related to fuel price volatility or disruptions in road networks by diversifying transportation options and reducing reliance on automobiles.

4.2.15.1 Operational Output, Earnings, and Employment

The Project alternatives are expected to generate reoccurring employment and earnings for the region in the form of operation and maintenance staff, facility operators, and maintenance expenditures. They are expected to have a beneficial, but not substantial effect on local employment, relative to the overall employment of the region.

4.2.15.2 Fiscal Effects

The wages generated from construction activities would boost tax revenues. Table 4-18 lists potential income tax generation. The incremental consumption from new earnings would also boost sale tax revenues, which is listed in Table 4-19.

Table 4-18. Potential Income Tax Generated Earnings (2023 $M)

Area	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Regional	676	903	853	1,070	1,127
State of California	782	1,048	990	1,242	1,308

Source: Metro, 2025r

2023 $M = millions in 2023 dollars

Table 4-19. Potential Sales Tax Revenues (2023 $M)

Area	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Regional	182	243	229	288	303
State of California	160	214	202	255	268

Source: Metro, 2025r

2023 $M = millions in 2023 dollars

Constructing the Project alternatives would require acquiring private land and structures for ROW, parking, and station facilities. These acquisitions would remove the properties from the local tax base, reducing annual tax revenue. Including temporary acquisitions during construction and applying a conservative assumption that both partial and full takes would result in property tax loss for the full parcel, it is estimated that Alternative 1 would impact less than 0.13 percent of the Los Angeles County or City of Los Angeles annual property tax revenue relative to 2023 assessed parcel values and the total 2023 property tax revenues (County of Los Angeles, 2023; Controller's Office, City of Los Angeles, 2024). Alternative 3 would impact less than 0.12 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. Alternative 4 would impact less than 0.21 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. Alternative 5 would impact less than 0.16 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. Alternative 6 would impact less than 0.18 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. It is anticipated that Modified Alternative 5 would impact annual property tax revenues in a similar manner as Alternative 5 or Alternative 6, although this will be determined during the upcoming design process. The calculated revenue loss would be well below the annual change in levied taxes, which increased 5.5 percent in fiscal year 2022-2023 from fiscal year 2022-2023 (County of Los Angeles, 2023). The projected loss in tax revenues associated with any of the Project alternatives would not compromise the county's or city's ability to provide services or generate an adverse effect.

4.2.15.3 Construction Output, Earnings, and Employment

Construction of each of the Project alternatives would require substantial capital investment. The spending would increase the employment, earnings, and output for the duration of the construction period. Table 4-20 lists capital cost estimates in 2023 dollars, providing a common value for expenditures that would be distributed over several years. Alternative 6 has the highest estimated capital costs followed by Alternative 5, Alternative 3, Alternative 4, and Alternative 1. It is anticipated that Modified Alternative 5 would likely reduce capital costs compared to Alternative 5 because it reduces overall Project length, although this will be determined during the upcoming design process. Preliminary benefit-cost comparison indicates that each Project alternative would result in considerable benefits. Further quantification of project costs and benefits will inform future decision-making, including the potential for reduced travel times and vehicle operating costs and improved air quality, traffic safety, health, and economic productivity.

Table 4-20. Summary of Capital Costs (2023 $M)

Category	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Design and Planning	3,619	4,638	4,174	5,238	5,655
Construction	9,574	13,104	12,661	15,891	16,537
Equipment	814	861	610	584	501
Total	14,007	18,603	17,444	21,713	22,693

Source: Metro, 2025r

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

To isolate the potential economic effects on the local economy and the state, it is typical to distinguish between resources/funds that are new to the economy—those that would be invested in region and/or the state under the Project alternatives—and resources/funds that would be spent on projects in the region with similar economic effects (e.g., funds that would be allocated to other transportation

construction projects in the area). Table 4-21 lists the potential regional and state benefit for Alternative 1. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-22 lists the potential regional and state benefit for Alternative 3. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-23 lists the potential regional and state benefit for Alternative 4. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-24 lists the potential regional and state benefit for Alternative 5. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-25 lists the potential regional and state benefit for Alternative 6. It is anticipated that Modified Alternative 5 would result in benefits of similar magnitude to the other alternatives, although this will be determined during the upcoming design process.

Table 4-21. Alternative 1: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	3,619	7,509	2,606	33,802	7,711	2,847	37,267
Construction (Tunnel, Track and Approaches)	9,574	18,019	4,661	65,960	18,831	5,565	79,363
Total	13,193	25,528	7,267	99,762	26,542	8,411	116,630

Source: Metro, 2025r

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-22. Alternative 3: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	4,638	9,625	3,340	43,327	9,884	3,649	47,769
Construction (Tunnel, Track and Approaches)	13,104	24,661	6,379	90,272	25,772	7,616	108,615
Total	17,742	34,286	9,719	133,599	35,656	11,265	156,385

Source: Metro, 2025r

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-23. Alternative 4: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	4,174	8,661	3,006	38,987	8,894	3,283	42,984
Construction (Tunnel, Track and Approaches)	12,661	23,828	6,163	87,224	24,902	7,359	104,948
Total	16,835	32,489	9,169	126,211	33,795	10,642	147,932

Source: Metro, 2025r

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-24. Alternative 5: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	5,238	10,870	3,773	48,931	11,162	4,121	53,948
Construction (Tunnel, Track and Approaches)	15,891	29,907	7,736	109,476	31,255	9,236	131,721
Total	21,129	40,777	11,508	158,407	42,417	13,357	185,669

Source: Metro, 2025r

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 4-25. Alternative 6: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	5,655	11,735	3,516	58,239	12,050	4,449	58,239
Construction (Tunnel, Track and Approaches)	16,537	31,123	6,950	137,077	32,525	9,611	137,077
Total	22,192	42,858	10,466	195,316	44,575	14,060	195,316

Source: Metro, 2025r

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

4.2.16 Growth Inducing Effects

Analysis of growth inducing impacts evaluates reasonably anticipated growth in comparison to the population, households, and employment projections developed by a federally designated metropolitan planning organization, which is SCAG for Los Angeles County. Refer to the Sepulveda Transit Corridor Project Growth Inducing Impacts Technical Report for information related to existing conditions and the applicable regulatory environment (Metro, 2025s).

Operational Effects

The potential for operational impacts associated with population, housing, and employment growth would be similar for the Project alternatives since the Project would not construct any new housing units and therefore would not generate direct population growth within the proposed station areas. The Project is proposed to serve growth projected within the region. The SCAG-derived forecast growth supports local jurisdictions to explore opportunities to change the existing land uses surrounding the station areas. Potential indirect effects as a result of the Project alternatives include the future planning and development of transit-oriented development (TOD) within the proposed station areas. However, as the proposed station areas would be almost entirely within Priority Growth Area, these TODs would be in areas already designated by SCAG for the allocation of denser, more compact development. Thus, the projected growth within the Study Area proposed station areas is identified in the SCAG's 2024-2050 RTP/SCS and is not new unplanned growth.

The existing City of Los Angeles Transit-Oriented Communities (TOC) Incentive Program and Metro TOC Policy prioritize the development of TOCs within 0.5 miles of a major transit stop or High-Quality Transit Stop. Such future planned densification of land uses is also incorporated into the forecast SCAG growth data, is central to the growth strategies of the 2024-2050 RTP/SCS and is not considered unplanned growth. The Project alternatives would be a catalyst to the TOD planning and development, which would direct projected growth for the affected communities. Additionally, the Project is included in the list of transportation projects identified in the SCAG's 2024-2050 RTP/SCS and Measure M and is thus incorporated into their assumptions for future planning and development in the region.

Construction Effects

The potential for construction impacts associated with population, housing, and employment growth are similar for the Project alternatives since the Project would not construct any new housing units and therefore would not generate population growth within the proposed station areas. Construction activities would result in temporary influxes of construction workers, equipment, and vehicular trips. However, these workers would likely be sourced from the local labor pool, and thus the temporary employment opportunities should not directly foster the construction of permanent housing for workers. Construction activities would not remove obstructions to population growth, nor encourage or facilitate other projects that have not already been identified in planning documents.

4.2.17 Cumulative and Indirect Effects

A cumulative effect is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). Cumulative projects include regional transportation improvement projects, commercial developments of at least 50,000 square feet, and residential developments of 20 units or more. Approximately 100 cumulative projects are located within the Project Study Area. They are listed in Table 3-36 and identified on Figure 3-23 and Figure 3-24 of the Sepulveda Transit Corridor Project

Cumulative Impacts Technical Report (Metro, 2025t). That report also includes a detailed assessment of cumulative effects to environmental and community resources, which generally result in similar findings as presented above in the resource assessments. The following analysis focuses on potential cumulative effects related to transportation and traffic.

All Project alternatives would expand regional transportation choices, improve overall regional mobility, and decrease VMT and travel time due to the increased use of transit. This is considered a beneficial cumulative effect on area-wide traffic conditions. The Project alternatives would not affect local transit operations and circulation as there would be minimal impacts to individual bus lines or stops and transit service would be improved overall by implementation of the Project.

For Alternatives 1 and 3, modifications to the roadway network would potentially be influenced by the ExpressLanes project. All highway modifications associated with either project would require detailed review by Caltrans to ensure there are no geometric safety concerns.

To maintain the number lanes assumed in the cumulative condition, Alternative 1 would likely need to expand the I-405 facility westward several feet at several constrained locations along the I-405 corridor including portions of the corridor within the Brentwood and Sherman Oaks communities. As a result of the highway expansion, various modifications to adjacent roadways may be required including curb realignment, restriping, and ramp realignment. Despite these roadway changes, all highway and land use access would be maintained for transportation.

For all Project alternatives, the queues resulting from the peak-hour passenger flow into the ESFV LRT Van Nuys Metrolink Station are forecast to exceed the available queueing space at the fare gates and would create a hazard to passengers. Passenger queues at other station transfers would have adequate space and would not create a hazard to passengers. Implementation of MM TRA-1 would require an evaluation of passenger flow at the ESFV LRT Van Nuys Metrolink Station to determine appropriate design solutions such as removal of fare gates or installation of stand-alone validators to prevent queue lengths from exceeding the available queueing space.

For all Project alternatives, construction impacts would be temporary and intermittent during the overall construction period. As continued development is planned throughout the Project Study Area, individual development projects may occur simultaneously adjacent to the project alignment. This may result in a short-term cumulatively considerable adverse effect during construction. All Project alternatives include transportation-related mitigation measures such as MM TRA-4 to minimize the anticipated traffic disruptions during construction, which would reduce Project alternative contributions to cumulative construction effects. Specific to Alternatives 1 and 3, the ExpressLanes project may affect many of the same areas as those Project alternatives. If the ExpressLanes project is constructed prior to Alternative 1 or 3, construction activities would have the potential to affect operation of the ExpressLanes project through temporary lane closures required to construct the MRT alignment along the I-405 median. This would delay the benefit of the ExpressLanes project, including improved traffic flows and travel times as well as vehicle/person throughput through the Sepulveda Pass. As such, construction has the potential to result in a cumulative impact. The anticipated future NEPA documentation will address this potential cumulative impact in greater detail.

4.2.18 Section 4(f) Effects

The Section 4(f) analysis presents anticipated findings based on assessments completed for CEQA because the anticipated NEPA process has not been initiated for the Project. To date, a Section 106 consultation process has not occurred; thus, key Section 4(f) consultation with the officials with

jurisdiction over historic sites (i.e., the SHPO) has not occurred. The identification of historic sites will be revisited when there is federal involvement.

Section 106 of the National Historic Preservation Act of 1966 (36 CFR Part 800) directs federal agencies to consider the effects of projects on historic sites that are listed in or eligible for listing in the NRHP. In the Section 106 process, agencies work with the SHPO, the Tribal Historic Preservation Officer, and the Advisory Council on Historic Preservation to identify historic properties and avoid, minimize, or resolve adverse effects. Section 4(f) requires that, prior to a historic site being granted protection, it must be considered historically significant. Section 106 process is the method by which this historical significance is determined.

Section 4(f) of the United States Department of Transportation Act of 1966 (Title 23 United States Code [U.S.C.] Section 138 and 49 U.S.C. 303(c)) provides special protection of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the official(s) with jurisdiction over the park, area, refuge, or site) (49 U.S.C. Section 303). The FTA may not approve the use of Section 4(f) property unless the FTA determines that (1) there is no prudent or feasible alternative, and (2) the project includes all possible planning to minimize harm to these resources resulting from such use (23 CFR 774.3). As defined in 23 CFR 774.17, the "use" of a protected Section 4(f) property occurs when conditions described are met for permanent incorporation, temporary occupancy, constructive use, or *de minimis* impact. Regarding permanent incorporation, land from a Section 4(f) property is permanently incorporated into a transportation project when it has been purchased as ROW or sufficient property interests have otherwise been acquired for the purpose of project implementation. Temporary occupancy results when Section 4(f) property, in whole or in part, is required for project construction-related activities. The property is not permanently incorporated into a transportation facility, but the activity is considered to be adverse in terms of the preservation purpose of Section 4(f). A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

Section 4(f) use is assessed in terms of the magnitude of impact to determine whether the use is "*de minimis*" or not "*de minimis*." The requirements of Section 4(f) would be considered satisfied if it is determined that a transportation project would have only a *de minimis* impact on the Section 4(f) resource. The provision allows avoidance, minimization, mitigation, and enhancement measures to be considered in assessing the net impact to Section 4(f) use to make a *de minimis* determination. The agencies with jurisdiction must concur in writing with the determination.

Refer to the Sepulveda Transit Corridor Project Section 4(f) Considerations Technical Report for additional information related to the Section 4(f) regulation (Metro, 2025u).

4.2.18.1 Historic Sites

Historic and archival research was undertaken to determine the presence of previously identified historic properties eligible for listing in the NRHP. Archival research and field surveys identified 68 historical resources that may be affected by Alternative 1. Research also identified 64 historical resources associated with Alternative 3, 65 historical resources associated with Alternative 4, 54 historical resources associated with Alternative 5, and 53 historical resources associated with Alternative 6. Historic resources associated with Modified Alternative 5 will be determined during the upcoming design process. Overall, a total of 128 built historic resources were identified in the Project Study Area, some of which are not eligible for the NRHP and are only important for California or local registers. The

resources include residential, commercial, institutional, government, and industrial properties primarily along existing transportation corridors. There are five historic districts, two historic linear landscapes, and three historic structures.

In addition to built-environment historic properties, 10 previously identified archaeological resources were identified within the Project Study Area through a combination of archival and field research. Of those previously identified resources, the SCCIC records search identified one previously recorded archaeological resource (P-19-003803) within the Project Study Area. This archaeological resource was also the only previously identified resource that has been determined eligible for listing in the NRHP. Section 4(f) applies to archaeological sites that are listed in or eligible for listing in the NRHP and that warrant preservation in place. Efforts to preserve the resource or develop and execute a Data Recovery Plan should be addressed in the Section 106 process. Thus, P-19-003803 is considered a Section 4(f) protected historical site though further review of the site as part of the Section 106 process is necessary to determine if preservation in place is warranted.

Alternative 1 is anticipated to have the following Section 4(f) impacts on historic resources:

- *De minimis* impact to 15300 Ventura Boulevard
- *De minimis* impact to the West Los Angeles Veterans Affairs Historic District
- Permanent Use to Da Siani Ristorante (Sherwood Coiffeurs)

The proposed aerial Ventura Boulevard/Sepulveda Boulevard Station would be constructed approximately 20 feet from the rear (west elevation) of the 15300 Ventura Boulevard building and approximately 261 square feet of the legal parcel of the resource would be permanently acquired to accommodate portions of the Ventura Boulevard/Sepulveda Boulevard Station. The building itself would not be physically demolished, destroyed, relocated, or altered. The historical site's setting is commercial, and the rear elevation's current viewshed includes I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building or its setting to materially impair its significance. Construction of the station and the construction staging areas have the potential to cause damage to the historic building related to construction vibration. Construction adjacent to this resource also has the potential to inadvertently impact character-defining features, including the 15300 Ventura Boulevard parking garage, if protection measures are not put in place. Implementation of a Cultural Resources Monitoring Plan (MM CUL-1) would minimize potential harm to this resource. To address construction vibration-related damage to the historic site, vibration reduction measures would be implemented. Vibration reduction methods include routing equipment away from the historic site, locating stationary vibration-generating equipment away from the historic site, utilizing alternative equipment or methods to reduce overall vibration, and phasing earth-moving and ground-impacting activities during different time periods. In addition, a Vibration Control Plan (MM VIB-1.1) will be prepared for Alternative 1. As part of the Vibration Control Plan, vibration monitoring at historic structures would be required. Conversion of approximately 261 square feet of the historic site's property to transportation use would not constitute an adverse effect under Section 106 as the historic site would continue to convey its historic significance despite the presence of transportation infrastructure adjacent to and on the historic site property. Vibration reduction measures are anticipated to avoid any potential vibration-related damage to the historic site.

The Da Siani Ristorante (Sherwood Coiffeurs) property would be acquired and demolished for the construction of a proposed aerial MRT alignment parallel to I-405. Physical demolition would materially

impair the significance of the historical resource and has been presumed to result in an adverse effect to the historic site which would constitute a greater than *de minimis* use of this property. Implementation of MM CUL- 4 and MM CUL-5 would not reduce harm to the resource by requiring archival documentation and development of an interpretive program; however, a greater than *de minimis* use of the property would remain. As outlined in 23 CFR 774.3, prior to approving the use of any Section 4(f) protected property, the FTA must determine that no feasible and prudent avoidance alternative exists. If Alternative 1 is selected by the Metro Board as the Locally Preferred Alternative, the Alternative 1 developer should assess and develop avoidance alternatives that avoid the use of this historic site, though additional assessment through the FTA's Section 106 process would also be required. Potential alternatives to avoid the use of Section 4(f) property may include location alternatives, alternative actions, alignment shifts, and/or design changes. If it is determined that no feasible and prudent avoidance alternative exists, then the FTA may approve, from among the remaining alternatives that use Section 4(f) property, only the alternative that causes the least overall harm in light of the statute's preservation purpose. Such a determination would only occur after substantial consultation with the official with jurisdiction over the resource (i.e., the SHPO) and in coordination with the FTA.

The West Los Angeles Veterans Affairs Historic District is significant for its association with the government's development of veterans' health care and for its distinctive architecture. The district includes 66 contributing resources and 44 noncontributing resources. Under Alternative 1, the proposed aerial guideway and the proposed aerial Wilshire Boulevard/Metro D Line Station would be constructed within roughly 20 to 150 feet of the historic district, east of Dowlen Drive. In addition, approximately 23,817 square feet of land from the West Los Angeles Veterans Affairs Historic District property would be permanently acquired along the eastern property line to accommodate necessary grading and I-405 ramp modifications. None of the contributing elements to the historic district, including structures and landscaping, would be physically demolished, destroyed, relocated, or altered. However, due to the aerial nature of the project components, permanent visual impacts on the historic district and its setting are anticipated from the guideway and station. To address visual effects associated with the Alternative 1 aerial structure, MM CUL-2 would be implemented to ensure design of the structure adheres to the SOI Standards, thereby avoiding visual disruption to the historic site's contributing elements. MM CUL-1 and MM CUL-3 are proposed to address potential effects to the historic district during construction, including protection of the district's contributing landscape elements and development of a Cultural Resources Monitoring and Mitigation Plan (CRMMP), including development of treatment and protection measures for the historic site. Conversion of approximately 23,817 square feet of the historic district's property to transportation use has been presumed to not constitute an adverse effect under Section 106 as the historic district would continue to convey its historic significance despite the presence of transportation infrastructure adjacent to and on the historic district property. Measures to minimize or avoid harm including MM CUL-1, MM CUL-2, and MM CUL-3 would be implemented to ensure that all contributing elements to the historic district are protected during construction while requiring design of Alternative 1 Wilshire Boulevard/Metro D Line Station and aerial guideway to adhere to the SOI Standards. With impact avoidance, minimization, mitigation, and enhancement measures applied to Alternative 1, the transportation use of the Section 4(f) resource would not adversely affect the historic significance of the resource. It is anticipated that the Section 106 process would conclude no adverse effect on the historic site. Based on the nature of the effects of Alternative 1 on the West Los Angeles Veterans Affairs Historic District, it is presumed that the FTA would make a *de minimis* impact finding. Prior to finalizing this determination, the FTA must satisfy the requirements of 23 CFR 774.5(b), including consultation with the official with jurisdiction over the resource, which is the SHPO.

Alternative 3 is anticipated to have the following Section 4(f) impacts on historic resources:

- *De minimis* impact to 15300 Ventura Boulevard
- Permanent Use to Da Siani Ristorante (Sherwood Coiffeurs)
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the West Los Angeles Veterans Affairs Historic District
- *De minimis* impact to the Westwood Federal Building

The analyses of impacts to these historic resources under Alternative 3 are identical to the analyses presented with one exception. Implementation of MM VIB-3.1 would minimize potential impacts associated with Alternative 3.

Alternative 4 is anticipated to have the following Section 4(f) impacts on historic resources:

- *De minimis* impact to The Performing Arts Center
- *De minimis* impact to the Valley Animal Hospital
- *De minimis* impact to 6833 Sepulveda Boulevard
- *De minimis* impact to 6160 Sepulveda Boulevard
- *De minimis* impact to the Air Raid Siren No. 117
- *De minimis* impact to the Cabana Motel
- *De minimis* impact to the El Cortez Motel
- *De minimis* impact to 5724 Sepulveda Boulevard
- *De minimis* impact to the Kauai Surf
- *De minimis* impact to the resource at 5450 Sepulveda Boulevard
- *De minimis* impact to the Cathedral of St. Mary Church
- *De minimis* impact to the Lt. Patrick H. Daniels United States Army Reserve Center
- *De minimis* impact to 4700 Sepulveda Boulevard
- Permanent Use to 15300 Ventura Boulevard
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the UCLA Linde Medical Building

The analyses of impacts to these historic resources under Alternative 4 are identical to the analyses presented with one exception. Implementation of MM VIB-4.1 would minimize potential impacts associated with Alternative 4. Alternative 5 is anticipated to have the following Section 4(f) impacts on historic resources:

- *De minimis* impact to the Lt. Patrick H. Daniels United States Army Reserve Center
- *De minimis* impact to 4506 Saugus Avenue
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the Linde Medical Building

The analyses of *de minimis* impacts to these historic resources under Alternative 5 are identical to the analyses presented with one exception. Implementation of MM VIB-5.1 would minimize potential impacts associated with Alternative 5.

Alternative 6 is anticipated to have the following Section 4(f) impacts on historic resources:

- Permanent Use to Bill's Valley Car Wash
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the Linde Medical Building

- *De minimis* impact to the Tishman Building
- *De minimis* impact to the Laemmle Theater

Bill's Valley Car Wash would be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. Physical demolition would materially impair the significance of the historic site and would constitute a permanent use. The explanation for addressing this potential permanent use under Alternative 6 is identical to the explanation for addressing the potential permanent use under Alternative 1. The analysis of *de minimis* impacts to these historic resources under Alternative 6 is identical to the analysis presented above for Alternative 1 with one exception. Implementation of MM VIB-6.1 would minimize potential impacts associated with Alternative 6 by requiring a Vibration Control Plan with mitigation measures such as locating stationary vibration-generating equipment away from the historic site, utilizing alternative equipment or methods to reduce overall vibration, phasing earth-moving and ground-impacting activities during different time periods, and vibration monitoring at historic structures.

The analyses of impacts to the remaining historic resources under Alternative 6 are identical to the analyses presented with one exception. Implementation of MM VIB-6.1 would minimize potential impacts associated with Alternative 6.

Modified Alternative 5 could have the following Section 4(f) impacts on historic resources based on an anticipated alignment similar to Alternatives 5 and 6:

- Permanent Use to Bill's Valley Car Wash (confirmation pending upcoming design)
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the Linde Medical Building
- *De minimis* impact to the Tishman Building

Similar to Alternative 6, Bill's Valley Car Wash could be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. This potential effect will be determined during the upcoming design process. The explanation for addressing this potential permanent use under Modified Alternative 5 would be identical to the explanation for addressing the potential permanent use under Alternative 1. Implementation of MM VIB-5.1 would likely minimize potential impacts associated with Modified Alternative 5, if needed.

4.2.18.2 Public Parks and Recreational Areas

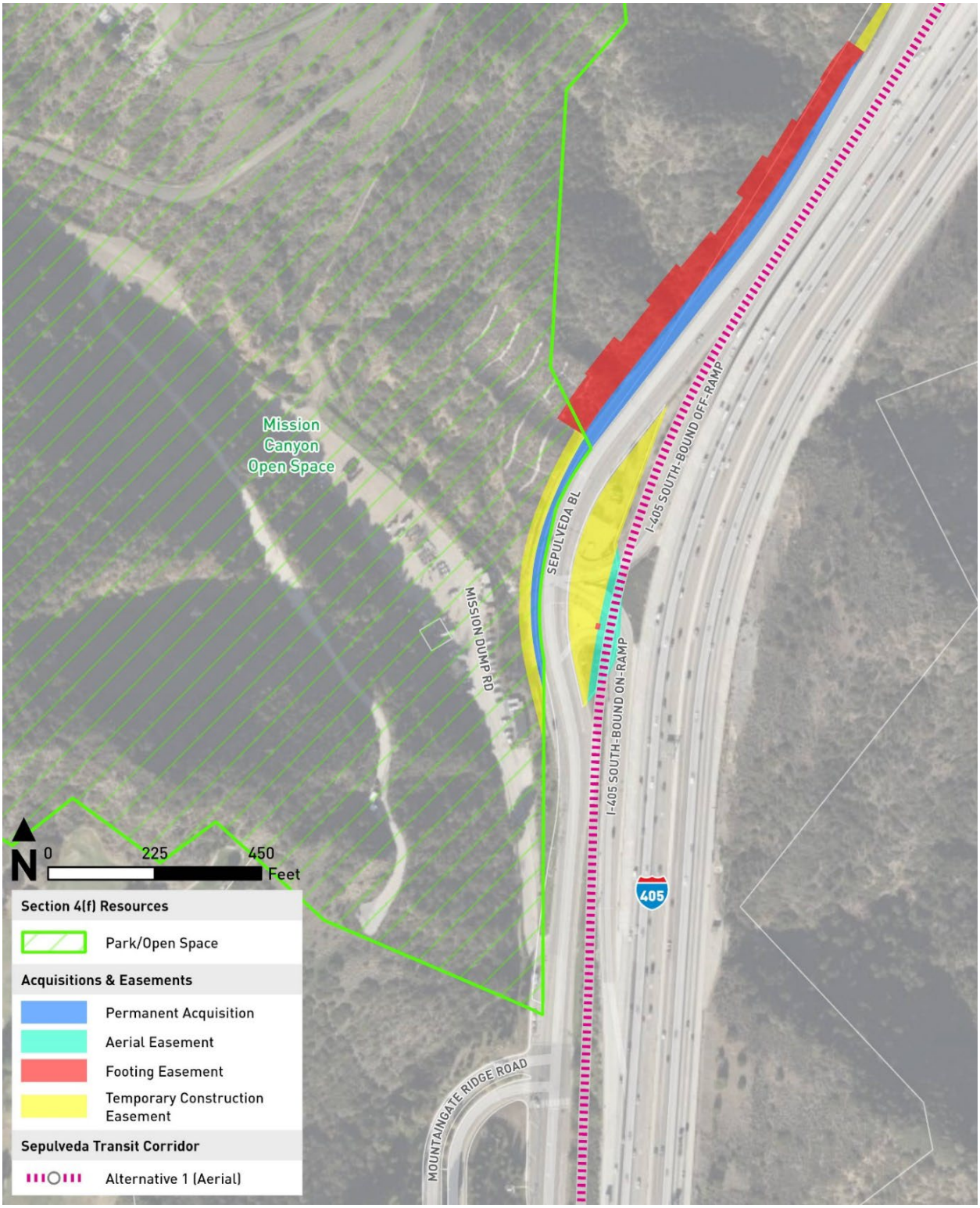
Alternatives 1 and 3 are anticipated to have the following impacts on public parks and recreational areas:

- *De minimis* impact to Mission Canyon Open Space
- *De minimis* impact to Teichman Family Magnolia Park

The Mission Canyon Open Space is a former landfill that has been planned for development of a regional park. The MRCA, a partner agency to SMMC, has developed designs and circulated an Initial Study and Mitigated Negative Declaration under CEQA in 2022. The proposed park would include a 105-space parking lot, a picnic area, fitness stairs, water tanks, restrooms, maintenance storage, ranger residence, and a 2.5-mile loop trail with regional connection to the Westridge-Canyonback Wilderness Park. Section 4(f) applies to planned parks when the land is one of the enumerated types of publicly owned lands and the public agency that owns the property has formally designated and determined it to be significant for park, recreation area, or wildlife and waterfowl refuge purposes. While the Development Plan has not been formally adopted by the MRCA, in absence of formal consultation with the MRCA to

establish the property's significance, the property has been assumed to be protected under Section 4(f). The aerial MRT alignment would be located approximately 150 feet east of the Mission Canyon Open Space property. While the aerial guideway alignment itself would not result in property effects to the resource, Sepulveda Boulevard would require realignment to accommodate the aerial guideway footings. This realignment would result in acquisition of approximately 0.6 acres of property from the planned park along the hillside fronting Sepulveda Boulevard, near Mission Dump Road. Construction easements within the planned park property would be required to construct the realigned roadway. Figure 4-11 depicts the anticipated acquisition areas. Because the Mission Canyon property has not been developed as a park, there are no existing features, attributes, or activities potentially affected and the likely location and function of any recreational facilities on the site is unknown. The modifications to the property would consist of grading and slope stabilization along the property line as well as installation of new roadway pavement. Given the steep undeveloped topography of the site, there is limited opportunity to develop any recreational facilities or features in the area affected. Further, Mission Dump Road, the primary means of access to the property, would remain unaffected. Upon completion of construction, the aerial guideway would be visible to potential future park users and may reduce the sense of the natural setting intended for the park development. However, the visual setting is already dominated by the presence of I-405 and the addition of the aerial guideway is unlikely to alter future park users' experience of the park. Applicable measures to minimize harm include MM BIO-11, PM GEO-1, PM GEO-2, PM GEO-3, MM GEO-3, and MM GEO-5. MM BIO-11 would minimize the number of trees removed from the property to maintain the natural setting of the site to the greatest extent possible. PM GEO-1, PM GEO-2, PM GEO-3, MM GEO-3, and MM GEO-5 would ensure that grading and associated slope stabilization activities on the site are seismically sound and appropriately designed. Due to the nature of operations (i.e. MRT aerial alignment along the I-405 ROW), it is anticipated that no effect on the potential activities, features, or attributes of the park would occur. Only 0.6 acres of the approximately 480-acre property would be converted to a transportation use. When considering the scope of Alternatives 1 and 3 and the avoidance and minimization measure commitments, impacts are expected to be minor. The transportation use of the Section 4(f) resource, together with impact avoidance, minimization, mitigation, and enhancement measures would not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). Based on the nature of the effects on the Mission Canyon Open Space, it is presumed that a *de minimis* impact finding would be made by FTA. Prior to finalizing this determination, the FTA must satisfy the requirements of 23 CFR 774.5(b).

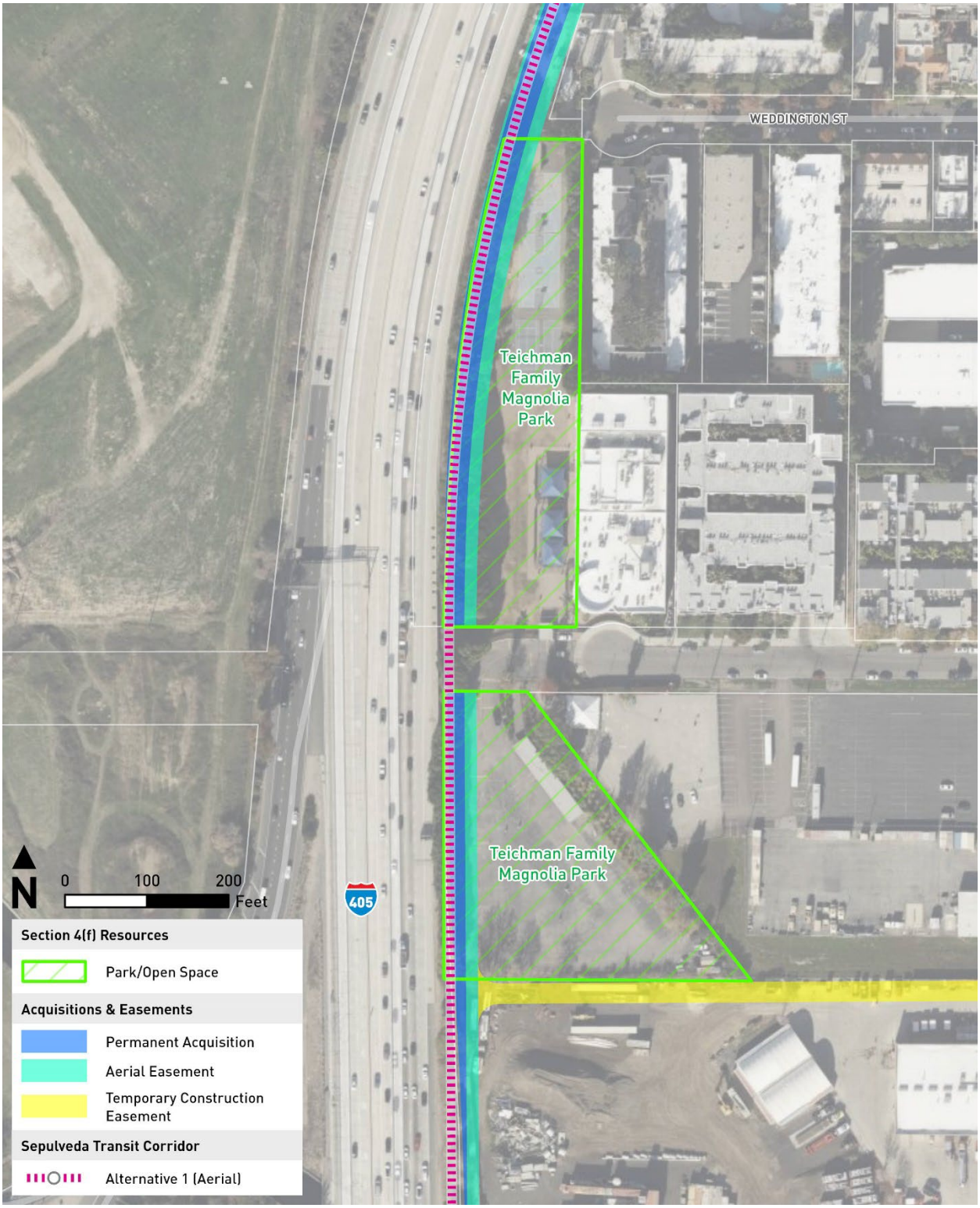
Figure 4-11. Alternative 1: Property Acquisition – Mission Canyon Open Space



Source: Metro, 2025u

The Teichman Family Magnolia Park is a public park constructed by the Emek Hebrew Academy, a private, not-for-profit school. The park is under lease to the City of Los Angeles Department of Recreation and Parks from the U.S. Government through USACE, and the park is available to the public through a shared use agreement between the private school, USACE, and the City of Los Angeles Department of Recreation and Parks. The park includes basketball, volleyball, and tetherball courts as well as a controlled access gate and parking facility. The aerial MRT alignment would be constructed along the western property line of both the parking lot and the park itself. As a result, approximately 0.6 acres of the park would be permanently acquired for and used for a transportation purpose. The area to be acquired would consist of the landscaped area along the western edge of the park property that serves as a buffer between park uses and the I-405 ROW. No park facilities or features would be acquired or removed as a result of Alternatives 1 or 3. Figure 4-12 depicts the anticipated acquisitions.

Figure 4-12. Alternative 1: Property Acquisition – Teichman Family Magnolia Park



Source: Metro, 2025u

MM BIO-11 would minimize harm to the resource by avoiding, where possible, tree removals and by replacing those trees removed by Alternative 1 construction. As such, it is anticipated that with incorporation of MM BIO-11 the park property would continue to be screened from I-405 with minimal effect to the regular use of the facility for recreational purposes. The proposed aerial guideway would be experienced by park users in a similar fashion to how the existing I-405 facility is experienced.

Due to the nature of Alternatives 1 and 3, it is anticipated that no effect on the potential activities, features, or attributes of the planned park would occur. Only 0.6 acres of the approximately 4-acre property would be converted to a transportation use. When considering the scope of Alternatives 1 and 3 and the avoidance and minimization measure commitments, impacts are expected to be minor. The transportation use of the Section 4(f) resource, together with impact avoidance, minimization, mitigation, and enhancement measures would not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). Based on the nature of the effects of Alternatives 1 and 3 on the Teichman Family Magnolia Park, it is presumed that a *de minimis* impact finding would be made by FTA. Prior to finalizing this determination, the FTA must satisfy the requirements of 23 CFR 774.5(b).

4.2.19 Avoidance and Minimization Measures

Table 4-26. presents avoidance and minimization measures that may be included in NEPA documentation to lessen environmental and community effects. These measures were included in the CEQA DEIR (Metro, 2025) and updated to reflect Modified Alternative 5.

Table 4-26. Potential NEPA Avoidance and Minimization Measures

Resource	Avoidance and Minimization Measure	Applicability
Transportation and Traffic		
MM TRA-1	During final design, Metro shall complete a detailed pedestrian flow microsimulation analysis to evaluate passenger movements when transferring between the Project Van Nuys Metrolink Station and the ESFV LRT Line Van Nuys Metrolink Station. This analysis shall assess passenger flow into the ESFV LRT Van Nuys Metrolink Station and potential areas of congestion at the fare gates during peak and off-peak hours. In addition to passengers transferring from the Van Nuys Metrolink Station, this analysis shall include passengers arriving at the ESFV LRT Van Nuys Metrolink Station via Amtrak, Metrolink, bus, active transportation, park & ride, and kiss & ride. The results of this analysis shall inform design to determine necessary measures, such as removal of fare gates or installation of stand-alone validators at the ESFV LRT Van Nuys Metrolink Station, to eliminate the safety concern of passengers queueing into the street. Any necessary adjustments to station layouts, signage, pedestrian transfer paths, or fare gate configurations shall be incorporated into final design prior to commencement of operations.	All Project Alternatives
MM TRA-2	During final design, the project contractor shall coordinate with LADOT to limit vehicular access to the pick-up/drop-off area at the Metro E Line Expo/Sepulveda Station to only right-in/right-out traffic.	Alternatives 1 and 3
MM TRA-3	Before commencing revenue service, the Project shall install advance warning signs at the pick-up/drop-off location on Sherman Way to facilitate traffic flow and ensure pedestrian safety. These signs shall comply with the standards of the *California Manual on Uniform Traffic Control Devices* (Caltrans, 2026).	Alternatives 1 and 3
MM TRA-4	The project contractor shall prepare a Transportation Management Plan (TMP) to facilitate the flow of traffic and transit service in and around construction zones. The TMP shall include, at a minimum, the following measures: • Where feasible, schedule construction-related travel (i.e., deliveries, hauling, and worker trips) during off-peak hours and maintain two-way traffic circulation along affected roadways during peak hours. Avoid the closure of two major adjacent streets where feasible. • Designated routes for project haul trucks shall primarily utilize the Interstate 405, Interstate I-10, and US-101 corridors. Throughout the construction process, these routes shall be coordinated with the City of Los Angeles and Veterans Affairs to ensure consistency with Land Use and Mobility Plans. Additionally, the routes shall be situated to minimize noise, vibration, and other possible impacts. • Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through-traffic in adjacent residential areas. • Where construction encroaches on the Los Angeles-San Diego-San Luis Obispo rail corridor right-of-way, coordinate construction activities with Union Pacific, Metrolink, and Amtrak to minimize disruptions to service and coordinate on outreach to inform passengers of service impacts. Provide temporary parking and drop-off facilities at the Van Nuys Metrolink/Amtrak Station to minimize passenger impacts.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	• Develop and implement an outreach program and public awareness campaign in coordination with Caltrans, the City of Los Angeles, the City of Santa Monica, and the County of Los Angeles to inform the general public about the construction process and planned roadway closures, potential impacts, and mitigation measures, including temporary bus stop relocation. • Where feasible, temporarily restripe roadways to maximize the vehicular capacity at locations affected by construction closures. • Provide wayfinding signage, lighting, and access to specify pedestrian safety amenities (such as handrails, fences, and alternative walkways) during construction. • Where construction encroaches on pedestrian facilities, special pedestrian safety measures shall be used, such as detour routes and temporary pedestrian barricades. • Where construction encroaches onto the University of California, Los Angeles campus, the project contractor shall ensure that access to campus buildings is maintained through temporary decking and the construction of temporary stairs and ramps. • During final design, the project contractor shall coordinate with the Metro Operations to minimize construction impacts on existing Metro rail operations in and around existing stations. Where construction results in the interruption of Metro rail operations, buses shall provide temporary service between rail stations. • Provide on-street bicycle detour routes and signage to address temporary effects to bicycle circulation and minimize inconvenience (e.g., lengthy detours) as to minimize users potentially choosing less safe routes if substantially rerouted. • During final design, the project contractor shall coordinate with first responders and emergency service providers to minimize impacts on emergency response. Coordination efforts shall include the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic movement. The nearest local first responders would be notified, as appropriate, of Traffic Control Plans during construction to coordinate emergency response routing. • Maintain customer and delivery access to all operating businesses near construction work areas. Access shall be maintained to allow for reasonable business operations, including clear signage for alternate routes, temporary driveways, or entry points as necessary. Coordination with businesses shall be conducted to address specific access needs and minimize disruptions, ensuring that any restrictions are communicated in advance and alternative arrangements are provided as appropriate.	

Resource	Avoidance and Minimization Measure	Applicability
MM TRA-5	Where construction results in the interruption of Metro rail operations, the Project shall provide temporary bus service at rail stations taken out of passenger service. Temporary bus service may consist of either dedicated bus shuttles or extensions of other Metro bus service. Temporary bus service during closures of the Metro D Line Westwood/UCLA Station and/or Metro D Line Westwood/VA Hospital Station shall operate on Bonsall Avenue, Wilshire Boulevard, Santa Monica Boulevard, Century Park East, Avenue of the Stars, Century Park West, and/or Constellation Drive.	All Project Alternatives
MM TRA-6	During final design, the project contractor shall coordinate with UCLA and the Veterans Affairs (VA) Medical Center to ensure adequate emergency access to the Ronald Reagan UCLA Medical Center and the VA Medical Center during construction.	Alternatives 1 and 3
MM TRA-7	The Project shall replace the Willis Avenue Pedestrian Bridge with another pedestrian bridge or pedestrian undercrossing. The replacement structure shall be completed and operational before the existing bridge is removed.	Alternatives 4 and 5
MM TRA-8	To maintain safe and convenient access to the Ivy Bound Sherman Oaks Charter School, the project contractor shall not operate or park large trucks or other construction vehicles on Morrison Street from 6:30am to 9:00am or 1:30pm to 4:00pm on school days, or at such other times that the school informs the Project contractor that a large amount of student pick-up or drop-off activity will occur.	Alternatives 4 and 5
MM TRA-9	During final design, the project contractor shall coordinate with first responders and emergency service providers on the design of the raised median along Sepulveda Boulevard to ensure that existing emergency response times are maintained following construction.	Alternative 4
MM TRA-10	The Project shall redesign the west entrance of the existing Metro E Line Expo/Bundy Station to allow for transfers from the Project station to the Metro E Line within a single fare-paid zone.	Alternative 6
Air Quality		
MM AQ-1	The Project shall require zero emissions or near zero emissions on-road haul trucks such as heavy-duty trucks with natural gas engines that meet or exceed the California Air Resources Board's (CARB) adopted optional nitrogen oxide emissions standard at 0.02 grams per brake horsepower-hour (g/bhp-hr), if and when feasible. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards. These records shall be submitted monthly to Metro for review and shall be made available to regulatory agencies upon request. To ensure compliance, Metro or its designated representative shall conduct regular inspections of construction operations, including on-site verification of truck compliance. Inspections shall occur at least twice per month during active construction. Any contractor found to be using non-compliant trucks without prior approval from Metro shall be subject to penalties, including suspension of operations until compliance is achieved.	All Project Alternatives
MM AQ-2	Construction contracts shall include language that compels contractors to implement all policies and emissions control measures as presented in the Los Angeles County Metropolitan Transportation Authority's Green Construction Policy.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
MM AQ-3	Construction contracts shall include language that compels contractors to implement all fugitive dust control measures as detailed in South Coast Air Quality Management District Rule 403 (Fugitive Dust).	All Project Alternatives
Included in the DEIR as part of the Project. Included in the PEL Study as a NEPA minimization measure.	In accordance with the Green Construction Policy, Metro is committed to the following construction equipment requirements, construction best management practices, and implementation strategies for all construction projects performed on Metro properties or within Metro rights-of-way: • All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards at a minimum. In addition, if not already supplied with a factor-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology devices certified by the California Air Resources Board (CARB) achieving no less than the equivalent of a Level 3 diesel emission control strategy. • All on-road heavy-duty diesel trucks or equipment with a gross vehicle weight rating of 19,500 pounds or greater shall comply with the U.S. Environmental Protection Agency's 2007 on-road emission standards for particulate matter (PM) and nitrogen oxide (0.01 gram per brake horsepower hour [g/bhp-hr] and 1.2 g/bhp-hr, respectively). • Every effort shall be made to utilize grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must meet the following standards: • Meet a 0.01 g/bhp-hr standard for PM, or be equipped with best available control technology for PM emissions reductions. • Best management practices shall include, at a minimum the following: – Use of diesel particulate traps or best available control technology, as feasible. – Use renewable diesel for all diesel engines. – Maintain equipment according to manufacturer's specifications. – Restrict idling of construction equipment and on-road heavy-duty trucks to a maximum of 5 minutes when not in use (CARB exceptions apply). – Maintain a buffer zone that is a minimum of 1,000 feet between truck traffic and sensitive receptors, where feasible. – Work with local jurisdictions to improve traffic flow by signal synchronization during construction hours, where feasible. – Configure construction parking to minimize traffic interference, where feasible. – Enforce truck parking restrictions, where applicable.	All Project Alternatives

<table>
<tr><th>Resource</th><th>Avoidance and Minimization Measure</th><th>Applicability</th></tr>
<tr><td></td><td>– Prepare haul routes that conform to local requirements to minimize traversing through congested streets or near sensitive receptor areas.
– Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, as feasible.
– Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.
– Use electric power in lieu of diesel power where available.
– Maintain traffic speeds on all unpaved areas at or below 15 mph.</td><td></td></tr>
<tr><td colspan="3">Noise and Vibration</td></tr>
<tr><td>MM NOI-1.1
MM NOI-3.1</td><td>Soundwalls

Soundwalls of 3.5 feet in height shall be installed above the top of the guideway beams to reduce noise to below the Federal Transit Administration (FTA) moderate-impact noise criteria. Locations shall be verified during final design as necessary to reduce noise to below the FTA moderate-impact noise criteria. The following table lists the soundwall locations.
<table>
<tr><th>Location</th><th>Type</th><th>Civil Station Location</th><th>Track Side</th></tr>
<tr><td>Albers Apartments at 15328 Albers Street; and Best Western Plus Carriage Inn at 5525 Sepulveda Boulevard</td><td>3.5-foot-high soundwall above the guideway beams</td><td>1047+80 to 1053+00 East of tracks</td><td>Northbound</td></tr>
<tr><td>Granada Apartments at 15630 Vanowen Street</td><td>3.5-foot-high soundwall above guideway beams</td><td>1137+40 to 1142+00 East of tracks</td><td>Northbound</td></tr>
<tr><td>Single-family backyards east of I-405, between Vanowen Street and Lili Way</td><td>3.5-foot-high soundwall above guideway beams</td><td>1142+00 to 1160+30 East of tracks</td><td>Northbound</td></tr>
<tr><td>Single-family homes along the east side of Firmament Avenue, between Cohasset Street and Saticoy Street</td><td>3.5-foot-high soundwall above the guideway beams</td><td>1189+00 to 1195+00 East of tracks</td><td>Northbound</td></tr>
</table></td><td>Alternatives 1 and 3</td></tr>
<tr><td>MM NOI-4.1</td><td>Soundwalls

Soundwalls of heights of 3 to 10 feet shall be installed above the rail girder structure to reduce noise impacts to below the Federal Transit Administration (FTA) moderate noise impact criteria. Locations shall be verified during final design as</td><td>Alternative 4</td></tr>
</table>

Resource	Avoidance and Minimization Measure	Applicability

necessary to reduce noise to below the FTA moderate-impact noise criteria. The following table lists the recommended locations of soundwalls.

Location	Type	Civil Stations	Track Side
East of aerial guideway, between Sutton Street and Greenleaf Street	4-foot-high absorptive soundwall atop U-shaped girder	958+00 to 961+00	Northbound
	5-foot-high absorptive soundwall atop U-shaped girder	961+00 to 963+00	Northbound
West of aerial guideway, north of Weddington Street	3-foot-high absorptive soundwall atop U-shaped girder	1018+00 to 1021+00	Southbound
East of aerial guideway, between Burbank Boulevard and Hatteras Street	3-foot-high absorptive soundwall atop U-shaped girder	1041+60 to 1044+40	Northbound
	10-foot-high absorptive soundwall atop U-shaped girder	1045+00 to 1048+00	Northbound
East of aerial guideway, between Haynes Street and Kittridge Street	10-foot-high absorptive soundwall atop U-shaped girder	1098+00 to 1101+00	Northbound
	5-foot-high absorptive soundwall atop U-shaped girder	1101+00 to 1102+50	Northbound
West of aerial guideway, between Wyandotte Street and Leadwell Street	3-foot-high absorptive soundwall atop U-shaped girder	1152+00 to 1154+00	Southbound
East of aerial guideway, between Valerio Street and Cohasset Street	3-foot-high absorptive soundwall atop U-shaped girder	1157+50 to 1161+00	Northbound
	3-foot-high absorptive soundwall atop U-shaped girder	1161+00 to 1164+20	Northbound

Resource	Avoidance and Minimization Measure	Applicability
MM NOI-1.2 **MM NOI-3.2** **MM NOI-4.2** **MM NOI-5.2** **MM NOI-6.2**	**Noise Control Plan** • Prior to the initiation of localized construction activities, the Project contractor shall develop a Noise Control Plan demonstrating how the Federal Transit Administration (FTA) 8-hour $L_{eq.equip}$ (equivalent noise level of equipment) noise criteria would be achieved during construction. The Noise Control Plan shall be prepared by a board-certified acoustical engineer. The FTA 8-hour $L_{eq.equip}$ construction noise standards are as follows: Residential daytime standard of 80 A-weighted decibels (dBA) $L_{eq.equip}$ and nighttime standard of 70 dBA $L_{eq.equip}$, Commercial daytime and nighttime standard of 85 dBA $L_{eq.equip}$, and Industrial daytime and nighttime standard of 90 dBA $L_{eq.equip}$. The Noise Control Plan shall be designed to follow the Los Angeles County Metropolitan Transportation Authority's (Metro) requirements, and shall include measurements of existing noise, a list of the major pieces of construction equipment that would be used, predictions of the noise levels at the closest noise-sensitive receptors (residences, hotels, schools, religious facilities, and similar facilities), and noise mitigation measures to be implemented to achieve compliance with the FTA 8-hour $L_{eq.equip}$ construction noise standards to the degree feasible. The Noise Control Plan must be approved by Metro prior to initiating noise-generating construction activities. The Project contractor shall conduct continuous noise monitoring to demonstrate compliance with the FTA 8-hour $L_{eq.equip}$ noise limits. If the FTA 8-hour $L_{eq.equip}$ criteria are exceeded, the Project contractor shall implement measures to reduce construction noise as much as feasible. The Project contractor shall establish a public information and complaint system. The Project contractor shall respond to and provide corrective action for complaints within 24-hours. In addition, the Project shall comply with local noise ordinances when applicable, including by obtaining a variance(s) from the applicable local jurisdiction when nighttime work is required. The following noise reducing methods may be implemented by the Project contractor: – If nighttime construction is planned, a noise variance may be prepared by the Project contractor, if required by the jurisdiction, that demonstrates the implementation of control measures to maintain noise levels below the applicable FTA and local standards. – Where nighttime construction would exceed the FTA nighttime criteria, avoid nighttime construction to the degree feasible. – Utilize specialty equipment equipped with enclosed engines and/or high performance mufflers as feasible. The Project contractor shall locate equipment and staging areas as far from noise-sensitive receptors as possible. – Limit unnecessary idling of equipment. – Install temporary noise barriers as needed where feasible. – Reroute construction-related truck traffic away from residential streets to the extent permitted by the relevant municipality.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	– Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible. – Where Project construction cannot be performed in accordance with the requirements of the applicable noise limits, the Project contractor shall be required to investigate alternative construction methods that would result in lower sound levels.	
MM NOI-6.1	**Traction Power Substation Noise Reduction** • The Project shall implement measures including, but not limited to, the following to reduce traction power substation (TPSS) noise: – Orient cooling fans and heating, ventilation and air conditioning equipment away from sensitive receptors (i.e., At site 7, TPSS fans shall be located on the sides of units closest to and facing Van Nuys Boulevard. At Site 9, TPSS fans shall be located nearest to Vanowen Street and away from the nearest buildings north and east of the site). – Use quieter cooling fans or heating, ventilation and air conditioning equipment. – Provide a surrounding enclosure around the TPSS unit. – Install baffles on the exterior of the cooling fan and heating, ventilation and air conditioning equipment. – Provide sound insulation of TPSS unit enclosure or mount sound-isolation materials to minimize transformer hum.	Alternative 6
MM VIB-1.1 MM VIB-3.1 MM VIB-4.2 MM VIB-5.2 MM VIB-6.1	**Vibration Control Plan** • Prior to construction, the Project contractor shall prepare a Vibration Control Plan demonstrating how the Federal Transit Administration (FTA) building damage risk criteria and the FTA vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities. The Vibration Control Plan shall include a list of the major pieces of construction equipment that will be used, and the predictions of the vibration levels at the closest sensitive receivers. The Project contractor shall conduct vibration monitoring to demonstrate compliance with the vibration limits during construction activity. Where the construction cannot be performed to meet the vibration criteria, the Project contractor shall implement alternative means and methods of construction measures to reduce vibration levels as much as feasible. Vibration reducing methods that may be implemented by the Project contractor include: – When feasible, use less vibration intensive equipment or techniques near vibration sensitive locations. – Use as small an impact device (i.e., hoe ram, pile driver) as possible to accomplish necessary tasks. – Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers will be required where feasible.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	– When feasible, in construction areas close to sensitive buildings, select non-impact demolition and construction methods such as saw or torch cutting and removal for off-site demolition, and use chemical splitting, or hydraulic jack splitting, instead of high impact methods. • The Project contractor shall monitor construction vibration levels at structures identified as a "historic" resource within the meaning of CEQA Guidelines Section 15064.5(a) to ensure the vibration damage threshold of 0.12 in/sec peak particle velocity shall not be exceeded. The vibration monitoring shall be conducted by a qualified professional for real-time vibration monitoring for construction work at the Project construction site requiring heavy equipment or ground compaction devices. A pre-construction and post-construction survey of these buildings shall be conducted by a qualified structural engineer. Any damage shall be noted. All vibration monitors used for these measurements shall be equipped with an "alarm" feature to provide advanced notification that vibration impact criteria have been approached. Documented damage in the post-construction survey shall be repaired as required by the *Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (NPS, 2017). The following historic resources shall be included in the Vibration Control Plan. – Historic building located at 4511 Sepulveda Boulevard, Sherman Oaks (Alternatives 1, 3, 4) – Photo Electronics Corp. Building, 1944 Cotner Avenue, Los Angeles (Alternatives 1, 3) – Dual Ultimate Pharmacy, 2020 Cotner Avenue, Los Angeles (Alternatives 1, 3) – Historic Building at 2114 Cotner Avenue, Los Angeles (Alternatives 1, 3) – UCLA Ackerman Hall, 308 Westwood Plaza, Los Angeles (Alternatives 3, 4, 5, 6, likely Modified Alternative 5) – 15300 Ventura Boulevard, Sherman Oaks (Alternatives 1, 3) – Historic building located at 14746 Raymer Street, Van Nuys (Alternatives 1, 3, 4, 5) – Gayley Center located at 1101 Gayley Avenue, adjoining the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles (Alternatives 4, 5, 6, likely Modified Alternative 5) – Linde Medical Building located at 10921 Wilshire Boulevard, Los Angeles adjacent to the proposed Wilshire Boulevard/Metro D Line Station (Alternatives 4, 5, 6, likely Modified Alternative 5) – Tishman Building located at 10950 Wilshire Boulevard, Los Angeles adjacent to the proposed Wilshire Boulevard/Metro D Line Station (Alternatives 4, 5, 6, likely Modified Alternative 5) – Historic buildings located at 15300 and 15233 Ventura Boulevard, Sherman Oaks (Alternative 4) – Historic building located at 4700 Sepulveda Boulevard, Sherman Oaks (Alternative 4) – Lt. Patrick H. Daniels United States Army Reserve Center located at 5161 Sepulveda Boulevard, Sherman Oaks (Alternative 4)	

Resource	Avoidance and Minimization Measure	Applicability
	– Starlight Cottage located at 5450 Sepulveda Boulevard, Sherman Oaks (Alternative 4) – Cathedral of St. Mary Church located at 5335 Sepulveda Boulevard, Sherman Oaks (Alternative 4) – Historic building located at 5724 Sepulveda Boulevard, Van Nuys (Alternative 4) – Cabana Motel located at 5764 Sepulveda Boulevard, Van Nuys (Alternative 4) – El Cortez Motel located at 5746 Sepulveda Boulevard, Van Nuys (Alternative 4) – Historic building located at 6160 Sepulveda Boulevard, Van Nuys (Alternative 4) – Historic building located at 6833 Sepulveda Boulevard, Van Nuys (Alternative 4) – Lancer Lion II Apartments located at 7657 Sepulveda Boulevard, Van Nuys (Alternative 4) – Historic building located at 7721 Sepulveda Boulevard, Van Nuys (Alternative 4) – The Performing Arts Center located at 7735 Sepulveda Boulevard, Van Nuys (Alternative 4) – Historic building located at 6833 Sepulveda Boulevard, Van Nuys (Alternative 4) – Air Raid Siren No. 110 located at the northeast corner of Covello Street and Sepulveda Boulevard in Van Nuys (Alternative 4) – Air Raid Siren No. 117 on the north side of Oxnard Street just west of Sepulveda Boulevard in Van Nuys (Alternative 4) – Historic buildings located at 4506 Saugus Street, Sherman Oaks (Alternative 5) – Historic buildings located at 5958 Van Nuys Boulevard, Sherman Oaks (Alternative 6 and likely Modified Alternative 5)	
MM VIB-4.1	**Trackwork Isolation Methods** • Metro shall implement trackwork isolation to reduce groundborne vibration levels to below the Federal Transit Administration groundborne vibration impact criteria for frequent events at the locations where exceedance of the groundborne vibration impact criteria are anticipated to occur. Metro will isolate trackwork using one of the following four methods: – High Resilience Direct Fixation Rail Fasteners (HRDF): HRDF attaches the rail directly to the fastener body. HRDF is used to attach the rails to the first concrete pour and then the space around the tacks is filled with precast concrete panels. There are several models of highly resilient direct fixation fasteners available that can be effective at controlling vibration. – Low-Impact or Spring Frogs: Wheel impacts at crossovers could increase vibration levels up to 10 vibration decibel notations (VdB) at sensitive buildings near the crossovers. Where vibration impact occurs at the	Alternative 4

Resource	Avoidance and Minimization Measure	Applicability

crossovers along the project alignment, the impact vibration can be reduced through the use of low-impact frogs.

- Floating Slab Track: This approach typically provides the highest reduction in groundborne vibration levels and is employed near Category 1 buildings where thresholds of impact are more stringent. Under this method, the track is constructed on a concrete slab that is supported by either resilient pads or a continuous resilient mat.
- Resiliently Supported Ties: The resiliently supported tie system consists of concrete ties supported by rubber pads resting on top of a slab track or subway invert. The rails are fastened directly to the concrete ties using standard rail clips. This type of system has been shown to reduce groundborne vibration levels by up to 10 VdB.

- Locations where mitigation is required are identified in the following table and will be verified during final design.

Mitigation Measure Type	Civil Station Limits From – To		Location Description
High Resilience Direct Fixation Rail Fasteners	519+00	520+50	Between 2355 South Bentley Avenue and 2345 South Bentley Avenue
Floating Slab	520+50	525+50	2337 South Bentley Avenue to Tennessee Avenue
High Resilience Direct Fixation Rail Fasteners	525+50	549+00	Tennessee Avenue to 1921 South Bentley Avenue
Floating Slab	549+00	551+00	1921 South Bentley Avenue to Missouri Avenue
High Resilience Direct Fixation Rail Fasteners	551+00	555+50	Missouri Avenue to 1835 South Bentley Avenue
Spring Frogs at Double Crossover	599+73	602+31	Crossovers north of Ashton Avenue
High Resilience Direct Fixation Rail Fasteners	611+50	616+00	1101 Westwood Boulevard to 1045 Westwood Boulevard
Floating Slab	625+50	630+00	North of Le Conte Avenue to 100 Medical Plaza
Resiliently Supported Ties	630+00	633+00	100 Medical Plaza to 710 Westwood Plaza
Floating Slab	633+00	639+00	710 Westwood Plaza to south of 570 Westwood Plaza
High Resilience Direct Fixation Rail Fasteners	673+50	711+00	South side of 121 Udine Way to north side of Hotel Bel-Air
High Resilience Direct Fixation Rail Fasteners	721+00	722+50	Residence located at 10651 Capello Way
High Resilience Direct Fixation Rail Fasteners	727+00	733+00	10650 Somma Way to 10687 Somma Way

<table>
<tr><th>Resource</th><th colspan="4">Avoidance and Minimization Measure</th><th>Applicability</th></tr>
<tr><td></td><td>High Resilience Direct Fixation Rail Fasteners</td><td>771+00</td><td>773+00</td><td>Residence located at 1545 Tanner Bridge Road</td><td></td></tr>
<tr><td></td><td>High Resilience Direct Fixation Rail Fasteners</td><td>907+00</td><td>909+00</td><td>3671 Meadville Drive to 3677 Meadville Drive</td><td></td></tr>
<tr><td></td><td>High Resilience Direct Fixation Rail Fasteners</td><td>918+00</td><td>931+00</td><td>3800 Scadlock Lane to north end of Briarwood Drive cul-de-sac</td><td></td></tr>
<tr><td>MM VIB-5.1</td><td colspan="4">Trackwork Isolation Method:
• At the locations where exceedance of Federal Transit Administration (FTA) groundborne vibration impact criteria for frequent events is anticipated to occur, Metro will isolate trackwork using one of the following four methods, as identified by the following table. Locations where mitigation is necessary will be verified during final design with the objective to reduce vibration levels to below the FTA groundborne vibration impact criteria for frequent events.
– High Resilience Direct Fixation Rail Fasteners (HRDF): Use of HRDF rail fasteners to attach the rail directly to the fastener body would reduce groundborne noise and vibration levels to less than significant at many locations along the project alignment. HRDF are used to attach the rails to the first concrete pour, and then the space around the tacks is filled with precast concrete panels. There are several models of highly resilient direct fixation fasteners available that can be effective at controlling vibration.
– Low-Impact or Spring Frogs: Wheel impacts at crossovers could increase vibration levels up to 10 vibration decibel notation (VdB) at sensitive buildings near the crossovers. Where vibration impact occurs at the crossovers along the Project alignment, the impact vibration can be reduced through the use of low-impact frogs.
– Floating Slab Track: This approach typically provides the highest reduction in groundborne vibration levels and is employed near Category 1 buildings where thresholds of impact are more stringent. Under this method, the track is constructed on a concrete slab that is supported by either resilient pads or a continuous resilient mat.
– Resiliently Supported Ties: The resiliently supported tie system consists of concrete ties supported by rubber pads resting on top of a slab track or subway invert. The rails are fastened directly to the concrete ties using standard rail clips. This type of system has been shown to reduce groundborne vibration levels by up to 10 VdB.
<table>
<tr><th>Mitigation Measure Type</th><th colspan="2">Civil Station Limits (From - To)</th><th>Location Description</th></tr>
<tr><td>High Resilience Direct Fixation Rail Fasteners</td><td>519+00</td><td>520+50</td><td>Between 2355 South Bentley Avenue and 2345 South Bentley Avenue</td></tr>
<tr><td>Floating Slab</td><td>520+50</td><td>525+50</td><td>2337 South Bentley Avenue to Tennessee Avenue</td></tr>
</table></td><td>Alternative 5, Modified Alternative 5 (applicable locations pending upcoming design)</td></tr>
</table>

Resource	Avoidance and Minimization Measure				Applicability
	High Resilience Direct Fixation Rail Fasteners	525+50	549+00	Tennessee Avenue to 1921 South Bentley Avenue	
	Floating Slab	549+00	551+00	1921 South Bentley Avenue to Missouri Avenue	
	High Resilience Direct Fixation Rail Fasteners	551+00	555+50	Missouri Avenue to 1835 South Bentley Avenue	
	Spring Frogs at Double Crossover	599+73	602+31	Crossovers north of Ashton Avenue	
	High Resilience Direct Fixation Rail Fasteners	611+50	616+00	1101 Westwood Boulevard to 1045 Westwood Boulevard	
	Floating Slab	625+50	630+00	North of Le Conte Avenue to 100 Medical Plaza	
	Resiliently Supported Ties	630+00	633+00	100 Medical Plaza to 710 Westwood Plaza	
	Floating Slab	633+00	639+00	710 Westwood Plaza to south of 570 Westwood Plaza	
	High Resilience Direct Fixation Rail Fasteners	673+50	711+00	South side of 121 Udine Way to north side of Hotel Bel-Air	
	High Resilience Direct Fixation Rail Fasteners	721+00	722+50	Residence located at 10651 Capello Way	
	High Resilience Direct Fixation Rail Fasteners	727+00	733+00	10650 Somma Way to 10687 Somma Way	
	High Resilience Direct Fixation Rail Fasteners	771+00	773+00	Residence located at 1545 Tanner Bridge Road	
	High Resilience Direct Fixation Rail Fasteners	907+00	909+00	3671 Meadville Drive to 3677 Meadville Drive	
	High Resilience Direct Fixation Rail Fasteners	910+00	911+50	3721 Meadville Drive to 3719 Meadville Drive	
	High Resilience Direct Fixation Rail Fasteners	918+00	950+00	South end of Kingswood Road to 15259 Valley Vista Boulevard	
	High Resilience Direct Fixation Rail Fasteners	952+50	954+00	4321 Saugus Avenue to Sutton Street	
	Resiliently Supported Ties	954+00	958+00	Sutton Street to Ventura Boulevard/Sepulveda Boulevard Station	
	Low-Impact Frogs at Double Crossover	957+70	960+30	Crossovers south of Ventura Boulevard/Sepulveda Boulevard Station	
	Resiliently Supported Ties	965+50	967+00	Television and radio studios located at 15260 Ventura Boulevard	

Resource	Avoidance and Minimization Measure				Applicability
	Floating Slab	970+00	972+00	3 Ball Entertainment video production located at 15301 Ventura Boulevard	
	High Resilience Direct Fixation Rail Fasteners	973+00	987+00	4650 Sepulveda Boulevard to US-101 southbound onramp	
	High Resilience Direct Fixation Rail Fasteners	990+00	1005+00	South of US-101 northbound offramp to Hartsook Street	
	Floating Slab	1008+00	1011+00	LA Live Stream film production at 15315 Magnolia Boulevard	
	High Resilience Direct Fixation Rail Fasteners	1011+00	1034+00	5225 Sepulveda Boulevard to south side of Burbank Boulevard	
	High Resilience Direct Fixation Rail Fasteners	1038+00	1048+00	5638 Sepulveda Boulevard to Hatteras Street	
	High Resilience Direct Fixation Rail Fasteners	1078+00	1079+00	Cinema Motel located at 6242 Sepulveda Boulevard	
	High Resilience Direct Fixation Rail Fasteners	1094+50	1111+00	Haynes Street to north side of Archwood Street	
	High Resilience Direct Fixation Rail Fasteners	1117+00	1129+00	6831 Sepulveda Boulevard to north side of 7007 Sepulveda Boulevard	
	Resiliently Supported Ties	1129+00	1134+00	North side of 7007 Sepulveda Boulevard to Sherman Way Station	
	Low-Impact Frogs at Double Crossovers	1131+30	1133+87	Crossovers south of Sherman Way Station	
	High Resilience Direct Fixation Rail Fasteners	1148+00	1164+00	North of Wyandotte Street to north of Covello Street	
	High Resilience Direct Fixation Rail Fasteners	1168+00	1170+00	La Posada Motel locates at 7615 Sepulveda Boulevard	
	Resiliently Supported Ties	1175+00	1177+00	7721 Sepulveda Boulevard and 7735 Sepulveda Boulevard	
	Resiliently Supported Ties	1181+00	1183+00	Third Encore Annex Studios - Stagg 15239 Stagg Street	
	High Resilience Direct Fixation Rail Fasteners	1186+00	1189+00	Stagg Street Studio 15147 Stagg Street	

Resource	Avoidance and Minimization Measure	Applicability
Ecosystems and Biological Resources		
PM BIO-1	**Stormwater Pollution Prevention Plan Development** • A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the start of construction. The SWPPP shall identify the design features and best management practices that shall be used: – To manage drainage-related issues (e.g., erosion, sedimentation, and non-stormwater discharges) during construction activities. Erosion-control measures shall be regularly checked by inspectors, biologist(s), and/or resident engineer. Fencing and erosion-control measures in all construction areas shall 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 shall occur in designated fueling zones within the construction staging areas. Drip pans, drip cloths, or absorbent pads shall be used during fluid replacements. All equipment used within the approved construction limits shall be maintained to minimize and control fluid and grease leaks. Provisions shall be made to contain and immediately clean up unintentional spills of fuel, oil, or fluid. When handling toxic substances, construction vehicles shall carry a Hazardous Material Spill Kit for use in the event of a spill. All construction personnel working on-site shall 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 shall be removed to an approved off-site disposal facility. Trash and food items shall 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 shall be stored in appropriately labeled containers in a proper staging area (i.e., with secondary containment or indoors or under cover). Any hazardous spills shall be immediately cleaned up and reported.	All Project Alternatives
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 ITP (Fish and 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, the City of Los Angeles Department of Public Works shall 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	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	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.	
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 conducted by a Qualified Biologist, 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).	All Project Alternatives
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 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	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	maternity and hibernation seasons. Removal shall occur at night whenever feasible to minimize disturbances. Before removal, a Qualified 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 nest is not vacated after successive attempts, consultation with CDFW 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 shall begin to be removed by hand (e.g., hammer, screwdriver). The associated vibrational and noise	

Resource	Avoidance and Minimization Measure	Applicability
	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 Los Angeles Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division. – Trees protected by the Metro Tree Policy shall require the Project to prepare a Tree Protection Plan that identifies Tree Protection Zones for all trees designated for retention. The Project shall also 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.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	– 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 (CESA) or Endangered Species Act (ESA):** All trees protected by CESA or ESA (e.g., *Quercus dumosa*) shall require coordination with the California Department of Fish and Wildlife or U.S. Fish and 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-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	All Project Alternatives

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 (see 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 of idling vehicles shall be posted (facing outwards from the buffer) at the start and end of the nest buffer where it crosses the road.

Resource	Avoidance and Minimization Measure	Applicability
	• 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 Special-Status Bat Species.** To reduce impacts on roosting bats resulting from construction activities, the Project shall implement the following: • 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 1 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, 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, 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 Bat 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	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	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 CDFW 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 Bat 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 Bat 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 Bat Biologist) using a two-step process that occurs over two consecutive days: – Day 1, Step 1: Under the supervision of a Qualified Bat 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 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 under the supervision of a Qualified Biologist can occur on the following day. • Trees that are only to be trimmed and not removed shall also require a two-step process as the removal process with two deviations: 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.	

Resource	Avoidance and Minimization Measure	Applicability
	• The results of bat surveys, evaluations, and monitoring efforts that are undertaken shall be documented in a report by the biologist and provided to CDFW 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.	All Project Alternatives
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 and 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 and 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 and Wildlife Service protocol. Surveys shall be conducted between dawn and 11:00am and outside of periods of inclement weather (excessive heat	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	or cold, high winds, rain, etc.). Surveys shall not be conducted concurrently with other surveys. Per the U.S. Fish and 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 and Wildlife Service shall be informed, and additional coordination shall occur as needed and in compliance with Section 7 of the Endangered Species Act.	

Resource	Avoidance and Minimization Measure	Applicability
MM BIO-8	**Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles.** To reduce Impacts on special-status reptiles from construction activities, the Project shall implement the following: • 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 USFWS or CDFW, 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 CESA or ESA, then the appropriate agency shall be immediately informed and additional coordination shall occur, as needed.	All Project Alternatives
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 and 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., CDFW or USFWS) and coordinate further actions as required by	Alternatives 1, 3, 5, 6, likely Modified Alternative 5

Resource	Avoidance and Minimization Measure	Applicability
	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 CDFW. 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.	Alternatives 1, 3, 4 and 6

Resource	Avoidance and Minimization Measure	Applicability
	• 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 and 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 revegetation 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 five-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 will be defined with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and will 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 will be submitted in annual reports submitted to Caltrans, the Santa Monica Mountains Conservancy, and other relevant agencies until success criteria are achieved.	

Resource	Avoidance and Minimization Measure	Applicability
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* (Attachment B of the *Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report* [Metro, 2025g]) 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 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.	Alternatives 1 and 3

Resource	Avoidance and Minimization Measure	Applicability
	○ 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	

Resource	Avoidance and Minimization Measure	Applicability
	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 (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 damage to or removed a protected tree; decisions would be made in accordance with local ordinances identifying protected trees.	
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* (Attachment B of the *Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report* [Metro, 2025g]) 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:	Alternatives 4, 5, and likely Modified Alternative 5

Resource	Avoidance and Minimization Measure	Applicability
	○ 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	

Resource	Avoidance and Minimization Measure	Applicability
	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 damaged or removed a tree; decisions would be made in accordance with local ordinances identifying protected trees.	
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* (Attachment B of the *Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report* [Metro, 2025g]) 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:	Alternative 6

Resource	Avoidance and Minimization Measure	Applicability
	○ 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	

Resource	Avoidance and Minimization Measure	Applicability
	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 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 (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 (i.e., 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.	Alternatives 1, 3, and 6

Resource	Avoidance and Minimization Measure	Applicability
	• 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* (Attachment A from the Sepulveda Transit Corridor Project, Final Ecosystem and Biological Resources Technical Report [Metro, 2025g]) 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:	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	– 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-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 affect 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.	All Project Alternatives
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.	All Project Alternatives
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.).	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
MM BIO-19	Wildfires shall be prevented by exercising care when driving to prevent sparks and by not parking construction vehicles where catalytic converters would 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.	All Project Alternatives
MM BIO-20	Construction workers shall be prohibited from bringing pets and firearms to the site.	All Project Alternatives
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.	All Project Alternatives
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.	All Project Alternatives
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.	All Project Alternatives
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 mph. Nontoxic soil stabilizers may be used on access roads to control fugitive dust, as needed.	All Project Alternatives
MM BIO-25	Vehicle speeds shall be restricted to posted speed limits on existing paved roads and to 15 mph 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.	All Project Alternatives
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	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	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.	All Project Alternatives
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 CDFW 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.	Alternatives 1 and 3
Visual Quality and Aesthetics		
MM AES-1	The Project shall place privacy screens, as applicable and appropriate, in high visibility areas that have construction-related structures or activities. The Project shall use privacy screens in areas that require tree-removal activities adjacent to visually sensitive areas, including but not limited to residential areas.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
Land Use and Development		
PM LU-1	**Circulation Improvement.** To address changes in circulation along Sepulveda Boulevard, the Project shall develop a circulation improvement strategy in coordination with the Los Angeles Department of Transportation. The circulation improvement strategy shall include any combination of the following design features: • Midblock straddle bents in preference to median support columns • Median breaks to allow left-turn movements where safe and effective • Midblock, signalized pedestrian crossings • Curb bump outs around straddle bent supports • Pursuit of new or innovative technologies for guideway support that allow for longer spans	Alternative 4
PM LU-2	**Urban Design and Cohesion Enhancement.** The Project shall develop an urban design strategy to enhance and improve the Van Nuys community's cohesion along Sepulveda Boulevard. The urban design strategy shall include any combination of the following design features: • Median design shall reduce the height of the median barrier between columns to the greatest extent practicable. • Median design shall include landscaping consistent with the applicable City of Los Angeles landscape design guidance. • A lighting plan inclusive of decorative lighting along the proposed median and functional day/night lighting along proposed guideway. • Signage and wayfinding improvement strategy shall provide wayfinding to transit stations as well as Sepulveda Boulevard crossings. Potential monument signage, wayfinding, and other improvements shall provide a sense of place. • Streetscape design improvements including sidewalk treatments, roadway markings, and street furniture. • Columns and straddle bent supports shall be finished with graffiti-resistant materials.	Alternative 4
MM LUP-1	Metro shall coordinate with the Santa Monica Mountains Conservancy and City to amend the Santa Monica Mountains Conservancy Comprehensive Plan and the Brentwood-Pacific Palisades and Van Nuys-North Sherman Oaks Community Plans (DCP, 1998a, 1998b, and work with the City of Los Angeles to amend the City of Los Angeles Municipal Code to bring the Project into conformity with those planning and zoning requirements.	Alternatives 1 and 3

Resource	Avoidance and Minimization Measure	Applicability
Cultural Resources and Tribal Cultural Resources		
MM CUL-1	**Cultural Resources Monitoring and Mitigation Plan** • A project-wide Cultural Resources Monitoring and Mitigation Plan (CRMMP) shall be developed and implemented by Metro. The purpose of the CRMMP is to document the actions and procedures to be followed to ensure avoidance or minimization of impacts to cultural resources and to provide a detailed program of mitigation for direct and indirect impacts on cultural resources during Project construction. Preparation of the CRMMP shall necessitate the completion of a pedestrian survey of the private property parcels within the Resource Study Areas that were not accessible during the preparation of the Environmental Impact Report and the *Sepulveda Transit Corridor Project Cultural Resources and Tribal Cultural Resources Technical Report* Metro, 2025m); this shall occur only on parcels slated for acquisition and construction activities. Proposed ground disturbance for the Project shall be reviewed to make any necessary adjustments to archaeological sensitivity assessments as a result of ongoing project design. • The Cultural Resources Monitoring and Mitigation Plan shall include a detailed prehistoric and historic context that clearly demonstrates the themes under which any identified subsurface deposits would be determined significant. Should significant deposits be identified during earth moving activities, the Cultural Resources Monitoring and Mitigation Plan shall address methods for evaluation, treatment, artifact analysis for anticipated artifact types, report writing, repatriation of human remains and associated grave goods, and curation. • The Cultural Resources Monitoring and Mitigation Plan will be a guide for archaeological monitoring activities as defined in MM CUL-7. The Cultural Resources Monitoring and Mitigation Plan shall require that a Secretary of the Interior-qualified archaeologist in prehistoric and historical archaeology (36 CFR Part 61) be retained prior to ground disturbing activities. • The Cultural Resources Monitoring and Mitigation Plan shall include recommended treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. • The Cultural Resources Monitoring and Mitigation Plan shall include that, in the event, as a result of the resource evaluation and tribal consultation process, a resource is considered to be eligible for inclusion in the California Register of Historical Resources and/or a local register of historical resources or is determined to be a Tribal Cultural Resource through eligibility listing or determination of significance by the CEQA lead agency (Metro), an archaeological monitor and Native American monitor shall monitor all remaining ground disturbing activities in the area of the resource. If, during cultural resources monitoring, the Secretary of the Interior-qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the Secretary of the Interior qualified archaeologist can specify that monitoring be reduced or eliminated.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	• The Cultural Resources Monitoring and Mitigation Plan shall outline the content and process for implementing pre-construction Cultural Resource training, as discussed in MM CUL-6. • The Cultural Resources Monitoring and Mitigation Plan shall require a pre-construction baseline survey to identify building protection measures for historical resources in relation to tunnel boring machine (TBM) launch/TBM extraction, construction staging, and construction vibration and cut and cover activities adjacent to historical resources. The Project shall conduct a pre-construction survey to establish baseline, pre-construction conditions and to assess the potential for damage related to improvements adjacent to these historical resources. • The Cultural Resources Monitoring and Mitigation Plan shall include building protection measures such as fencing, sensitive construction techniques based on final project design, dust control measures, underpinning, soil grouting, or other forms of ground improvement, as well as lower vibration equipment and/or construction techniques (refer to MM VIB-1.1, MM-VIB-3.1, MM VIB-4.2, MM VIB-5.2, and MM VIB-6.1.) In scenarios where a historical resource would be impacted by differential settlement caused by the TBM construction method, the Project shall require the use of an earth pressure balance or slurry shield tunnel boring machine. An architectural historian or historic architect who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) shall review proposed protection measures. • The Cultural Resources Monitoring and Mitigation Plan shall require that a post construction survey be undertaken to ensure that no significant impacts had occurred to historical resources. An architectural historian or historic architect who meets the Secretary of Interior Professional Qualification Standards (36 CFR Part 61) shall prepare an assessment of the implementation of the mitigation measures. If the post-construction survey identifies damage to historical resources, the Project shall require that repairs be made in accordance with the SOI Standards for the Treatment of Historic Properties (NPS, 2017). The assessment shall confirm that such repairs have been completed to restore the resource's integrity and avoid any permanent material impairment to the resource. • MM CUL-1 applies to following historical resources: – Sherman Way Street Trees (Alternatives 1, 3, 4, and 5) – Van Nuys Boulevard Street Trees (Alternatives 1, 3, and 5) – 15300 Ventura Boulevard (Alternatives 1 and 3) – West Los Angeles Veterans Affairs Historic District (Alternatives 1 and 3) – Westwood Federal Building (Alternative 3) – 10811 Ambazac Way (Alternative 3) – UCLA Ackerman Hall (Alternatives 3, 4, 5, 6, and likely Modified Alternative 5) – 10940 Weyburn Avenue (Alternative 3) – Chatam Restaurant (Alternative 3) – Performing Arts Center (Alternative 4)	

Resource	Avoidance and Minimization Measure	Applicability
	– Valley Animal Hospital (Alternative 4) – Van Nuys Boulevard Street Trees (Alternative 4) – 6833 Sepulveda Boulevard (Alternative 4) – 6160 Sepulveda Boulevard (Alternative 4) – Air Raid Siren No. 110 (Alternatives 4) – Air Raid Siren No. 117 (Alternatives 4 and 5) – Cabana Motel (Alternative 4) – El Cortez Motel (Alternative 4) – 5724 Sepulveda Boulevard (Alternative 4) – 5450 Sepulveda Boulevard (Alternative 4) – Cathedral of St. Mary Church (Alternative 4) – Lt. Patrick H. Daniels United States Army Reserve Center (Alternatives 4 and 5) – 4700 Sepulveda Boulevard (Alternative 4) – Air Raid Siren No. 110 (Alternative 5) – 4506 Saugus Avenue (Alternative 5) – UCLA Historic District (Alternative 6, and likely Modified Alternative 5) – Linde Medical Building (Alternative 4, 5, 6, and likely Modified Alternative 5) – Tishman Building (Alternative 4, 5, 6, and likely Modified Alternative 5) – Laemmle Theater (Alternative 6) – 14746 Raymer Street (Alternatives 1, 3, 4, 5) – Photo Electronics Corp. Building (Alternatives 1 and 3) – Dual Ultimate Pharmacy (Alternatives 1 and 3) – 2114 Cotner Avenue (Alternatives 1 and 3) – Lancer Lion II Apartments (Alternative 4) – 15233 Ventura Boulevard (Alternative 4) – Da Siani Ristorante (Sherwood Coiffeurs) (Alternative 4) – Gayley Center (Alternatives 4, 5, 6, and likely Modified Alternative 5) – 5958 Van Nuys Boulevard (Alternative 6 and likely Modified Alternative 5) – UCLA Veterans Rehabilitation Services (Alternative 3)	

Resource	Avoidance and Minimization Measure	Applicability
MM CUL-2	**Design Treatments** • To ensure that new construction does not adversely affect the setting and character of a historic district, the Project shall be designed to be compatible with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Rehabilitating Historic Buildings* at the following historical resources that would be altered by proposed aerial guideway elements, station entrances, towers, and retaining walls: – West Los Angeles Veterans Administration Historic District • The project elements shall be designed to conform to the Secretary of the Interior Standards. To ensure the elements meet Secretary of the Interior Standards, the Project shall retain an architectural historian or historic architect who meets the Secretary of the Interior Professional Qualification Standards (36 CFR Part 61) (qualified professional) to consult on and assess project construction plans and/or design sets at 30 percent, 60 percent, and 90 percent design review phases. The qualified professional shall assess each design set for conformance with the Secretary of the Interior Standards and shall prepare memoranda to Metro. Metro shall incorporate any project changes into the subsequent design sets to conform to the Secretary of the Interior Standards. Metro shall approve a memorandum prepared by a qualified professional stating that the final (90 percent) construction plans conform to the Secretary of the Interior Standards prior to the start of construction.	Alternative 1
MM CUL-3	**Pre-Construction and Construction Protection Measures** • The Project shall retain a qualified historic architect or architectural historian to conduct a pre-construction survey of the contributing landscape elements of the West Los Angeles Veterans Affairs Historic District. This survey shall document the location, dimensions, and condition of all contributing landscape elements within the area of potential impact prior to the start of construction. This documentation shall establish a baseline against which potential construction impacts shall be evaluated. The results of this survey shall be provided to Metro and the California Office of Historic Preservation (OHP) for review. • Following completion and review of the pre-construction survey, a construction monitoring plan shall be prepared by a qualified historic architect or qualified architectural historian ("Qualified Architect"). The plan shall specify that all contributing landscape elements identified in the survey shall be avoided during construction. Protective measures, including fencing, ground covers, and temporary supports, shall be installed around contributing landscape elements prior to construction activities occurring within 10 feet of the resource. • Construction activities involving heavy equipment or other vibration-producing activities shall not exceed a recommended vibration threshold at the location of any contributing landscape element, as determined by a qualified vibration consultant. Vibration monitoring equipment shall be used during construction to ensure compliance with this threshold.	Alternative 1

Resource	Avoidance and Minimization Measure	Applicability
	• The Qualified Architect shall document compliance with the construction monitoring plan weekly during active construction and provide written reports to Metro. Any deviations from the approved plan shall be addressed immediately. • Following construction, a post-construction survey shall be conducted to verify that no significant impacts occurred to contributing landscape elements. The results of this post-construction survey shall be documented in a report submitted to Metro and the OHP. • MM CUL-3 applies to the following historical resources: – West Los Angeles Veterans Affairs Historic District (Alternative 1)	
MM CUL-4	**Historical Resource Archival Documentation** • The Project shall complete historical resource archival documentation of historical resources that will be demolished or substantially altered. The archival documentation shall follow the guidelines of the National Park Service's Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey program to create Historic American Building Survey-like documentation. At a minimum, the documentation shall consist of the following: – Large-format photographs including negatives and archival prints – Written narrative following the Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey short format – Site plan • The Project shall provide copies of the documentation to the City of Los Angeles Office of Historic Resources for archival purposes. Large-format photographs shall be verified prior to any demolition activities that would affect the Da Siani Ristorante (Sherwood Coiffeurs) building located at 4511 Sepulveda Boulevard. The documentation shall be prepared so that the original archival-quality documentation could be donated for inclusion in the Los Angeles Public Library. Copies of documentation shall be offered to the Los Angeles Public Library and local historical societies upon request. • MM CUL-4 applies to following built environment resources: – Da Siani Ristorante (Sherwood Coiffeurs) (4511 Sepulveda Boulevard) (Alternatives 1 and 3) – 15300 Ventura Boulevard (Alternative 4) – Bill's Valley Car Wash (Alternative 6 and possibly Modified Alternative 5 pending upcoming design)	Alternatives 1, 3, 4, 6, and likely Modified Alternative 5

Resource	Avoidance and Minimization Measure	Applicability
MM CUL-5	**Interpretive Program** • The Project shall prepare interpretive programs for historical resources that will be demolished or substantially altered. The Project shall provide interpretive materials in the form of a pamphlet, website, or similar, that describes and/or illustrates the historic significance of these properties. Interpretive materials shall be provided to the City of Los Angeles for public education purposes. Copies of interpretive materials shall be offered to the Los Angeles Public Library and local historical societies upon request. • MM CUL-5 applies to following historical resources: – Da Siani Ristorante (Sherwood Coiffeurs) (4511 Sepulveda Boulevard) (Alternatives 1 and 3) – 15300 Ventura Boulevard (Alternative 4) – Bill's Valley Car Wash (Alternative 6 and Modified Alternative 5 pending upcoming design)	Alternatives 1, 3, 4, 6, and possibly Modified Alternative 5
MM CUL-6	**Cultural Resource Training** • Prior to any ground disturbing activities, all construction personnel involved in ground disturbing activities shall be provided with appropriate cultural and Tribal Cultural Resources training in accordance with the Cultural Resources Monitoring and Mitigation Plan detailed in MM CUL-1. • The training shall be prepared by a Secretary of the Interior-qualified archaeologist to instruct the personnel regarding the legal framework protecting cultural resources and Tribal Cultural Resources, typical kinds of cultural resources and Tribal Cultural Resources that may be found during construction, artifacts that would be considered potentially significant, and proper procedures and notifications if cultural resources and/or Tribal Cultural Resources are discovered. The training shall be presented by, or under the supervision of, a Secretary of the Interior-qualified archaeologist, who shall review types of cultural resources and artifacts that would be considered potentially significant to support operator recognition of these materials during construction. Contingent upon the results of Assembly Bill 52 consultation, Native American representatives shall be solicited to attend the Worker Environmental Awareness Program training and contribute to the course material to provide guidance on tribal perspectives on working in areas sensitive for Tribal Cultural Resources.	All Project Alternatives
MM CUL-7	**Archaeological Monitoring** Project related ground disturbing activities conducted in locations determined to have moderate to high archaeological sensitivity, or other locations determined appropriate through Assembly Bill 52 consultation, shall be monitored by, or under the supervision of, a Secretary of the Interior-qualified archaeologist, in accordance with the Cultural Resources Monitoring and Mitigation Plan detailed in MM CUL-1. If monitoring does not reveal any archaeological artifacts, then there would be no impact to archaeological resources. If archaeological artifacts are discovered, then work shall be halted in the immediate vicinity of the find, and a Secretary of the Interior-qualified archaeologist shall assess the significance of	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation.	
MM CUL-8	**Unanticipated Discovery of Human Remains** If human remains are discovered, work in the immediate vicinity of the discovery shall be suspended and the Los Angeles County Coroner shall be contacted immediately. If the remains are deemed Native American in origin, the coroner shall contact the State of California Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resource Code Section 5097.98 and California Code of Regulations Section 15064.5. The Most Likely Descendants may inspect the site within 48 hours of being notified and may issue recommendations for scientific removal and nondestructive analysis. If the Most Likely Descendant fails to make recommendations, then Metro and/or the landowner may rebury the remains in a location not subject to further disturbance, at their discretion. Work may be resumed at Metro's discretion but shall commence only after consultation and treatment have been concluded. Work may continue on other parts of the Project while consultation and treatment are conducted.	All Project Alternatives
MM TCR-1	**Native American Monitoring** • Project-related ground-disturbing activities conducted in locations determined to have moderate to high archaeological sensitivity, or other locations determined appropriate through Assembly Bill 52 consultation, shall be monitored by a Native American representative from a consulting tribe, in accordance with the Cultural Resources Monitoring and Mitigation Plan detailed in MM CUL-1. The tribal monitor shall be qualified by his or her tribe to monitor tribal cultural resources. • In the event that an archaeological resource discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a Secretary of the Interior-qualified archaeologist pursuant to California Public Resource Code Section 21083.2(i), the Native American tribes that consulted on the Project pursuant to Assembly Bill 52 shall be notified. Those tribes shall also be provided information about the find to allow for early input from the tribal representatives with regard to the potential significance and treatment of the resource. Resources shall be treated with culturally appropriate dignity, taking into consideration the tribal cultural values and meaning of the resource. • If, as a result of the inadvertent resource discovery evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource and determined, in accordance with California Public Resource Code Section 21074, to be eligible for inclusion in the California Register of Historical Resources or a local register of historical resources or is determined to be significant by the CEQA lead agency (Metro), the qualified archaeologist and Native American monitor shall monitor all remaining ground-disturbing activities in the area of the resource. The input of all consulting tribes shall be considered in the preparation of any required treatment plan activities prepared	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	by the qualified archaeologist for any tribal cultural resources identified during project construction, as required in the Cultural Resources Monitoring and Mitigation Plan (MM CUL-1). • Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.	
MM TCR-2	**Unanticipated Discovery of Human Remains** If human remains are discovered, work in the immediate vicinity of the discovery shall be suspended and the Los Angeles County Coroner shall be contacted immediately. If the remains are deemed Native American in origin, the coroner shall contact the State of California Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resource Code Section 5097.98 and California Code of Regulations Section 15064.5. The Most Likely Descendants may inspect the site within 48 hours of being notified and may issue recommendations for scientific removal and nondestructive analysis. If the Most Likely Descendant fails to make recommendations, then Metro and/or the landowner may rebury the remains in a location not subject to further disturbance, at their discretion. Work may be resumed at Metro's discretion but shall commence only after consultation and treatment have been concluded. Work may continue on other parts of the Project while consultation and treatment are conducted.	All Project Alternatives
Geotechnical, Subsurface, and Seismic		
PM GEO-1	The Project shall demonstrate to the County of Los Angeles and the City of Los Angeles that the design of the Project complies with all applicable provisions of the California Building Code with respect to seismic design. Compliance shall include the following: • California Building Code Seismic Zone 4 Standards as the minimum seismic-resistant design for all proposed facilities. • Seismic-resistant earthwork and construction design criteria (i.e., for the construction of the tunnel below ground surface, liquefaction, landslide, etc.), based on the site-specific recommendations of a California Registered Geologist in cooperation with the Project Engineers. • An engineering analysis to characterize site-specific performance of alluvium or fill where either forms part or all of the support.	All Project Alternatives
PM GEO-2	A California-registered geologist and geotechnical engineer shall submit to and have approval by the Project a site-specific evaluation of unstable soil conditions, including recommendations for ground preparation and earthwork activities specific to the site and in conformance with City of Los Angeles Building Code, County of Los Angeles Building Code, the California Building Code, Metro Rail Design Criteria (as applicable), and Caltrans Structure Seismic Design Criteria.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
PM GEO-3	The Project shall demonstrate that the design of the Project complies with all applicable provisions of the County of Los Angeles Building Code and City of Los Angeles Building Code.	All Project Alternatives
MM GEO-1	The Project's design shall include integration and installation of early warning system to detect and respond to strong ground motion associated with ground rupture. Known active fault(s) (i.e., Santa Monica Fault) shall be monitored. Linear monitoring systems such as time domain reflectometers or equivalent or more effective technology shall be installed along fixed guideway in the zone of potential ground rupture.	All Project Alternatives
MM GEO-2	Where excavations are made for the construction of the below surface tunnel, the Project shall either shore excavation walls with shoring designed to withstand additional loads or flatten or reduce the slope of the excavation walls by laying them back to a shallower gradient. Excavation spoils shall not be placed immediately adjacent to excavation walls unless the excavation wall is shored to support the added load. Spoils should be stored at a safe distance from the excavation site to prevent undue pressure on the walls.	All Project Alternatives
MM GEO-3	The Project shall comply with the recommendations of the final soils and geotechnical report. These recommendations shall be implemented in the design of the Project, including but not limited to measures associated with site preparation, fill placement, temporary shoring and permanent dewatering, groundwater seismic design features, excavation stability, foundations, soil stabilization, establishment of deep foundations, concrete slabs and pavements, surface drainage, cement type and corrosion measures, erosion control, shoring and internal bracing, and plan review.	All Project Alternatives
MM GEO-4	In locations where soils have a potential to be corrosive to steel and concrete, the soils shall be removed, and buried structures shall be designed for corrosive conditions, and corrosion-protected materials shall be used in infrastructure.	All Project Alternatives
MM GEO-5	Prior to construction, the Project shall prepare a Construction Management Plan that addresses geologic constraints and outlines strategies to minimize or avoid impacts to geologic hazards during construction. The plan shall address the following geological and geotechnical constraints/resources and incorporate standard mitigation (shown in parentheses): • Groundwater withdrawal (using dewatering pumps and proper disposal of contaminated groundwater according to legal requirements) • Risk of ground failure from unstable soils (retaining walls and inserting soil stabilizers) • Subsidence (retaining walls and shoring) • Erosion control methods (netting on slopes, bioswales, sediment basins, re-vegetation) • Soils with shrink-swell potential (inserting soil stabilizers including chemical treatment of soils) • Soils with corrosive potential (protective coatings and protection for metal, steel or concrete structures, soil treatment, removal of corrosive soils, and proper disposal of any corrosive soils)	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	• Impact to topsoils (netting, and dust control) The recommendations of the Construction Management Plan shall be incorporated into the project plans and specifications.	
MM GEO-6	The potential to avoid impacts to previously unrecorded paleontological resources shall be avoided by having a qualified paleontologist or archaeologist cross-trained in paleontology, meeting the Society of Vertebrate Paleontology Standards retained as the project paleontologist, with a minimum of a bachelor's degree (Bachelor of Science/Bachelor of Arts) in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation. A paleontological monitor, under the guidance of the project paleontologist, shall be present as required by the type of earth-moving activities in the Project, specifically in areas south of Ventura Boulevard that have been deemed areas of high sensitivity for paleontological resources. The monitor shall be a trained paleontological monitor with experience and knowledge of sediments, geologic formations, and the identification and treatment of fossil resources.	All Project Alternatives
MM GEO-7	A Paleontological Resources Impact Mitigation Program shall be prepared by a qualified paleontologist. The Paleontological Resources Impact Mitigation Program shall include guidelines for developing and implementing mitigation efforts, including minimum requirements, general fieldwork, and laboratory methods, threshold for assessing paleontological resources, threshold for excavation and documentation of significant or unique paleontological resources, reporting requirements, considerations for the curation of recovered paleontological resources into a relevant institution, and process of documents to Metro and peer review entities.	All Project Alternatives
MM GEO-8	The project paleontologist or paleontological monitor shall perform a Workers Environmental Awareness Program training session for each worker on the project site to familiarize the worker with the procedures in the event a paleontological resource is discovered. Workers hired after the initial Workers Environmental Awareness Program training conducted at the pre-grade meeting shall be required to take additional Workers Environmental Awareness Program training as part of their site orientation.	All Project Alternatives
MM GEO-9	To prevent damage to unanticipated paleontological resources, a paleontological monitor shall observe ground-disturbing activities including but not limited to grading, trenching, drilling, etc. Paleontological monitoring shall start at full time for geological units deemed to have "High" paleontological sensitivity. Geological units deemed to have "Low" paleontological sensitivity shall be monitored by spot checks. No monitoring is required for geologic units identified as having "No" paleontological sensitivity. "Unknown" paleontological sensitivity is assigned to the less metamorphosed portions of the Santa Monica Slate, as detailed below: • The monitor shall be empowered to temporarily halt or redirect construction efforts if paleontological resources are discovered. The paleontological monitor shall flag an area 50 feet around the discovery and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	the area. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant, it shall be quickly removed, and the area cleared. In the event paleontological resources are discovered and deemed by the project paleontologist to be scientifically important, the paleontological resources shall be recovered by excavation (i.e., salvage and bulk sediment sample) or immediate removal if the resource is small enough and can be removed safely in this fashion without damage to the paleontological resource. If the discovery is significant, the qualified paleontologist shall notify Metro immediately. In consultation with Metro, the qualified paleontologist shall develop a plan of mitigation, which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find. • Recovered paleontological resources shall be prepared, identified to the lowest taxonomic level possible, and curated into a recognized repository (i.e., Natural History Museum of Los Angeles County). Bulk sediment samples, if collected, shall be "screen-washed" to recover the contained paleontological resources, which will then be identified to the lowest taxonomic level possible, and curated (as above). The report and all relevant field notes shall be accessioned along with the paleontological resources.	
Hazards and Hazardous Materials		
PM HAZ-1	Operational (post-Project) best management practices shall be implemented by the Project and include but not be limited to: • Cleaning and maintenance products shall be required to be labeled with appropriate cautions and instructions for handling, storage, and disposal. Staff shall be trained and required to use, store, and dispose of these materials properly in accordance with label directions. • If the quantity of hazardous materials used, handled, or stored on-site at the maintenance and storage facility exceeds the regulatory thresholds of 55 gallons for a hazardous liquid; 500 pounds of a hazardous solid; 200 cubic feet for any compressed gas; or threshold planning quantities of an extremely hazardous substance per Chapter 6.95 of the California Health and Safety Code, the Project shall prepare a Hazardous Materials Business Plan in accordance with all related requirements of the California Health and Safety Code (Chapter 6.95, Articles 1 and 2). The plan shall be reviewed and recertified every year and amended as required by the California Health and Safety Code (Chapter 6.95, Articles 1 and 2). • Storage and disposal of hazardous materials and waste shall be conducted in accordance with all applicable federal and state regulatory requirements, such as the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act; the Hazardous Materials Release Response Plans and Inventory Law; and the Hazardous Waste Control Act, and if a spill does occur, it shall be remediated in accordance	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	with all applicable federal and state regulatory requirements and in coordination with the Department of Toxic Substances Control and/or Los Angeles Regional Water Quality Control Board. • Compliance with applicable Los Angeles County and City of Los Angeles requirements pertaining to emergency vehicle access as well as the California Building Code and California Fire Code standards shall ensure that sufficient ingress and egress routes are maintained and provided to the new stations.	
PM HAZ-2	Construction best management practices shall include, but not be limited to: • The Project shall be required to obtain permits before construction begins and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases in accordance with the U.S. Environmental Protection Agency, State Water Resources Control Board, Department of Toxic Substances Control, California Division of Occupational Safety and Health, and the South Coast Air Quality Management District. • The Project shall develop a Stormwater Pollution Prevention Plan in accordance with the State Water Resources Control Board's Construction Clean Water Act Section 402 General Permit conditions, and subject to regular inspections by applicable jurisdiction(s) to ensure compliance. The Stormwater Pollution Prevention Plan shall include specifications for the following, but not be limited to: – Maintain proper working conditions for vehicles and equipment to minimize potential fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. – Conduct servicing, refueling, and staging of construction equipment only at designated areas where a spill would not flow to drainages. Conduct equipment washing, if needed, only in designated locations where water would not flow into drainage channels. – Implement drainage best management practices to protect water quality, (such as oil/water separators, catch basin inserts, storm drain inserts, media filtration, and catch basin screens). – Report hazardous spills to the designated Certified Unified Program Agency (i.e., Los Angeles County Fire Department Health Hazardous Materials Division or Santa Fe Springs Department of Fire and Rescue) and implement clean up immediately and proper disposal of contaminated soil at a licensed facility. – Establish properly designed, centralized storage areas to keep hazardous materials fully contained. – Keep spill cleanup materials (e.g., rags, absorbent materials, and secondary containment) properly stored and maintained at the work site when handling materials. – Implement monitoring program by the construction site supervisor that includes both dry and wet weather inspections.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	• Transportation of hazardous materials by the Project shall comply with state regulations governing hazardous materials transport included in the California Vehicle Code (Title 13 of the California Code of Regulations), the State Fire Marshal Regulations (Title 19 of the California Code of Regulations), and Title 22 of the California Code of Regulations. These regulations include the following: – Require all motor carrier transporters of hazardous materials to have a Hazardous Materials Transportation license issued by the California Highway Patrol. – Require the transport of hazardous materials via routes with the least overall travel time. – Prohibit the transport of hazardous materials through residential neighborhoods. – Require transporters to take immediate action to protect human health and the environment in the event of spill, release, or mishap. – Incorporate restrictions on haul routes into the construction specifications according to local permitting requirements. • Contaminated soils and hazardous building materials and wastes shall be disposed of in accordance with federal, state, and local requirements at landfills serving Los Angeles County. The removal and disposal of hazardous building materials shall be the responsibility of a California Division of Occupational Safety and Health certified contractor in accordance with South Coast Air Quality Management District Rule 1403 (Asbestos Emissions from Renovation/Demolition Activities). • Traffic control during construction shall follow local jurisdiction guidelines. For specialized construction tasks, it may be necessary to work during nighttime hours to minimize traffic disruptions.	
PM HAZ-3	Construction best management practices for activities within methane hazard zones, including tunneling operations and underground station construction shall include, but not be limited to, the following: • Pursuant to Section 91.7104.1 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619), site testing of subsurface geological formations shall be conducted by a Project-approved testing agency under the supervision of a licensed architect or registered engineer or geologist. Testing shall address, but necessarily be limited to, methane concentrations and surface conditions along tunneling routes and at underground stations locations. The licensed architect or registered engineer or geologist shall indicate the testing instruments used and testing procedure followed. The testing procedure shall meet the Methane Mitigation Standards established by the Superintendent of Building. • All paving work, building construction, tunneling and underground station construction within the methane zone or methane buffer zone as defined by Los Angeles Department of Building and Safety shall be required to comply with	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	Methane Mitigation Standards established by the Superintendent of Building as well as the requirements outlined in Sections 91.7103 and 91.7104 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619). • All buildings and underground structures, including tunneling and stations, located in the methane zone shall provide a methane mitigation system as required by Los Angeles Municipal Code Table 71 in Section 91.7104.2 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619) based on the appropriate site design level. The Superintendent of Building may approve an equivalent methane mitigation system designed by an architect, engineer, or geologist.	
PM HAZ-4	Construction best management practices for demolition of existing structures shall include, but shall not be limited to, the following: • Both the federal Occupational Safety and Health and California Division of Occupational Safety and Health agencies regulate worker exposure during construction activities that disturb lead-based paints. Any asbestos-containing materials, if present, shall require appropriate abatement of identified asbestos prior to demolition pursuant to the South Coast Air Quality Management District Rule 1403. • Polychlorinated biphenyl- (PCB) containing fluorescent light fixtures and electrical transformers that are not labeled "No PCBs" shall be assumed to contain polychlorinated biphenyls and shall be removed prior to demolition activities and shall be disposed of by a licensed and certified polychlorinated biphenyl removal contractor, in accordance with local, state, and federal regulations. The removal and disposal of the electrical transformers shall be the responsibility of the utility owner in accordance with all standards and practices.	All Project Alternatives
PM HAZ-5	Construction best management practices for the areas with known or previously undiscovered hazardous materials shall include but not be limited to the following: • The Project shall hire a qualified professional to sample soil suspected of contamination (obvious signs of contamination include indicators such as odors, stains, or other suspect materials) for the purpose of classifying material and determining disposal requirements before construction begins. If excavated soil is suspected or known to be contaminated, the Project shall: – Segregate and stockpile the excavated material in a way that shall facilitate measurement of the stockpile volume. – Spray the stockpile with water or a South Coast Air Quality Management District approved vapor suppressant and cover the stockpile with a heavy-duty plastic (i.e., Visqueen) to prevent soil volatilization in the atmosphere or exposure to nearby workers per South Coast Air Quality Management District Rule 1166.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	• Existing groundwater monitoring wells shall remain under on-going groundwater investigations associated with off-site sources.	
MM HAZ-1	**Phase II Environmental Site Assessment.** Prior to the issuance of a grading permit and before any substantial ground disturbance occurs on or near the properties with documented releases, the Project shall hire a qualified environmental professional to conduct a Phase II Environmental Site Assessment to determine the potential presence of petroleum hydrocarbons, metals, and volatile organic compounds in soil and/or groundwater. • If the Phase I Environmental Site Assessment identifies any recognized environmental conditions or other indicators of potential contamination, a Phase II Environmental Site Assessment shall be conducted. The Phase II Environmental Site Assessment shall include sufficient soil and groundwater sampling and laboratory analysis to identify the types of chemicals and their respective concentrations. The Phase II Environmental Site Assessment shall compare soil and groundwater sampling results against applicable environmental screening levels developed by the Los Angeles Regional Water Quality Control Board and/or Department of Toxic Substances Control. If the Phase II Environmental Site Assessment identifies contaminant concentrations above the screening levels, a site-specific Soil and Groundwater Management Plan shall be prepared and implemented as described in MM HAZ-2. The Project shall consult with the Department of Toxic Substances Control, California Environmental Protection Agency, and/or other appropriate regulatory agencies to ensure sufficient minimization of risk to human health and the environment is completed.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
MM HAZ-2	**Soil and Groundwater Management Plan.** Prior to the issuance of a grading permit, a site-specific Soil and Groundwater Management Plan shall be prepared by a qualified professional environmental contractor to address handling and disposal of contaminated soil and groundwater prior to demolition, excavation, and construction activities. • The Project shall implement the Soil and Groundwater Management Plan during construction activities. The Soil and Groundwater Management Plan shall specify all necessary procedures to ensure the safe handling and disposing of excavated soil, groundwater, and/or dewatering effluent in a manner that is protective of human health and in accordance with federal and state hazardous waste disposal laws, and with state and local stormwater and sanitary sewer requirements. At a minimum, the plan shall include the following: – Identification and delineation of contaminated areas and procedures for limiting access to such areas to properly trained personnel. – Step-by-step procedures for handling, excavating, characterizing, and managing excavated soils and dewatering effluent, including procedures for containing, handling, and disposing of hazardous waste; procedures for containing, handling, and disposing of groundwater generated from construction dewatering; the method used to analyze excavated materials and groundwater for hazardous materials likely to be encountered at specific locations; appropriate treatment and/or disposal methods. Removal of soil and materials shall be performed by a licensed engineering contractor with a Class A license and hazardous-substance removal certification. – Requirements to water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, and staging. – Requirements to cover or maintain at least 2 feet of free board space on haul trucks transporting soil or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered. – Requirements to use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered sweeping is prohibited. – Procedures for handling volatile organic compound-contaminated soil, including, but not limited to, segregating volatile organic compound-contaminated stockpiles from non-volatile organic compound-contaminated stockpiles, spraying volatile organic compound-contaminated soil stockpiles with water and/or approved vapor suppressant and covering them with plastic sheeting for all periods of inactivity lasting more than 1 hour, conducting a daily visual inspection of all covered volatile organic compound-contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces, and removing contaminated soil from an excavation or grading site within 30 days from the time of excavation to a licensed facility.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
	– Procedures for notification and reporting, including notifying and reporting to internal management and to local agencies. – Minimum requirements for site-specific Health and Safety Plans to protect the general public and workers in the construction area. Prior to the issuance of grading permits, the Soil and Groundwater Management Plan and the results of environmental sampling shall be provided to contractors who shall be responsible for developing their own construction worker Health and Safety Plan and training requirements, per MM HAZ-4. – The Project shall hire a qualified environmental professional to sample groundwater suspected of contamination. If any suspected groundwater contamination is encountered during construction, the contractor shall stop work in the vicinity, cordon off the area, and contact Metro who shall immediately notify the Regional Water Quality Control Board. In coordination with the Regional Water Quality Control Board, an investigation and remediation plan shall be developed by a qualified environmental professional in order to protect public health and the environment. Any hazardous or toxic materials shall be disposed of according to local, state, and federal regulations. – Trucking operations shall comply with Caltrans and any other applicable regulations, and all trucks shall be licensed and permitted to carry the appropriate waste classification. The tracking of dirt by trucks leaving the project site shall be minimized by cleaning the wheels upon exit and cleaning the loading zone and exit area as needed.	
MM HAZ-3	**Contractor Specifications.** The Project shall include in its contractor specifications the following requirement relating to hazardous materials: • During all ground-disturbing activities, the contractor(s) shall inspect the exposed soil and groundwater for obvious signs of contamination, such as odors, stains, or other suspect materials. Qualified personnel shall monitor for volatile organize compounds and other subsurface gases for concentrations exceeding South Coast Air Quality Management District levels with a photoionization detector. Should signs of unanticipated contamination be encountered, work shall be suspended, and the Los Angeles County Department of Public Health shall be notified, and the area secured. Contaminated soil and/or groundwater shall be segregated and characterized, and a site-specific Soil and Groundwater Management Plan, as described under MM HAZ-2, shall be prepared and implemented.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
MM HAZ-4	**Worker Health and Safety Plan.** The contractor shall prepare site-specific Worker Health and Safety Plan to protect the general public and workers in the construction area. The Health and Safety Plan shall be prepared in accordance with California and federal Occupational Safety and Health Administration regulations. Copies of the Health and Safety Plan shall be made available to construction workers for review during their orientation and/or regular health and safety meetings. The Health and Safety Plan shall identify chemicals of concern, potential hazards, worker training requirements, personal protective equipment and devices, decontamination procedures, the need for personal or area monitoring, and emergency response procedures. The Health and Safety Plan shall be amended, as necessary, if new information becomes available that could affect implementation of the plan.	All Project Alternatives
MM HAZ-5	**Hazardous Building Survey and Abatement.** Prior to demolition activities of any structures, the Project shall retain a California Division of Occupational Safety and Health-certified contractor to determine the presence or absence of building materials or equipment that contains hazardous materials, including asbestos, lead-based paint, and polychlorinated biphenyl-containing equipment. If such substances are found to be present, the contractor shall prepare and submit a workplan to the relevant oversight agency to demonstrate how these hazardous materials would be properly removed and disposed of in accordance with federal and state law, including South Coast Air Quality Management District Rule 1403 (Asbestos Emissions from Renovation/Demolition Activities). The removal and disposal of hazardous building materials shall be the responsibility of a California Division of Occupational Safety and Health-certified contractor. Following completion of removal activities, the Project shall submit documentation to the relevant oversight agency verifying that all hazardous materials were properly removed and disposed of.	All Project Alternatives
Safety and Security		
PM SAF-1	The Project shall comply with all regulations of California Health and Safety Code Sections 13000 et seq. and City of Los Angeles Municipal Code pertaining to fire protection systems, such as the adequate provision of smoke alarms, fire extinguishers, building access, emergency response notification systems (master alarm system), fire flows, hydrant pressure and spacing, and relevant building codes relating to fire suppression and defensible space.	All Project Alternatives
PM SAF-2	Metro shall coordinate with the Los Angeles Fire Department and Los Angeles Police Department to evaluate the design of Alternative 4 to ensure that emergency access for fire and police protection services is maintained at acceptable levels.	Alternative 4
MM SAF-1	The Project shall curtail above ground construction and maintenance activities requiring spark-producing equipment during high-risk wildfire periods in applicable areas. Applicable areas would be areas in the Santa Monica Mountain Range that the California Department of Forestry and Fire Protection designates as a wildfire zone and is populated with dried vegetation or other material that could ignite. Construction and maintenance activities utilizing motorized equipment shall be curtailed during red-flag warning days and other high-risk periods characterized by relative humidity of 15 percent or less combined with windy conditions consisting of frequent gusts at 25 mph or greater for at least 3 hours in a 12 hour period.	All Project Alternatives

Resource	Avoidance and Minimization Measure	Applicability
MM SAF-2	During construction of the Project, all staging areas, welding areas, or areas slated for development that use spark-producing equipment shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be monitored to ensure the spark arrestor is in good working order. All vehicles and crews working on the project site shall have access to functional fire extinguishers at all times.	All Project Alternatives

Source: HTA, 2024

4.3 Additional Data or Gaps to be Supplemented During the NEPA Process

Complying with NEPA and federal regulations (e.g., Section 106 and Section 4(f)) will require more detailed community and environmental effects assessments beyond what has been completed for the PEL Study. The Project will continue to be refined and new information developed as plans progress. In addition, coordination with some federal agencies cannot occur until after Metro formally initiates the NEPA process with the FTA. Initial findings described in the PEL Study will be confirmed with federal agencies during development of NEPA documentation.

Alternatives 1 and 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 will 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 will obtain all permits and approvals necessary from the relevant jurisdiction, the appropriate air quality management entity, and other regulatory entities. Alternatives 4, 5, and Modified 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 will obtain all permits and approvals necessary from the City of Los Angeles, SCAQMD, and other regulatory entities. As areas of the MSF site 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.

4.4 Outstanding Issues Related to Impact Assessments

Assessing compliance with some federal regulations, including Section 106 and Section 4(f), requires a detailed coordination process with federal agencies to obtain agreement on potential effects. This coordination cannot occur until the formal initiation of the NEPA process. Metro will coordinate with the SHPO, the FTA, and other responsible agencies to formally determine potential effects to be disclosed in NEPA documentation.

The Project must also demonstrate compliance with the transportation conformity regulation required by the CAA Section 176(c). Transportation conformity prohibits the USDOT and other federal agencies from funding, authorizing, or approving plans; programs; or projects that do not conform to air quality plans for attaining the NAAQS. Transportation conformity applies to transit projects and takes place on two levels: (1) the regional, or planning and programming level, and (2) the project level. The Project will be required to participate in the transportation conformity interagency consultation process with the SCAG Transportation Conformity Working Group.

The VA stated that its property has not been approved for use by the Project. This may require further consideration in the NEPA documentation, including the assessments related to Section 4(f) and Section 106 resources.

The U.S. Department of Housing and Urban Development (HUD) requested that its noise guideline be followed for assessing potential effects to HUD-assisted properties. The FTA Noise and Vibration Impact Assessment Manual was specifically developed to ascertain potential impacts from transit projects to varied land uses, including sensitive residential properties. The nexus between the HUD and the FTA impact assessment guidelines will be further explored during development of the NEPA documentation.

5 AGENCY AND PUBLIC INVOLVEMENT

Metro engaged in a comprehensive agency and public outreach process to inform the PEL Study and the CEQA DEIR (Metro, 2025). The following information was included in the PEL/NEPA Agency Consultation Summary Report (Metro, 2025v).

The Draft PEL Study was circulated for public review between April 10 and May 9, 2026 to assist Metro in understanding environmental and design constraints prior to assessing a single build alternative in an anticipated NEPA document. Notice of the Draft PEL Study availability was posted to the project website in addition to being emailed to key agency stakeholders. Comment letters were received from the EPA, VA, FAA, LADWP, one stakeholder group, and two members of the general public.

In addition, Chapter 5 of the DEIR (Public Participation and Outreach), includes a detailed summary of the CEQA outreach process that overlapped with the PEL Study process. Metro engaged stakeholders through informational meetings, targeted emails, briefings, and additional outreach efforts. Interested agencies participated in a multi-agency PEL meeting to describe the planning process and were offered individual meetings with Metro. Written and/or verbal comments were provided to Metro by multiple agencies. All comments are listed below in Table 5-1. and Table 5-2. Metro provided agencies with responses to comments and also considered these comments during the development of the PEL Study and associated environmental constraints and affected environment analyses.

Metro will consider the PEL Study, including agency and public comments, as the project proceeds through NEPA. All substantive comments will be considered, either individually or collectively (40 CFR 1503.4(a)), to help Metro make informed decisions.

5.1 Goals of Agency and Public Involvement Efforts

The PEL Study consultation process is a collaborative and integrated approach to transportation decision-making that considered benefits and impacts of the proposed transportation system improvements to the environment, community, and economy during the transportation planning process. This process is particularly important to federal agencies that may not typically engage lead agencies during the CEQA process. Accordingly, Metro focused on engaging federal agencies that may be directly affected by the Project or oversee resources that may be affected by the Project. Metro also approached state, regional, and local agencies that may be affected by the Project. The general public was engaged through the comprehensive CEQA public participation process to ascertain community concerns and Project alternative preferences.

5.2 Techniques Used to Engage Stakeholders

This section summarizes the Metro public engagement and agency coordination process, information content, and feedback from the initiation of the Project in 2021 through the release of the DEIR in 2025. As described in Chapter 5 (Public Participation and Outreach) of the CEQA DEIR (Metro, 2025), the public participation outreach was implemented concurrently with agency coordination activities throughout the environmental process and PEL Study. Metro undertook a series of communication activities, equitably distributed throughout the Project Study Area, leading up to key project milestones, such as prior to each round of public meetings. These activities were conducted either in-person or virtually, depending on the phase of the Project, public health guidelines, and what was determined to be the most effective and efficient outreach method for sharing the information with the audience. Meeting

notices were provided in English and Spanish. All collateral materials were posted online for those who were unable to attend the meetings in person.

Stakeholder briefings, community group presentations, and one-on-one meetings with key community groups/leaders were conducted throughout the process at strategic Project milestones beginning in 2021 with two key events. These two events included a June 2021 webinar prior to the scoping process to provide stakeholders with background information regarding the Project and to update them on what had occurred since the 2019 Feasibility Report. The webinar meeting allowed stakeholders to ask questions and to provide feedback and input regarding the Project and alternatives. Later in 2021, Metro released the NOP for the DEIR, which started the CEQA scoping process. From November 30, 2021 to February 11, 2022, Metro managed the comprehensive scoping process to engage the public, agencies, and stakeholders and to provide opportunities for input on issues to be examined and included in the DEIR. This activity included local, state, and federal agencies with facilities in the area; major educational, cultural and religious institutions; healthcare systems; community-based organizations; transportation advocacy groups; business organizations; neighborhood councils; homeowners associations; and large employers. Metro held and recorded four virtual scoping meetings via Zoom during the scoping period. Additionally, Metro held a scoping meeting for representatives of public agencies. Metro posted a recording of each public scoping meeting to its YouTube channel and also placed links to the recordings and to the scoping meeting PowerPoint presentation on the Project's website to allow those who could not participate in real time to have access to the recordings at their convenience.

Metro is conducting general outreach activities that include information display tables or "pop-up" meetings at popular community events. These events provide the opportunity to educate, engage, and enhance the visibility of the Project to stakeholders who may otherwise not be reached through other outreach efforts. Information display boards, interactive displays, and distribution of fact sheets are utilized at these events. Stakeholder contact information is gathered and added to the mailing list.

Extended outreach efforts can be extremely valuable in gaining deeper public awareness about the Project and in helping Metro understand the issues and concerns of the communities. This approach includes requesting support from key community representatives to help promote the public meetings, including elected official staff representatives, chambers of commerce, school districts, community groups, businesses and business associations, academic institutions, and other local interest groups involved in transportation, environmental sustainability, and social issues in the region. The outreach team provides a public notification toolkit to enable their assistance with promoting awareness and/or public meetings through their respective electronic communication tools, including websites, e-newsletters, social media sites, and membership e-blasts.

Metro engaged in a robust public outreach process during the development of the 2019 Feasibility Report (Metro, 2019). Metro designed a wide range of opportunities for feedback in an inclusive and transparent way and held multiple forums for bilingual English and Spanish community engagement. This included engaging stakeholders at a variety of events and locations in the San Fernando Valley and on the Westside, reaching thousands of stakeholders in person. Metro also conducted significant outreach with many public agencies that have jurisdiction throughout the Project Study Area. Coordination with these agencies allowed concerns to be identified and addressed early in the process.

Metro hosted three rounds of informational public meetings (for a total of 10 individual public meetings) as part of the public outreach efforts. Meetings were held to coincide with the introduction,

refinement, and evaluation of the Project alternatives. All materials were available in English and Spanish, and interpreters were available to translate and assist with submission of comments.

Metro coordinated with many public agencies that have jurisdiction throughout the Project Study Area, holding both multi-agency briefings and individual meetings. This effort was designed to present information on the alternatives under consideration, to discuss relevant issues related to each agency's jurisdiction, and proactively consult with these agencies prior to formal agency consultation.

Additional public outreach was completed during the DEIR review process. During the 90-day public review period, Metro hosted five information sessions and five public hearings. Additionally, five community meetings were held in the weeks leading up to the DEIR release to provide information about project status, benefits, costs, and construction schedules. Each round of meetings included one virtual and four in-person sessions. In total, 8,074 formal comment submissions were received during the public review period. Comments were received by various methods, including oral and written comments at the public hearings, written comments at the information sessions, online submissions, project email submissions, mail submissions, and phone submissions. A majority of the comments (approximately 85 percent) were submitted through the online SmartComment form. Of the comments received, approximately 98 percent were from individuals, with the remainder received from public agencies, elected officials, businesses, and community organizations. Overall, 7,308 of the comment submissions (90.5 percent) expressed support for the Project, either for a specific alternative(s) or the overall Project. In total, 69 of the comment submissions (0.9 percent) expressed opposition to the overall Project.

5.3 Agency and Public Notice

Metro conducted outreach via an emailed letter in January 2023 to more than 50 federal, state, regional, and local agencies to introduce the PEL Study. The stated purpose of the letter was to inform interested agencies that Metro initiated the PEL Study process and to invite them to a kick-off meeting. The letter described the project location/environmental setting, the initiation of the CEQA process, the planned contents of the PEL Study, information to participate in the kick-off meeting, and information to participate in three public open house meetings designed to solicit feedback from the public related to the design of the Project alternatives under consideration. Separate from the PEL Study, the November 2021 NOP notified federal and other agencies and the general public that Metro was initiating the CEQA process. The DEIR was released on June 2, 2025 for a 90-day public review and comment period (Metro, 2025). All stakeholders, including federal agencies, were notified that the DEIR was available for review and comment.

5.4 Groups Engaged

The PEL Study considers input from the following groups:

- Project Leadership Team: This group consisted of Metro managers, planning staff, and FTA team members. This group engaged federal agencies, provided strategic direction, reviewed progress, and approved the contents of the PEL Study.
- Metro Board of Directors: The Metro Board of Directors is the local decision-making body responsible for identifying the LPA. This group will consider the recommendations of the PEL Study to inform selection of the build alternative for the NEPA process.

- Resource Agency Partners: This group consisted of representatives from federal resource and regulatory agencies, in addition to other agencies, providing focus on their agencies' roles, responsibilities, and jurisdiction.
- Consultant Team: HTA supported Metro in developing the PEL Study, including collaborating with federal agencies and interested parties, providing preliminary NEPA assessments, and evaluating Project alternatives.
- General Public: The PEL Study considered public comments submitted during the CEQA scoping process and other meetings related to the DEIR.

5.5 Outreach Outcomes

Table 5-1. lists the agencies that participated in the virtual meeting held on February 2, 2023, along with comments and responses provided during the meeting. Table 5-2 lists agencies that requested a focused meeting and comments provided during the meeting. This section also includes a summary of DEIR comments provided by federal and other key stakeholder agencies.

Table 5-1. PEL Study Introductory Meeting for Agencies

Agency	Comments and Responses During the Meeting
Federal Agencies	
Federal Transit Administration (FTA)	• FTA clarified that agencies interested in having individual meetings should directly contact Metro. The purpose of the PEL Study is to advance planning in recognition of the needs of this corridor, and through coordination with stakeholder agencies, help Metro narrow the alternatives to an LPA. However, it is possible that multiple alternatives will be assessed during the NEPA process. • FTA noted that Metro has been following the state law and conducting all coordination with agencies as required by the law under CEQA. Metro hosted this meeting to introduce the PEL Study process and explain the difference between the PEL Study and CEQA requirements. • FTA added that comments during the CEQA process will be built upon in the PEL Study, and that Metro will be asking for additional comments during the NEPA scoping process.
Federal Highway Administration (FHWA)	• FHWA asked if there will be federal funds associated with the Project. Metro responded that the *Measure M Expenditure Plan* (Metro, 2016) anticipated federal funding for this Project.
U.S. Army Corps of Engineers (USACE)	• USACE asked if the FTA will be the federal lead agency and if there will be Cooperating Agencies. The FTA confirmed that it will be the lead agency for NEPA and Cooperating Agencies, if any, will be identified after the beginning of the NEPA process. • USACE asked for concerns about viability of the alternatives regarding routing and permits needed from USACE, and if these issues would be addressed in the PEL Study or under CEQA. Metro responded that USACE is encouraged to raise these issues during the PEL Study process. Metro acknowledged the need to understand the federal requirements as the Project moves towards an LPA.

Agency	Comments and Responses During the Meeting
	• USACE suggested reaching out to the Los Angeles Fire Chief to discuss potential firebreaks.
U.S. Department of Veterans Affairs (VA)	This agency did not comment during the meeting.
U.S. Environmental Protection Agency (EPA)	This agency did not comment during the meeting.
U.S. National Park Service (NPS)	This agency did not comment during the meeting.
State Agencies	
California Department of Fish and Wildlife (CDFW)	• CDFW asked if CEQA and NEPA processes will be separate. Metro answered in the affirmative. • CDFW asked if state agencies need to request a meeting with Metro to discuss concerns on biological resources. Metro answered in the affirmative and mentioned the request can come through emails to the Project team. Metro replied that CEQA consultation has started, and that the PEL Study will build on the CEQA analyses. • CDFW asked if there will be future meetings and why there was no pre-consulting meeting with state agencies under CEQA. Metro replied that the study scope has public meetings and targeted agency consultation, and that the purpose of the meeting was to kick off the PEL Study efforts, followed by public touchpoints and specific meetings with individual agencies.
California Department of Transportation (Caltrans)	• Caltrans asked to clarify the schedule for the concurrent process and meeting schedule for the CEQA and PEL Study processes. Metro responded that while the PEL Study meetings include a CEQA discussion, the PEL Study will not be part of the CEQA documentation. • Caltrans asked if agencies need to provide separate comments for CEQA and the PEL Study. Metro confirmed that agencies will need to provide comments for each document separately. • Caltrans asked to clarify the roles for federal agencies. FTA responded that the Project team is considering financial planning, range of alternatives and the screening process, and coordination with other federal partners with consideration of a mix of funding. Caltrans and the FHWA agreed to discuss roles and responsibilities offline, and FTA offered support as needed. • Caltrans asked when more details will be available. Metro provided a link to a StoryMap showing more details for the alternatives.
California Public Utilities Commission	This agency did not comment during the meeting.
University of California Los Angeles (UCLA)	This agency did not comment during the meeting.
Regional Agencies	
Los Angeles Regional Water Quality Control Board	This agency did not comment during the meeting.
San Fernando Valley Council of Governments	This agency did not comment during the meeting.

Agency	Comments and Responses During the Meeting
Southern California Association of Governments (SCAG)	SCAG asked how to comment on the *Draft Agency Coordination Plan* (Metro, 2023). Metro responded that comments should be sent to Cameron Palm via email within the next few weeks. FTA added that the Project team will provide an update of request for feedback in an email, and will include additional details
Westside Cities Council of Governments	This agency did not comment during the meeting.
Los Angeles County Agencies	
Los Angeles County Department of Regional Planning (LA County Planning)	This agency did not comment during the meeting.
Los Angeles Department of Public Health	This agency did not comment during the meeting.
Los Angeles County Sanitation Districts	This agency did not comment during the meeting.
City of Los Angeles Agencies	
Bureau of Street Lighting (BSL)	BSL requested a timeline, including designs for the alternatives. Metro responded that a Master Cooperative Agreement was being negotiated with the City of Los Angeles, which would cover provision of design materials. Metro also responded that the schedule is a work in progress, although the CEQA scoping period started in November 2021 followed by the initiation of design plans for the alternatives.
Department of City Planning (DCP)	This agency did not comment during the meeting.
Department of Recreation and Parks	This agency did not comment during the meeting.
Department of Transportation	This agency did not comment during the meeting.
City of Los Angeles Department of Water and Power (LADWP)	This agency did not comment during the meeting.
Other Cities	
City of Santa Monica	This agency did not comment during the meeting.
City of West Hollywood	This agency did not comment during the meeting.
Santa Clarita Transit	Santa Clarita Transit requested to see the last slide of the presentation that shows the next steps, which was accommodated by Metro.

Source: HTA, 2024

After the introductory meeting on February 2, 2023, a number of agencies requested a focused meeting with Metro and/or submitted written comments. These meetings began with a presentation by Metro followed by a question-and-answer session. Metro encouraged agencies to submit a formal comment letter specific to the PEL Study. Table 5-2 lists the agencies that requested a focused meeting, comments provided during the meeting, and comments received by letter (if applicable). Most agencies asked Metro for information on the build alternatives and to clarify the timeline for the Project, which is not noted as a comment in the table.

Table 5-2. PEL Study Agency Comments and Meeting

Agency	Comments Related to the Build Alternatives
Federal Agencies	
Advisory Council on Historic Preservation Written Comment Date: January 18, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments The Advisory Council on Historic Preservation declined to participate in the PEL Study process.
Amtrak, Metrolink, and LOSSAN Rail Corridor Meeting Date: August 24, 2023	Verbal Comments during the Focused Meeting • Amtrak requested to be informed of developments because the Project might impact the Amtrak bus network. • Amtrak had numerous questions related to the Project schedule, the PEL Study process, and the nexus for submitting comments specific to the PEL Study. Written Comments No written comments were provided for the PEL Study.
Federal Aviation Administration (FAA) and Los Angeles World Airports (LAWA) Meeting Date: June 27, 2023	Verbal Comments during the Focused Meeting FAA and LAWA requested clarification related to the use of Van Nuys Airport property. Metro clarified that a potential construction staging area is located north of Roscoe Boulevard on land not connected to Airport property. The land is zoned open space and shown on land use plans to be owned by a government entity. Written Comments No written comments were provided for the PEL Study.
Federal Railroad Administration Written Comment Date: July 7, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments The Federal Railroad Administration declined to engage in the PEL Study process.
National Park Service (NPS) Meeting Date: March 6, 2023	Verbal Comments during the Focused Meeting • The NPS noted the importance of habitat connectivity. • The NPS clarified administrative boundaries and the relationship with SMMC.

Agency	Comments Related to the Build Alternatives
	• The NPS noted that the subterranean alignments of Alternatives 4, 5, and 6 would likely have less effect to wildlife than the surface alignments associated with Alternatives 1, 2, and 3. • The NPS clarified that they are not aware of plans for a new wildlife crossing in the Project area. <u>Written Comments</u> No written comments were provided for the PEL Study.
U.S. Army Corps of Engineers (USACE) Meeting Date: January 4, 2024 Written Comment Date: January 25, 2024	<u>Verbal Comments during the Focused Meeting</u> • USACE stated that the agency's regulatory group will oversee the permitting process. Temporary construction access may trigger a Section 404 permit. A Section 408 permit could be triggered by the alignment going over or under the Los Angeles River. • USACE asked Metro to confirm that there are no river crossings near UCLA. It was also stated that the Los Angeles River is not likely considered navigable at Project crossing points. • USACE acknowledged that the PEL Study process is an opportunity for USACE to raise red flags. • USACE stated that the Los Angeles River may be listed as an historic property thereby requiring additional assessment in the NEPA document. <u>Written Comments</u> • Issues of Concern regarding the Sepulveda Dam: Assuming the aerial alignment of the proposed alternatives along the I-405 Freeway are to the east of I-405, none of the alternatives directly affect the Sepulveda Dam. USACE owns the Sepulveda Dam property. A portion of the property is used to operate the Sepulveda Dam and 1,527 acres is leased to the City of Los Angeles for recreational use. Any alignment that intersects with USACE -owned property would likely require an out-grant from the Real Estate Division. Any alignment that has the potential to affect a USACE built facility would likely require permission under Section 408. • Issues of Concern regarding the Los Angeles River Crossing: All of the proposed alternatives appear to involve a crossing (aerial or below ground) of the Los Angeles River. The Los Angeles River Flood Control Channel was constructed by the USACE and is owned by Los Angeles County, the City of Los Angeles, and private landowners. The section of the Los Angeles River upstream from Sepulveda Boulevard (through Sepulveda Basin) was constructed by USACE and is operated and maintained by the USACE. The section between Sepulveda Boulevard and Lankershim Boulevard is operated and maintained by the City of Los Angeles. The Los Angeles River from San Pedro Bay to the confluence with Arroyo Calabasas is also a traditionally navigable water under Section 404. However, it is *not* a Navigable Water and therefore not regulated under Section 10 of the Rivers and Harbors Act.

Agency	Comments Related to the Build Alternatives
	• Any alternative which has the potential to affect the USACE built channel of Los Angeles River (under, over, or through), would likely require permission under Section 408. In addition, any alternative which would involve temporary or permanent discharge of dredged or fill material into the Los Angeles River would likely require a Section 404 permit. Activities which are typically considered a discharge of dredged or fill material include, but are not limited to, temporary construction access ramps, temporary water diversions, trenching, and support piers. • Issues of Concern regarding eligibility of the Los Angeles River for listing on the National Register of Historic Places (NRHP): Please be aware that the Los Angeles River is eligible for listing on the NHRP as a linear district. Therefore, it is a historic property by definition (36 CFR 800.16(l)(1)). As such, the effects of a federal undertaking (including the issuance of a license or permit) on the Los Angeles River must be evaluated (36 CFR 800.4(d)) and any adverse effects must be resolved (36 CFR 800.6). • Issues of Concern regarding the Sepulveda Channel Crossing: All of the proposed alternatives appear to involve a crossing (aerial or below ground) of the Sepulveda Channel. As with the Los Angeles River crossings, any alteration which has the potential to affect the USACE-built channel would likely require permission under Section 408. Whether USACE would have jurisdiction under Section 404 for crossings of Sepulveda Channel is unclear at this time. Due to its historic age, the Sepulveda Channel must be evaluated for eligibility for listing on the NRHP pursuant to 36 CFR 60.4. If it is found to be eligible, the effects of the federal undertaking must be evaluated and any adverse effects must be resolved. • Proposed Contents of a Future Draft Environmental Impact Statement (EIS) – Waters of the US: To facilitate review of the likely future request for federal action under Section 404, USACE recommends the following topics for environmental evaluation: 1) The nature and degree of effect that the proposed discharge of dredged or fill material will have, individually and cumulatively, on the characteristics of the substrate at the proposed discharge site within waters of the U.S. 2) The nature and degree of effect that the proposed discharge of dredged or fill material into waters of the U.S. will have individually and cumulatively on water, current patterns, circulation including downstream flows, normal water fluctuation, and water chemistry. 3) The nature and degree of effect that the proposed discharge of dredged or fill material will have, individually and cumulatively, in terms of potential changes in the kinds and concentrations of suspended particulate/turbidity in the vicinity of the discharge site within waters of the U.S. 4) The degree to which the material proposed for discharge into waters of the U.S. will introduce, relocate, or increase contaminants. 5) The nature and degree of effect that the proposed discharge of dredged or fill material into waters of the U.S. will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms.

Agency	Comments Related to the Build Alternatives
	• USACE encourages Metro to coordinate with USACE early in the process to evaluate the alternatives for potential effects to water resources to identify ways to avoid and minimize, to the maximum extent possible, impacts to waters of the US. • Proposed Contents of a Future Draft EIS – Completed USACE Projects: To facilitate review of the likely future request for federal action under Section 408, USACE recommends the Metro evaluate the nature and degree to which each alternative would affect the flood control facilities. USACE recommends that such analysis specifically identifies the completed USACE projects as Section 408 facilities, discusses impacts to each such Section 408 facility, and proposes mitigation measures related to those specific Section 408 facilities. USACE encourages Metro to coordinate with USACE early in the process with regard to alterations to completed USACE Projects or USACE lands. • Proposed Contents of a Future Draft EIS – Historic Resources: If the Project requires authorization by USACE, USACE will be required to comply with federal environmental statutes including NEPA, Section 106 of the National Historic Preservation Act (NHPA), Section 7 of the Endangered Species Act, etc. To facilitate the environmental review for the likely future federal action, USACE recommends that Metro describe the following topics as part of the environmental setting: 1) The level of significance in American history, architecture, archeology, engineering, and culture of Sepulveda Channel and Sepulveda Dam. 2) The integrity of location, design, setting, materials, workmanship, feeling, and association of Sepulveda Channel and Sepulveda Dam. 3) Any association of Sepulveda Channel or Sepulveda Dam with events that have made a significant contribution to the broad patterns of American history, or the lives of persons significant in our past. 4) Whether Sepulveda Channel or Sepulveda Dam embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. 5) Whether Sepulveda Channel or Sepulveda Dam have yielded, or may be likely to yield, information important in prehistory or history. • USACE also recommends that Metro evaluate the following topics as part of the Impact Analysis for each alternative: 6) How each alternative would alter the characteristics of the Los Angeles River which qualify it as eligible for listing on the NRHP. 7) If Sepulveda Channel or Sepulveda Dam are found to have characteristics which qualify them as eligible for listing on the NRHP, how each alternative would alter the characteristics of the Sepulveda Channel or Sepulveda Dam which qualify it as eligible for listing on the NRHP.

Agency	Comments Related to the Build Alternatives
	• Future Federal Action: It would be appropriate for FTA to be the federal Lead Agency for the purposes of compliance with Section 106 of the NHPA and Section 7 of the Endangered Species Act. In this event, USACE should be invited to be a cooperating agency under 40 C.F.R. Part 1501, 50 C.F.R. 401 and 36 C.F.R. 800.2(a)(2). The resource agencies with whom the lead federal agency consults and seeks concurrence, should be informed that the consultations are inclusive of USACE federal actions/undertakings and are being carried out by the lead federal agency on our behalf. If the lead federal agency consults under a Memorandum of Agreement with State Historic Preservation Officer and other parties for NHPA Section 106, then USACE should be a signatory to the Memorandum of Agreement. In addition, USACE should be given the opportunity to review pertinent biological and cultural resources documents, including draft biological opinions and draft Memorandum of Agreements. • Once a preferred alternative has been selected, we recommend filling out the permitting inquiries checklist to determine the specific permitting requirements of that alternative. However, if feedback from USACE on each alternative is desired in order to help refine or select an alternative, you may submit one permitting inquiry checklist for each alternative to each crossing. A current jurisdictional delineation report should be submitted in addition to the other information requested in the checklist. Please refer to this letter and U.S. Army Corps of Engineers File Number SPL-2021-00650-LPF in any correspondence with USACE regarding the Sepulveda Transit Corridor Project.
U.S. Department of Housing and Urban Development (HUD) Written Comment Date: August 10, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency declined a PEL Study meeting pending the availability of detailed alignment maps. <u>Written Comments</u> • HUD provided a July 22, 2021 comment letter related to the I-405 Sepulveda Pass ExpressLanes Project to also represent comments for the PEL Study. The following HUD-assisted properties were identified in the letter. – Orangewood Court Apartments located at 5050 Sepulveda Boulevard – Diamond Head Apartments located at 1554 Vanowen Street – Emerald Pointe Apartments located at 14600 Saticoy Street – Villa Valley Apartments located at 15950 Sherman Way – Sherman Way Senior HSG located at 15864 Sherman Way – VPH Adult Retirement Center located at 15211 Sherman Way – Dickens Court located at 14955 Dickens Court – The Plaza Apartments located at 10980 Wellworth Avenue – New Vista Post-Acute Care Center located at 1516 Sawtelle Boulevard – Pico Veteran Senior Housing located at 10961 West Pico Boulevard

Agency	Comments Related to the Build Alternatives
	• Because of the proximity of these properties to the Project, HUD would like to ensure that Metro evaluate potential impacts from noise and localized air emissions (relative to HUD environmental regulations and standards) at these locations.
U.S. Environmental Protection Agency (EPA) Meeting Date: June 1, 2023	<u>Verbal Comments during the Focused Meeting</u> • EPA requested and received confirmation that Metro is coordinating with FTA. • EPA commented on the potential for operational efficiencies in considering the alternatives. Metro replied that the Project system will comply with Metro Design Guidelines and standard (i.e., kit-of-parts) requirements for transit systems. • EPA noted that the Project could benefit communities through improved transit access, including those associated with the VA. • EPA confirmed participation in the PEL Study and noted the benefits of the PEL Study completed for the State Route 137 project. The PEL Study validates early environmental assessment qualifying such assessments for the NEPA document. <u>Written Comments</u> No written comments were provided for the PEL Study.
U.S. Federal Highway Administration (FHWA) Written Comment Date: June 12, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting <u>Written Comments</u> FHWA declined to participate in the PEL Study process.
U.S. General Services Administration (GSA) Meeting Date: June 14, 2023 Written Comment Date: July 25, 2023	<u>Verbal Comments during the Focused Meeting</u> • GSA asked Metro to confirm that no presumptions have been made related to the GSA position on the Project. • GSA requested clarification regarding providing comments on environmental effects versus property effects. Metro confirmed that it is soliciting comments on both possible environmental effects related to GSA resources and property impacts. <u>Written Comments</u> GSA stated that the agency has no further comments related to the PEL Study process.

Agency	Comments Related to the Build Alternatives
U.S. Geological Survey (USGS) Written Comment Date: September 7, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments The U.S. Geological Survey declined to participate in the PEL Study process.
U.S. Department of Veterans Affairs (VA) Written Comment Date: June 30, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • The VA provided PEL Study comments directly within the PEL Study Questionnaire. VA property has not been approved for the following uses: – An alignment west of I-405 for Alternative 1. – A station for Alternatives 2, 3, 4, 5, or 6 beyond what was approved for the Metro D Line (Purple) extension. – A pedestrian bridge for Alternative 2. – Widening I-405 or realigning ramps and local roads for Alternatives 2 or 3. • Veteran Service Organizations should be engaged given the proximity and potential impacts of this project to existing VA facilities.
State Agencies	
California Department of Transportation (Caltrans) Written Comment Date: June 27, 2023	Verbal Comments during the Focused Meeting This agency declined a PEL Study meeting. Written Comments Caltrans provided a sample evaluation matrix to assist in evaluating and comparing the alternatives.
Los Angeles Regional Water Quality Control Board (LARWQCB) Meeting Date: March 9, 2023	Verbal Comments during the Focused Meeting • LARWQCB noted concerns with widening Sepulveda Boulevard due to potentially impacting storm drains. • LARWQCB indicated that the primary area of concern is drainage within the middle segment of the Project, within the Santa Monica Mountains. • LARWQCB requested that the delineations be reviewed for accuracy based on that agency's methodology.

Agency	Comments Related to the Build Alternatives
	Written Comments No written comments were provided for the PEL Study.
Gabrielino Tongva Indians (GTI) Meeting Date: May 16, 2023	Verbal Comments during the Focused Meeting • GTI stated that they want to participate in both the federal Section 106 process and the state Assembly Bill 52 process. • GTI stated that the alignments are near sacred springs and midden sites, including the Veterans Affairs Administration land and University High School (location of the spring site). • GTI noted that they can share information for sacred sites on the Veterans Affairs Administration land. Written Comments No written comments were provided for the PEL Study.
Regional Agencies	
Los Angeles County Sanitation Districts (LACSD) Written Comment Date: May 4, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • Maintain 24/7 access to Mission Dump Rd during Project construction along Sepulveda Blvd so access to Mission Canyon Landfill (MCLF) is not impeded. As the County's post-closure "contractor", LACSD needs 24/7 access to MCLF to inspect and maintain the landfill's environmental control systems (gas collection, stormwater management, etc.). • Consult with LACSD if realignment of Sepulveda Boulevard under Alternatives 1, 2 or 3 requires fee acquisition of, or a permanent easement over, any portion of the 12-acre vacant hillside property owned by LACSD along Sepulveda Boulevard (APN 4490-002-271), just north of Mission Dump Rd. • MCLF has not been developed into a park or opened to the public. The County and MRCA are negotiating the particulars, and construction of park improvements has not yet begun. It is likely that the park will be open to the public by the time Project construction begins. In that case, maintain public access to MCLF.

Agency	Comments Related to the Build Alternatives
Metropolitan Water District of Southern California (MWD) Written Comment Date: February 27, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • The MWD is concerned with potential impacts to the pipelines and appurtenant facilities that may result from the construction and implementation of the Project. A map was provided of MWD facilities, which specifically noted the Sepulveda Feeder and Santa Monica Feeder Pipelines. • The MWD must be allowed to maintain its rights-of-way and requires unobstructed access to its facilities in order to maintain and repair its system. In order to avoid potential conflicts with MWD facilities and rights-of-way, design plans for any activity in the area of MWD pipelines or facilities be submitted for review and written approval. MWD will not permit procedures that could subject the pipeline to excessive vehicle, impact or vibratory loads. Any future design plans associated should be submitted to MWD Substructures Team. Approval of the Project should be contingent on MWD approval of design plans for portions that could impact its facilities. • The MWD provided the document "Guidelines for Improvements and Construction Projects Proposed in the Area of Metropolitan's Facilities and Rights-of-Way" to assist in preparing plans that are compatible with MWD facilities and easements. • The MWD supports mitigation measures such as using water efficient fixtures, drought-tolerant landscaping, and reclaimed water to offset any increase in water use.
Westside Cities Council of Governments (WCCOG) Written Comment Date: June 30, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments The WCCOG supports a project alignment with a station at the UCLA campus and that facilitates a seamless connection to the Metro D Line.
Local Agencies	
City of Los Angeles Bureau of Street Lighting (BSL) Written Comment Date: June 29, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • The BSL will require increase of existing lighting levels for safety.

Agency	Comments Related to the Build Alternatives
	• Modifications to street layouts will require redesign and reconstruction of lighting systems. • Any street/pedestrian lighting improvements that create new assessments or increase existing assessments to property owners will require the Proposition 218 process to take effect. This process not only requires community participation but also their approval throughout a ballot process. • Historical/Ornamental street lights shall be retained and improved (refurbished and upgraded). • Temporary street lighting systems within the City of Los Angeles are required for public right-of-way. Number of temporary units installed and the spacing between adjacent locations will match the existing street lighting system in service on a one-for one basis. • Park & Ride facilities and parking lots design shall include public street and pedestrian lighting improvements in and around the facilities that meet current BSL standards.
City of Los Angeles Departments of City Planning (DCP)/Los Angeles Department of Transportation (LADOT) Written Comment Date: June 29, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> • Evaluate consistency with Mobility Plan 2035 using the City's Transportation Assessment Guidelines. • Evaluate the potential increase in VMT for any alternative that includes adding new multi-purpose lanes if the analysis finds that those features were not already adequately evaluated at a programmatic level, such as in the EIR prepared for the Southern California Association of Government's most recent Regional Transportation Plan. • Where general purpose lanes would be reduced by the Project, streets that are expected to accommodate more than 750 vehicles per lane per hour for two consecutive hours after the Project is completed require further analysis. Metro would need to work with the Department of Transportation to implement an Outreach and Evaluation Plan for the Project. The Outreach and Evaluation Plan would require, at minimum, evaluating and disclosing potential changes to operating travel speed along the roadway as a result of the Project. • Support further study of all alternatives, especially Alternatives 4, 5, and 6. • Final designs must be analyzed by LADOT. • Examine opportunities for first/last mile improvements. • Assess consistency with land use plans. • Alternatives 4, 5, and 6 support TOD better than Alternatives 1, 2, and 3.

Agency	Comments Related to the Build Alternatives
	• MSF location for Alternatives 1, 2, and 3 could inhibit implementation of the Orange Line Transit Neighborhood Plan. • MSF location for Alternatives 4 and 5 is in an industrial area and would have less effect on future housing and commercial development. Be mindful of nearby residences. • MSF location for Alternative 6 is zoned industrial but near a transit hub. Consider tradeoffs of locating MSF near potential TOD area. • Assess wildlife connectivity. • Ensure consistency with City tree removal guidelines. • Alternatives 1, 2, and 3 should consider the potential future implementations of aerial mobility when evaluating any alternative with above-ground infrastructure located in the I-405 right-of-way.
City of Los Angeles Department of Water and Power (LADWP) Written Comment Date: June 12, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> Requested detailed maps to identify impacts to their properties.
City of Santa Monica Meeting Date: March 13, 2023	<u>Verbal Comments during the Focused Meeting</u> The City of Santa Monica asked if the build components for the various build alternatives can be mixed-and-matched and if Bus Rapid Transit was considered for the Project, including in the I-405 corridor. <u>Written Comments</u> A comment letter was not provided for the PEL Study.

Source: HTA, 2024

EIR = Environmental Impact Report
LADOT = Los Angeles Department of Transportation
PEL = Planning and Environmental Linkages
MSF = maintenance and storage facility
TOD = transit-oriented development

During the DEIR comment period, the VA and EPA were the only federal agencies to submit comments on the CEQA process. The key VA comment was that Metro could not utilize VA property. EPA commented that Metro should preserve wildlife corridors, coordinate with the local air district to minimize construction emissions, and coordinate with other agencies to limit effects to aquatic resources. State and local agencies submitted comment letters related to the DEIR. These comments were similar to what was provided above related to the PEL Study process, although focused on the CEQA analyses.

Table 5-3 provides comments received during the Draft PEL Study public circulation period along with responses to the comments.

5.6 Unresolved Issues

The PEL Study consultation process identified the following issues that would need to be addressed and coordinated as the Project progresses through further planning and design refinements depending on the alternative selected to advance. As noted below, many of the issues are particular to certain alternatives and are avoided by the selection of Modified Alternative 5 as the LPA.

- Considering the conflicts with VA property associated with Alternatives 1 and 3.
- Coordinating approval of Alternatives 1 and 3 with FHWA and Caltrans through the assessments of cumulative effects of the Project and the ExpressLanes project (e.g., concurrent construction activities). Alternative 1 would require FHWA to approve a Modified Access Report related to the closure of the Sunset Boulevard southbound on-ramp.
- Considering the use of HUD guidelines for assessing potential effects to HUD-assisted properties under all Project alternatives.
- Coordinating the assessment of habitat connectivity under Alternatives 1 and 3 with the NPS, EPA, and other stakeholders.
- Coordinating with the FAA to avoid impacting flight operations.
- Coordinating connectivity to the Metrolink Van Nuys Station, Metro D Line, Metro E Line, Metro G Line, and Project interface with the ESFV LRT Line under all Project alternatives.
- Coordinating with LADWP to avoid and/or minimize facility effects.
- Consulting with LACSD and/or MRCA to minimize potential effects to the regional park planned for the Mission Canyon Landfill under Alternatives 1 and 3.
- Ongoing tribal coordination under all Project alternatives.
- Developing and evaluating Modified Alternative 5 (e.g., stations and alignments), including the Initial Operating Segment (IOS) and associated MSF.

Table 5-3. Draft PEL Study Comments

Agency	Comments Related to the Draft PEL Study
Federal Agencies	
Federal Aviation Administration (FAA)	• FAA airspace analysis must evaluate the horizontal and vertical components of the at-grade and/or aerial portions of each alternative/alignment considered (including components such as the overhead catenary electrical power system, rolling stock envelope, and sound walls) on the various imaginary surfaces prescribed in Title 14, CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, as well as on the line-of-sight and range of FAA radio frequencies (e.g., navigational aids), which, if impacted, may adversely affect instrument flight procedures and thereby the capacity and/or safety of the national airspace system. • The imaginary surfaces associated with 14 CFR Part 77 are not the most restrictive in all circumstances; Terminal Instrument Procedures and Obstacle Clearance Surfaces may be more restrictive in certain situations and are therefore key considerations for the FAA. We anticipate that analyzing these surfaces may require FAA guidance, as most non-aviation professionals are unfamiliar with Terminal Instrument Procedures and Obstacle Clearance Surfaces. Alternatively, Metro may wish to consider procuring an aviation professional services consultant. • In addition to seeking FAA guidance or procuring an appropriate professional services consultant, Metro must use the FAA Notice Criteria Tool at frequent intervals (e.g., every 500 linear feet) along the at-grade and/or aerial portions of each alternative/alignment within an airport influence area to identify locations meeting filing requirements under 14 CFR Part 77. Metro must then coordinate with the FAA to submit the appropriate forms so that the FAA can evaluate potential adverse effects on the national airspace system. Filings must include all horizontal and vertical components of the proposed project (including the overhead contact system, rolling stock envelope, and sound walls). • The relevant airport influence areas for this project include areas within 20,000 feet of Van Nuys Airport and Santa Monica Airport. Although Santa Monica Airport may close prior to Project construction, certain navigational aids are expected to remain operational on the airport property for an undetermined period; therefore, aeronautical studies remain prudent. **Response**: Metro is committed to complying with 14 CFR Part 77 and coordinating with the FAA as the project progresses through the design process and the alignment is solidified. Metro understands the concerns related to airport and aircraft safety. The Metro K Line travels directly adjacent to Los Angeles International Airport property along Aviation Boulevard. Construction of the K Line required compliance with 14 CFR Part 77.
U.S. Environmental Protection Agency (EPA)	• The EPA comment letter summarizes the project and the PEL Study process. The EPA appreciates the opportunity to review this Draft PEL and has no additional feedback at this time. Please update the EPA should a different alternative be considered for continued analysis. When the Final PEL, subsequent Revised EIR, and future NEPA analyses are available, please notify EPA and provide electronic versions.

Agency	Comments Related to the Draft PEL Study
	• The comment notes the following correction on page 4-15: The SCAQMD dispersion modeling determined that intersections in Los Angeles County that *[do not]* exceed average daily traffic volume of approximately 100,000 vehicles would not generate CO concentrations which would exceed the NAAQS (SCAQMD, 2003). **Response**: Metro will provide EPA with future environmental documentation related to the project. The sentence on page 4-15 has been corrected as noted by EPA.
U.S. Department of Veterans Affairs (VA)	• References to the "VA Greater Los Angeles Healthcare System Draft Master Plan (VA Plan)" from 2016 should be replaced with references to the 2022 Master Plan. • The following resources are part of the West Los Angeles Veterans Affairs Historic District, but should also be separately listed in Table 3-13. The Wadsworth Chapel (Building 20) and Trolley Building (Building 66) at the VA West Los Angeles campus are individually listed resources in the National Register of Historic Places (NHRP), and the Los Angeles National Cemetery is an NHRP-eligible resource. • The timeline for near to mid-term completion of the 1,200 housing units in the 2022 Master Plan is 10 years or 2032 (not 2021 as stated in the PEL). • Alternatives should not assume VA land will be acquired. • Has Metro engaged Veteran Service Organizations for feedback on the proposed alternatives per the comment provided in June 2023? If so, will that feedback be included in future drafts of this environmental report? **Response**: The PEL Study and appendices have been updated per the comments. Metro acknowledges that the Project cannot presume the use of VA property. Modified Alternative 5, selected by the Metro Board of Directors as the LPA, does not utilize VA property. The PEL Study and the CEQA DEIR included comprehensive community outreach to local stakeholders. Veterans Service Organizations did not provide comments on the PEL Study. Metro will continue to communicate with local stakeholders during the NEPA process, including Veterans Service Organizations.
Local Agencies	
City of Los Angeles Department of Water and Power (LADWP)	• LADWP expresses support for the project and recognizes the development of the Memorandum of Understanding (MOU) between LADWP and Metro showing commitment and cooperation between the two parties. • LADWP provide the comment letter submitted during the DEIR public circulation period with the following summarized comments. – LADWP objects to any proposed use of the Stone Canyon Reservoir Complex property. LADWP requests that Metro relocate the project outside this LADWP property which houses critical infrastructure facilities.

Agency	Comments Related to the Draft PEL Study
	– LADWP objects to the permanent and/or temporary acquisition of the entire and/or partial use of the Water Distribution Division and Joint System's Fleet Services located at 7600 North Tyrone Avenue for the MSF associated with Alternatives 1 and 3. – LADWP objects to the permanent and/or temporary acquisition of the entire and/or partial use of the Valley Service Center, the Valley Telecommunication Headquarters, the office building at 6060 Sepulveda Boulevard, and the West Los Angeles Service Center and Westwood Overhead Headquarter. – Metro should collaborate with LADWP Power System Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment. – Alternatives 4 and 5 involve tunnelling directly beneath this station's highly sensitive and essential equipment. Any disruption caused by tunneling activities or train vibrations could lead to equipment failures, potentially causing station outages which could directly impact electric service for thousands of residents and businesses in the area. Given the essential role of this station in maintaining reliable electric service, LADWP cannot support any alternative that requires tunneling under DS-145. – LADWP requests that Metro provide developed street improvement plans, striping plans, rail and station design plans showing infrastructure locations, heights, and depths, and proposed new water and power service locations as soon as possible to begin conflict reviews and identify any major project challenges early in the process. – LADWP requests that Metro submit new water and power service requests for this project as soon as possible with accurate water and power demand information to provide the LADWP and Metro ample time to collaborate and find the most efficient and cost-effective way to provide these new services. – LADWP recommends that Metro consider selecting Alternatives 1 or 3 with the MSF Option , as these alignments completely avoid five out of the seven affected LADWP facilities, and LADWP is optimistic that any remaining facility impacts can be discussed and mitigated through collaboration. If Metro chooses any of the other alignments, Metro will be impacting multiple LADWP facilities, and creating more difficult challenges and risks for this project. **Response**: Metro acknowledges the Memorandum of Understanding with LADWP showing commitment and cooperation between the two parties. The MOU will ensure that Project-related effects to LADWP properties are avoided and/or minimized. For example, Modified Alternative 5, selected by the Metro Board of Directors as the LPA, does not affect the LADWP Stone Canyon or Mid-Valley Water Facilities. Metro is committed to continued coordination, including design plans and utility requests.

Agency	Comments Related to the Draft PEL Study
General Public	
Brian Coleman	The comment expresses support for a "fluid" system extending to Santa Monica. **Response**: This comment is acknowledged by the project team.
P.A. Brown	The comment expresses support for the LPA and opposition to an IOS. The IOS opposition is due to the lengthening of the planning process (e.g., new MSF location) and added cost. **Response**: This comment is acknowledged by the project team.
Winston Li on behalf of the Undergraduate Students Association Council at the University of California, Los Angeles	The comment expresses: • Support for Modified Alternative 5. • Strong need for the UCLA station at UCLA Gateway Plaza and not at the intersection of Gayley Avenue and Strathmore Drive. • Developing mitigation measures to address construction effects related to vibration and traffic. • Clarification related to construction disruptions associated with the Westwood/UCLA station on the D Line. • Concern that a bus bridge would not provide sufficient capacity. • Request that Metro continue to emphasize that tunneling is safe under residential and commercial properties. • Explore methods to reduce costs and accelerate construction. **Response**: This comment is acknowledged by the project team. The future phases of the environmental process will continue to address methods to minimize construction effects, system capacity, costs, and schedule.

Source: HTA, 2026

CFR = Code of Federal Regulations
FAA = Federal Aviation Administration
IOS = Initial Operating Segment
MOU = Memorandum of Understanding
NAAQS = National Ambient Air Quality Standards
NHRP = National Register of Historic Places
PEL = Planning and Environmental Linkages
SCAQMD = South Coast Air Quality Management District

6 NEXT STEPS

6.1 Next Steps for the NEPA Process

6.1.1 Recommendation for NEPA Class of Action

It is anticipated that the NEPA Class of Action will be an Environmental Impact Statement (EIS). The determination is subject to decision by the FTA. The class of action for a project reflects the level of significance of the potential impacts. For example, NEPA requires an EIS for major federal actions that "significantly" affect the quality of the human and natural environment. The term "significantly" requires consideration of both the context and intensity of the action. Context means that the significance of an action (both long- and short-term) should be analyzed in several contexts relative to environmental conditions at an appropriate scale, such as society as a whole (human, national), the affected region, the affected interests, and/or the locality. Significance varies with the proposed action's setting. Intensity refers to the severity of impact. The FTA typically considers the following in evaluating the intensity of project impacts: unique characteristics of the project, such as its location in parklands, wetlands, or ecologically critical areas; difficulties in relocating displaced businesses or residences; the degree of controversy regarding environmental matters; the degree to which the action may adversely affect resources on or eligible for the National Register of Historic Places; the degree to which the action may adversely affect an endangered or threatened species or designated critical habitat; and whether the action may lead to a violation of a federal, state, or local environmental law or requirement. This demonstrates that the FTA considers projects on an individual basis when determining whether an EIS is the correct class of action.

6.1.2 Conditions Identified in 23 U.S.C. 168(d)

Metro intends to use the contents of the Planning and Environmental Linkages (PEL) Study to bridge the gap between the planning and state and federal environmental phases of the Project. The PEL Study streamlines the environmental and permitting phases of the Project, and reduces long-term project costs, time, and risk to the public. The PEL Study satisfies the following conditions listed in 23 U.S.C. 168(d), which allows the PEL Study to be used in the NEPA documentation:

1. The PEL Study was developed through a planning process conducted pursuant to applicable federal law.
2. The PEL Study was developed in consultation with appropriate federal and state resource agencies and Indian tribes.
3. The planning process included broad multi-disciplinary consideration of corridor-wide transportation needs and potential effects, including effects on the human and natural environment.
4. The planning process included public notice that the planning products produced in the planning process may be adopted during a subsequent environmental review process.
5. During the environmental review process, Metro:
    a. Made the planning documents available for public review and comment by members of the general public and federal, state, local, and tribal governments that may have an interest in the Project.
    b. Provided notice of the intention to adopt or incorporate by reference the planning product.

c. Considered any resulting comments.

6. There is no significant new information or new circumstance that has a reasonable likelihood of affecting the continued validity or appropriateness of the planning product.
7. The PEL Study has a rational basis and is based on reliable and reasonably current data and reasonable and scientifically acceptable methodologies.
8. The PEL Study is documented in sufficient detail to support the decision or the results of the analysis and to meet requirements for use of the information in the environmental review process.
9. The PEL Study is appropriate for adoption or incorporation by reference and use in the environmental review process for the Project and is incorporated in accordance with, and is sufficient to meet the requirements of, NEPA (42 U.S.C. 4321 et seq.) and section 1502.21 of title 40, Code of Federal Regulations (as in effect on the date of enactment of the FAST Act).
10. The PEL Study was approved within the 5-year period ending on the date on which the information is adopted or incorporated by reference.

6.2 Unresolved Issues and Recommendations

Coordination with federal and state agencies, including Caltrans, HUD, EPA, USACE, FAA, and the SHPO will be required when preparing the NEPA documentation. The coordination process is recommended to occur early in the NEPA process.

Refer to Section 4.3, Additional Data or Gaps to be Supplemented During the NEPA Process, Section 4.4, Outstanding Issues Related to Impact Assessments, and Section 0, Unresolved Issues, for additional unresolved issues related to community and environmental effects.

6.3 Next Steps

Metro anticipates that the FTA will initiate the NEPA process in 2026. The NEPA Class of Action is undetermined at this time in the planning process. The PEL Study will be cited in the NEPA documentation as the basis for the alternative identified for study. Metro, in cooperation with the FTA, will prepare the environmental document pursuant to the requirements of NEPA (42 U.S.C. 4321 et seq.), the Federal Public Transportation Law (49 U.S.C. Chapter 53), the CAA (42 U.S.C. 7401 et seq.), the CWA (33 U.S.C. 1250 et seq.), the National Historic Preservation Act (54 U.S.C. 306108 and 36 CFR 800), Section 4(f) requirements (49 U.S.C. 303 and 23 U.S.C. 138) and its implementing regulations in 23 CFR 774, the ESA of 1973 (16 U.S.C. 1531–1544), EO 11988 (Floodplain Management), and EO 11990 (Protection of Wetlands).

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Appendix A. Sepulveda Transit Corridor Project PEL Study Environmental Constraints Technical Report

SEPULVEDA TRANSIT CORRIDOR PROJECT

Contract No. AE67085000

Planning and Environmental Linkages Study
Environmental Constraints Technical Report

Task 5.01.01.04F

Prepared for:

Metro

Los Angeles County
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Table of Contents

ABBREVIATIONS AND ACRONYMS VII

1 INTRODUCTION 1-1

1.1 Project Background 1-1
1.2 Project Alternatives 1-2
1.3 Project Study Area 1-3
1.4 Purpose of this Report and Structure 1-3

2 ALTERNATIVES 2-1

2.1 No Build Alternative 2-1
2.2 Alternative 1: Monorail with Aerial Alignment in I-405 Corridor and Electric Bus Connection to UCLA 2-1
2.3 Alternative 3: Monorail with Aerial Alignment in I-405 Corridor and Underground Alignment between the Getty Center and Wilshire Boulevard 2-4
2.4 Alternative 4: Heavy Rail with Underground Alignment South of Ventura Boulevard and Aerial Alignment generally along Sepulveda Boulevard in the San Fernando Valley 2-6
2.5 Alternative 5: Heavy Rail with Underground Alignment, including along Sepulveda Boulevard in the San Fernando Valley 2-8
2.6 Alternative 6: Heavy Rail with Entirely Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley, and Southern Terminus Station on Bundy Drive 2-10
2.7 Modified Alternative 5: Heavy Rail with Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station 2-12

3 AFFECTED ENVIRONMENT 3-1

3.1 Traffic and Transportation 3-1
3.1.1 Vehicle Miles Traveled 3-1
3.1.2 Roadway Network 3-1
3.1.3 Transit Network 3-8
3.1.4 Active Transportation 3-13
3.2 Air Quality 3-14
3.2.1 Federal and State Air Quality Standards 3-15
3.2.2 Existing Pollutant Concentrations 3-16
3.2.3 Ambient Carcinogenic Risk 3-21
3.2.4 Sensitive Receptors 3-21
3.3 Communities and Neighborhoods 3-23
3.3.1 Communities 3-23
3.3.2 Demographics and Socioeconomic Characteristics 3-29
3.4 Cultural Resources 3-34
3.4.1 Built Environment 3-40

3.4.2 Archaeological and Tribal Cultural Resources 3-57
3.4.3 Human Remains 3-70
3.5 Ecosystems and Biological Resources 3-70
3.5.1 Wildlife 3-71
3.5.2 Vegetation 3-73
3.5.3 U.S. Fish and Wildlife Service Critical Habitat 3-75
3.5.4 Wildlife Corridors 3-76
3.6 Geotechnical Considerations 3-78
3.6.1 Seismicity 3-78
3.6.2 Liquefaction 3-80
3.7 Growth-Inducing Impacts 3-82
3.8 Hazardous Materials and Hazards 3-91
3.8.1 Hazardous Materials from Known Release Sites 3-91
3.8.2 Other Potential Hazardous Materials 3-104
3.8.3 Methane Hazard Zones 3-106
3.8.4 Proximity to Airports 3-112
3.9 Land Use 3-114
3.10 Noise and Vibration 3-122
3.10.1 Noise 3-122
3.10.2 Vibration 3-129
3.11 Parks and Recreational Facilities 3-130
3.12 Safety and Security 3-136
3.12.1 Fire Services 3-136
3.12.2 Police Services 3-137
3.12.3 Wildfire 3-141
3.13 Real Estate and Acquisitions 3-143
3.13.1 Typical Types of Property Acquisitions and Displacements 3-143
3.13.2 Full Acquisition 3-144
3.13.3 Partial Acquisition 3-144
3.13.4 Easement 3-144
3.14 Section 4(f) Effects 3-145
3.15 Visual Quality and Aesthetics 3-170
3.15.1 Visual Setting 3-170
3.15.2 Scenic Vistas 3-171
3.15.3 Scenic Resources 3-171
3.15.4 Light and Glare 3-173
3.16 Water Resources 3-173
3.16.1 Jurisdictional Resources 3-175

3.16.2 Water Quality 3-176
3.16.3 Drainage 3-176
3.16.4 Flooding 3-178
3.16.5 Groundwater 3-180
4 PREPARERS OF THE TECHNICAL REPORT 4-1
5 REFERENCES 5-1

Tables

Table 3-1. Existing Vehicle Miles Traveled Compared to 2045 Without Project Conditions 3-1
Table 3-2. Existing Major Arterials within the Project Study Area 3-2
Table 3-3. Existing Intersection Level of Service 3-5
Table 3-4. Existing Fixed-Route Transit Service within the Project Study Area 3-8
Table 3-5. Existing and Planned Bicycle Facility Miles within the Project Study Area 3-13
Table 3-6. Federal and California Ambient Air Quality Standards 3-15
Table 3-7. Attainment Status Designations – South Coast Air Basin Portion of Los Angeles County 3-16
Table 3-8. Reseda Air Monitoring Station Data (SRA 6) 3-19
Table 3-9. West Los Angeles - Veterans Administration Air Monitoring Station Data (SRA 2) 3-20
Table 3-10. Population by Community (2019) 3-30
Table 3-11. Households in the Project Study Area (2019) 3-31
Table 3-12. Housing Units in the Project Study Area (2019) 3-31
Table 3-13. Historical Resources in the Built Environment Resource Study Area 3-41
Table 3-14. SCCIC Previously Recorded Built Environment Resources in the Resource Study Area 3-56
Table 3-15. SCCIC Previously Recorded Archaeological Resources in the Resource Study Area 3-58
Table 3-16. Special-Status Wildlife Species Potential to Occur within the Project Study Area 3-71
Table 3-17. Total and Protected Trees within the Ground-Disturbance Areas 3-74
Table 3-18. Special-Status Plant Species with Potential to Occur within the Project Study Area 3-75
Table 3-19. Summary of Major Regional and Local Faults 3-79
Table 3-20. Priority Development Areas within the Project Study Area[a] 3-84
Table 3-21. Historic Population and Housing Growth within the Project Study Area 3-85
Table 3-22. Historic Employment Growth within the Project Study Area 3-86
Table 3-23. SCAG Forecasted Percentages of Population, Housing, and Employment Growth in Affected Communities within the Project Study Area 3-87
Table 3-24. Planned and On-Going Development in the Project Study Area 3-89
Table 3-25. EDR Database Search Results 3-91
Table 3-26. Land Use Distribution within the Project Study Area 3-114
Table 3-27. Station Area Land Use Analysis 3-115
Table 3-28. Summary of Existing 24-Hour Noise Measurements for Category 2 Land Uses 3-123

Table 3-29. Summary of Existing Short-Term (1-Hour) Noise Measurements for Category 3 Land Uses 3-128
Table 3-30. Parks and Recreational Facilities 3-130
Table 3-31. Parks and Recreational Facilities Within 0.5-Mile Radius of Stations 3-134
Table 3-32. Average Operational Response Time Per Station 3-137
Table 3-33. Los Angeles Police Department Response Time 3-140
Table 3-34. Typical Causes of Property Acquisition and Displacement 3-143
Table 3-35. Identified Historic Sites in the Built Environment Resource Study Areas 3-146
Table 3-36. Park and Recreation Facilities for the Section 4(f) Assessment 3-166
Table 3-37. Scenic Highways in the Project Study Area 3-172

Figures

Figure 1-1. Sepulveda Transit Corridor Project Study Area 1-4
Figure 2-1. Alternative 1: Alignment 2-3
Figure 2-2. Alternative 3: Alignment 2-5
Figure 2-3. Alternative 4: Alignment 2-7
Figure 2-4. Alternative 5: Alignment 2-9
Figure 2-5. Alternative 6: Alignment 2-11
Figure 2-6. Modified Alternative 5: Conceptual Alignment 2-13
Figure 3-1. Existing Freeway and Arterial Network in the Project Study Area 3-4
Figure 3-2. Existing and Planned Fixed Guideway Service in the Project Study Area 3-11
Figure 3-3. Existing Bus Service in the Project Study Area 3-12
Figure 3-4. Existing and Planned Bicycle Facilities in the Project Study Area 3-14
Figure 3-5. SCAQMD Source Receptor Areas in the Project Study Area 3-18
Figure 3-6. MATES V Estimated Cancer Risk in the Project Study Area 3-22
Figure 3-7. Communities within the Project Study Area 3-24
Figure 3-8. HUD-Assisted Properties 3-33
Figure 3-9. Alternative 1: Cultural Resources Resource Study Area Overview 3-35
Figure 3-10. Alternative 3: Cultural Resources Resource Study Area Overview 3-36
Figure 3-11. Alternative 4: Cultural Resources Resource Study Area Overview 3-37
Figure 3-12. Alternative 5: Cultural Resources Resource Study Area Overview 3-38
Figure 3-13. Alternative 6: Cultural Resources Resource Study Area Overview 3-39
Figure 3-14. Alternative 1: Archaeological Sensitivity 3-60
Figure 3-15. Alternative 1: Tribal Cultural Sensitivity 3-61
Figure 3-16. Alternative 3: Archaeological Sensitivity 3-62
Figure 3-17. Alternative 3: Tribal Cultural Sensitivity 3-63
Figure 3-18. Alternative 4: Archaeological Sensitivity 3-64
Figure 3-19. Alternative 4: Tribal Cultural Sensitivity 3-65

Figure 3-20. Alternative 5: Archaeological Sensitivity 3-66
Figure 3-21. Alternative 5: Tribal Cultural Sensitivity 3-67
Figure 3-22. Alternative 6: Archaeological Sensitivity 3-68
Figure 3-23. Alternative 6: Tribal Cultural Sensitivity 3-69
Figure 3-24. Liquefaction Zones in the Project Study Area 3-81
Figure 3-25. Priority Growth Areas in the Project Study Area 3-83
Figure 3-26. Alternative 1: Hazardous Material Sites Within 0.5 Miles (South) 3-94
Figure 3-27. Alternative 1: Hazardous Material Sites Within 0.5 Miles (North) 3-95
Figure 3-28. Alternative 3: Hazardous Material Sites Within 0.5 Miles (South) 3-96
Figure 3-29. Alternative 3: Hazardous Material Sites Within 0.5 Miles (North) 3-97
Figure 3-30. Alternative 4: Hazardous Material Sites Within 0.5 Miles (South) 3-98
Figure 3-31. Alternative 4: Hazardous Material Sites Within 0.5 Miles (North) 3-99
Figure 3-32. Alternative 5: Hazardous Material Sites Within 0.5 Miles (South) 3-100
Figure 3-33. Alternative 5: Hazardous Material Sites Within 0.5 Miles (North) 3-101
Figure 3-34. Alternative 6: Hazardous Material Sites Within 0.5 Miles (South) 3-102
Figure 3-35. Alternative 6: Hazardous Material Sites Within 0.5 Miles (North) 3-103
Figure 3-36. Alternative 1: Methane Hazard Zones 3-107
Figure 3-37. Alternative 3: Methane Hazard Zones 3-108
Figure 3-38. Alternative 4: Methane Hazard Zones 3-109
Figure 3-39. Alternative 5: Methane Hazard Zones 3-110
Figure 3-40. Alternative 6: Methane Hazard Zones 3-111
Figure 3-41. Airport Influence Area 3-113
Figure 3-42. Alternative 1: Existing Land Uses 3-117
Figure 3-43. Alternative 3: Existing Land Uses 3-118
Figure 3-44. Alternative 4: Existing Land Uses 3-119
Figure 3-45. Alternative 5: Existing Land Uses 3-120
Figure 3-46. Alternative 6: Existing Land Uses 3-121
Figure 3-47. Noise Monitoring Sites – Project Study Area - South 3-126
Figure 3-48. Noise Monitoring Sites – Project Study Area - North 3-127
Figure 3-49. Existing Fire and Police Station Locations in the Project Study Area 3-139
Figure 3-50. Wildfire Hazard Zones in the Project Study Area 3-142
Figure 3-51. Watersheds in the Project Study Area 3-174
Figure 3-52. Existing Stormwater Drainage Infrastructure 3-177
Figure 3-53. FEMA Flood Zones in the Project Study Area 3-179
Figure 3-54. Groundwater Basins Underlying the Project Study Area 3-181

Abbreviations and Acronyms

µg/m^3	micrograms per cubic meter
ALS	Advanced Life Support
AM	ante meridiem (before noon)
APTA	American Public Transportation Association
AVTA	Antelope Valley Transit Authority
BBB	Santa Monica Big Blue Bus
BEA	Bureau of Economic Analysis
Btu	British thermal units
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCB	Culver CityBus
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulation
CHP	California Highway Patrol
CO	carbon monoxide
CPA	community plan area
CR	California Register
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dBA	A-weighted decibel
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EDR	Environmental Data Resources Inc.
EIR	Environmental Impact Report
EMS	emergency medical services
EPA	U.S. Environmental Protection Agency
ESFV	East San Fernando Valley
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GDP	Gross Domestic Product
HRT	heavy rail transit

HTA	HTA Partners
HUD	U.S. Department of Housing and Urban Development
I-5	Interstate 5
I-10	Interstate 10
I-405	Interstate 405
IOS	Initial Operating Segment
kg	kilogram
LACFD	Los Angeles County Fire Department
LA County Planning	Los Angeles County Department of Regional Planning
LADOT	Los Angeles Department of Transportation
LADWP	City of Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHCM	Los Angeles Historic-Cultural Monument
LAPD	Los Angeles Police Department
LASD	Los Angeles County Sheriff's Department
LASRE	LA SkyRail Express
LBT	Long Beach Transit
LOS	level of service
LOSSAN	Los Angeles-San Diego-San Luis Obispo
LPA	Locally Preferred Alternative
LRT	light rail transit
LUST	leaking underground storage tank
MATES	Multiple Air Toxics Exposure Study
Metro	Los Angeles County Metropolitan Transportation Authority
mg/m^3	milligrams per cubic meter
MRCA	Mountains Recreation and Conservation Authority
MRT	monorail transit
MSF	maintenance and storage facility
MSPSP	Mulholland Scenic Parkway Specific Plan
MWD	Metropolitan Water District of Southern California
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NB	northbound
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset

NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
Non-EMS	non-emergency medical services
NOP	Notice of Preparation
NPS	National Park Service
NR	National Register
NRHP	National Register of Historic Places
O_3	ozone
Pb	lead
PC/VN DASH	Panorama City/Van Nuys DASH
PCB	polychlorinated biphenyl
PD	Police Department
PDA	priority development area
PEL	Planning and Environmental Linkages
PM	particulate matter
PM	post meridiem (after noon or midday)
PM_{10}	respirable particulate matter (particles with diameters less than 10 microns)
$PM_{2.5}$	fine particulate matter (particles with diameters less than 2.5 microns)
ppm	parts per million
PRC	Public Resource Code
Project	Sepulveda Transit Corridor Project
ROW	right-of-way
RSA	Resource Study Area
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCEDC	Southern California Earthquake Data Center
SCT	Santa Clarita Transit
SMMC	Santa Monica Mountains Conservancy
SO_2	sulfur dioxide
SPRR	Southern Pacific Railroad
SR	State Route
SRA	Source Receptor Area
STCP	Sepulveda Transit Corridor Partners
SWRCB	State Water Resources Control Board

TAZ	transportation analysis zone
TCE	temporary construction easement
TPSS	traction power substation
UCLA	University of California, Los Angeles
U.S.	United States
US-101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
VA	U.S. Department of Veterans Affairs
Valley	San Fernando Valley
VAPD	Veterans Affairs Police Department
VMT	vehicle miles traveled
VN/SC DASH	Van Nuys/Studio City DASH
VRM	vehicle revenue mile
WB	westbound
Westside	Westside of Los Angeles

1 INTRODUCTION

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 (Westside). 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.

The scope of the Planning and Environmental Linkages (PEL) Study is to bridge the gap between project planning and environmental phases of the corridor by compiling and integrating the current California Environmental Quality Act (CEQA) work into an anticipated subsequent National Environmental Policy Act (NEPA) process. The PEL statute refers to 23 U.S.C. 168, which outlines the integration of transportation planning and environmental review through the PEL process. 23 U.S.C.168 (c)(1) and (2) apply to planning decisions and planning analyses, including those listed in the statute. This statute allows for the use of planning products developed during transportation planning to inform and streamline the NEPA process. The PEL process helps agencies consider environmental and community goals early in transportation planning, using that information to inform and potentially expedite the subsequent NEPA review. The PEL Study identifies and supplements data needs to support the future NEPA process and engages federal agencies and other partners in a facilitated form to solicit comments on the Project. The planning products produced in this planning process may be adopted during a subsequent environmental review process completed for the Project.

This *Environmental Constraints Technical Report* supports the PEL Study process.

1.1 Project Background

The Sepulveda Corridor provides a crucial transportation link across the Santa Monica Mountains and through the Westside of the City of Los Angeles, connecting the heavy concentration of households in the Valley with major employment and activity centers on the Westside, including such major travel destinations as Westwood, the University of California, Los Angeles (UCLA), and Century City. The Sepulveda Corridor serves trips throughout western Los Angeles County and beyond. With increasing population, employment, and travel, congestion on Interstate 405 (I-405) and other Project Study Area roadways is likely to worsen and spread over longer periods of the day unless substantial new system capacity is added. As congestion gets worse, Valley residents will see their access to Westside travel destinations deteriorate.

The 2019 Sepulveda Transit Corridor Project Final Feasibility Report (Metro, 2019) (henceforth referred to as the 2019 Feasibility Report) 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 2019 Feasibility Report identified feasible transit solutions that met the Purpose and Need, goals, and objectives of the Project. The 2019 Feasibility Report 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 a Draft Environmental Impact Report (DEIR) pursuant to CEQA, for the Project that included six alternatives (Metro, 2021c). 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 I-405 corridor and an electric bus connection to 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

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, 2024). Detailed descriptions of the five remaining “build” alternatives are presented in Section 2.

The DEIR, which evaluated the five remaining alternatives, was released on June 2, 2025 for a 90-day public review and comment period (Metro, 2025). In January 2026, the Metro Board of Directors selected a Modified Alternative 5 as the Locally Preferred Alternative (LPA). Modified Alternative 5 is heavy rail with an underground alignment along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station. The LPA is the alternative determined to best meet the Project’s goals, objectives, and community needs based on technical analysis and public input. Identifying an LPA does not constitute project approval. Hence, all alternatives are assessed in the PEL Study.

In addition, Metro is studying phase implementation inclusive of an Initial Operating Segment (IOS), for the Project with priority given to connecting the San Fernando Valley at the Metro G Line to the Westside at the Metro D Line. This IOS would be an incremental investment so that benefits can be married with identified funds, thereby allowing the majority of the Project’s mobility benefits to be realized sooner. The IOS has not yet been fully defined by Metro, including the maintenance and storage facility (MSF) location. The IOS will be studied in an upcoming further NEPA and CEQA analyses.

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

The purpose of this study is to present a high-level assessment of the affected environment that may impact the design or selection of the Locally Preferred Alternative. Environmental constraints are scenic, aesthetic, historic, community, and environmental resources that affect the development of a transportation project. The assessment addresses NEPA resources that either overlap with CEQA resources (e.g., air quality) or are specific to federal environmental documents (e.g., Section 4(f)). The environmental constraints herein are based on environmental studies prepared to support CEQA. The introductions provided for each topic cite the specific supporting study that was used to obtain baseline conditions that were used to identify environmental constraints. Analyzing baseline conditions during the planning phase supports the early identification of environmental constraints during the planning phase before they become major obstacles in later stages.

The report is organized according to the following sections:

- Section 1 Introduction
- Section 2 Alternatives
- Section 3 Affected Environment
- Section 4 Preparers of the Technical Report
- Section 5 References

Figure 1-1. Sepulveda Transit Corridor Project Study Area



Source: HTA, 2024

2 ALTERNATIVES

The Project would construct a fixed guideway public transportation line across the Santa Monica Mountains in the vicinity of the Sepulveda Pass. Metro staff is initiating environmental review of five project alternatives informed by both the *Sepulveda Transit Corridor Final Feasibility Report* and concepts developed by Pre-Development Agreement contractors. All of the project alternatives described in this section would have a northern terminus station near the Van Nuys Metrolink/Amtrak Station and a southern terminus station near the Metro E Line and include stations that provide connections to the Metro E, Metro D, and Metro G Lines, the East San Fernando Valley (ESFV) Light Rail Transit (LRT) Line, and the Metrolink Ventura County Line. The environmental documentation will also include consideration of a "No Build" Alternative that does not include the construction of a fixed guideway line.

2.1 No Build Alternative

The No Build Alternative would not construct any fixed guideway transit line between the Van Nuys Metrolink/Amtrak Station and the Metro E Line. This includes improving service on Metro Line 761, which is the primary transit option through the Sepulveda Pass. Metro Line 761 would operate between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station, rather than its current northern terminus at the Sylmar Metrolink Station, in coordination with the opening of the ESFV LRT Line.

2.2 Alternative 1: Monorail with Aerial Alignment in I-405 Corridor and Electric Bus Connection to UCLA

Alternative 1 is an entirely aerial monorail alignment that would run along the I-405 corridor and would include eight aerial monorail transit (MRT) stations and a new electric bus route from the Metro D Line Westwood/VA Hospital Station to the 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 ESFV LRT 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:

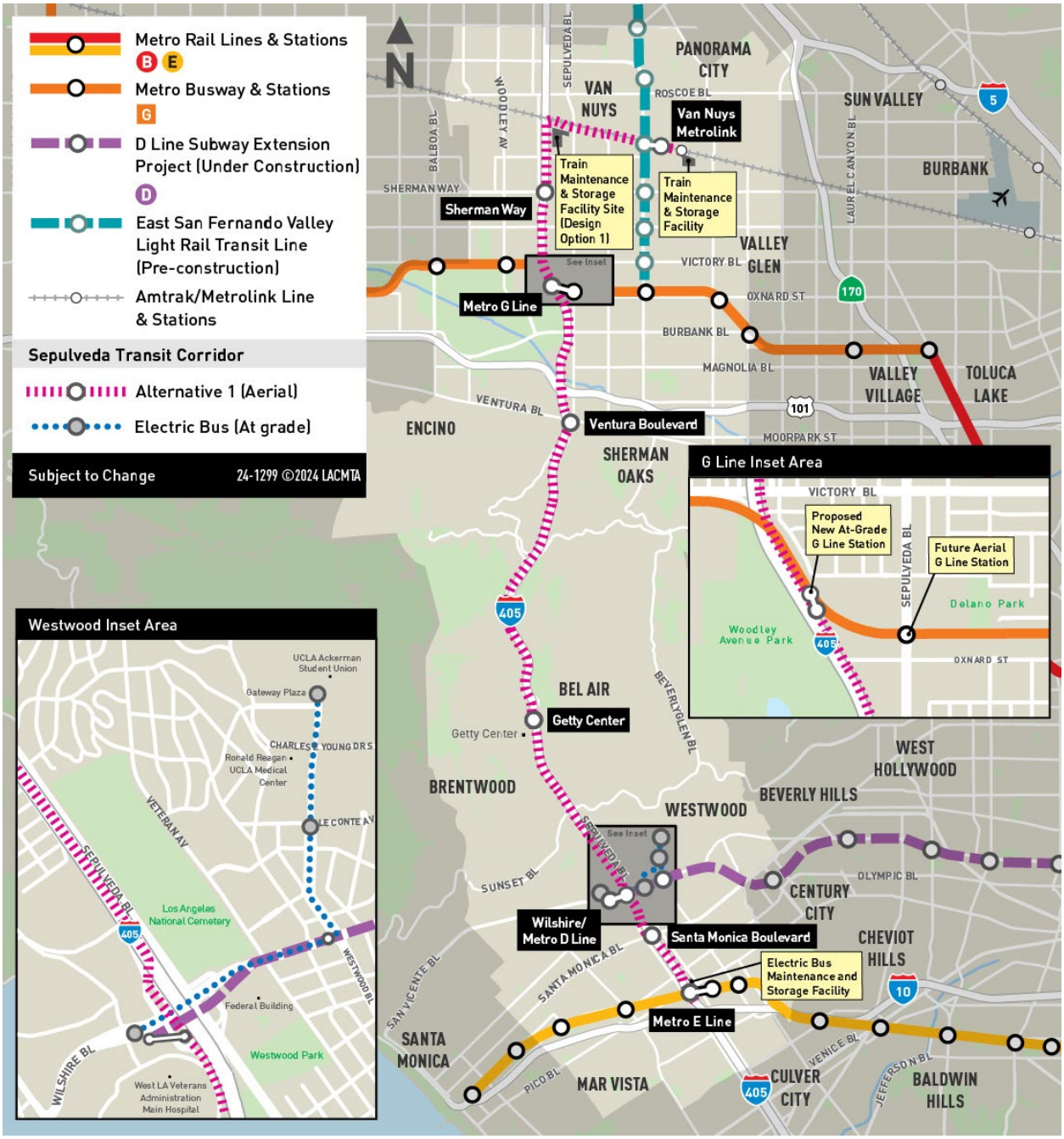
1. Metro E Line Expo/Sepulveda Station (aerial)
2. Santa Monica Boulevard Station (aerial)
3. Wilshire Boulevard/Metro D Line Station (aerial)
    a. Wilshire Boulevard/VA Medical Center bus stop
    b. Westwood Village bus stop
    c. UCLA Gateway Plaza bus stop
4. Getty Center Station (aerial)
5. Ventura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

In the 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 site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. In the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor. The MSF site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. 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.

Under the MSF Base Design for Alternative 1, the MSF would be located on LADWP property east of the Van Nuys Metrolink Station. This MSF site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. Under the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the LOSSAN rail corridor. The MSF site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. 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.

Figure 2-1 shows the Alternative 1 alignment, stations, and the potential locations for the MSF.

Figure 2-1. Alternative 1: Alignment



Source: LASRE, 2024; HTA, 2024

2.3 Alternative 3: Monorail with Aerial Alignment in I-405 Corridor and Underground Alignment between the Getty Center and Wilshire Boulevard

Alternative 3 is an aerial monorail alignment that would run along the I-405 corridor and would include seven aerial 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 Metro E, Metro D, and Metro G Lines, the ESFV LRT 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.

Alternative 3 includes a tunnel alignment to provide a direct connection to the UCLA campus. The alignment would enter an underground tunnel south of the Federal Building parking lot, proceed to an underground UCLA Gateway Plaza Station, and then continue north under the UCLA campus until Sunset Boulevard, where the tunnel would curve northwest for approximately 2 miles to rejoin the I-405 corridor.

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)

The MSF Base Design and MSF Design Option 1 for Alternative 3 are identical to Alternative 1. The MSF would be located on LADWP property east of the Van Nuys Metrolink Station. The MSF site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. 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 site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles.

Figure 2-2 shows the Alternative 3 alignment, stations, and MSF.

Figure 2-2. Alternative 3: Alignment



Source: LASRE, 2024; HTA, 2024

2.4 Alternative 4: Heavy Rail with Underground Alignment South of Ventura Boulevard and Aerial Alignment generally along Sepulveda Boulevard in the San Fernando Valley

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. 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 and the Santa Monica Mountains to a tunnel portal south of Ventura Boulevard in the Valley. 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. 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 United States (U.S.) Highway 101 (US-101) and the Los Angeles River before continuing to the Metro G Line Sepulveda Station, immediately south of the Metro G Line Busway.

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 ESFV LRT 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)

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.

Figure 2-3 shows the Alternative 4 alignment, stations, and MSF.

Figure 2-3. Alternative 4: Alignment



Source: STCP, 2024; HTA, 2024

2.5 Alternative 5: Heavy Rail with Underground Alignment, including along Sepulveda Boulevard in the San Fernando Valley

Alternative 5 consists of an HRT system with a primarily underground guideway track configuration, including seven underground stations and one aerial station. Alternative 5 follows the same horizontal alignment as Alternative 4 but with different vertical profiles and station configurations in the Valley. This alternative would include five transfers to high-frequency fixed guideway transit and commuter rail lines, including the Metro E, Metro D, and Metro G Lines, ESFV LRT 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 miles 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)

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 136 rail cars and would be bounded by single-family residences to the south, the Metrolink right-of-way (ROW) to the north, Woodman Avenue on the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west.

Figure 2-4 shows the Alternative 5 alignment, stations, and MSF.

Figure 2-4. Alternative 5: Alignment



Source: STCP, 2024; HTA, 2024

2.6 Alternative 6: Heavy Rail with Entirely Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley, and Southern Terminus Station on Bundy Drive

Alternative 6 is an 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 Metro E, Metro D, and Metro G Lines, the ESFV LRT Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.9 miles. Alternative 6 would be designed consistent with the typical HRT technology seen throughout the current Metro transit system.

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)

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 Metrolink ROW to the north, Woodman Avenue to the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west.

Figure 2-5 shows the Alternative 6 alignment, stations, and MSF.

Figure 2-5. Alternative 6: Alignment



Source: HTA, 2024

2.7 Modified Alternative 5: Heavy Rail with Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station

Modified Alternative 5 is an entirely underground HRT alignment that incorporates key elements of Alternative 5, including automated vehicles in a single-bore tunnel and a terminus at the E Line Expo/Sepulveda Station. On the Westside, the alignment would be identical to Alternative 5 and provide connections to the Metro E and Metro D Lines. In the Valley, the alignment would follow a similar path as Alternative 6 to continue underneath Van Nuys Boulevard instead of Sepulveda Boulevard, providing connections to the Metro G Line, ESFV LRT Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.2 miles, which may be developed in phases.

The seven underground 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/Van Nuys Boulevard Station (underground)
6. Metro G Line Van Nuys Station (underground)
7. Van Nuys Metrolink Station (underground)

Error! Not a valid bookmark self-reference. shows the conceptual alignment and station locations for Modified Alternative 5. An MSF location has not yet been identified for this alternative.

Figure 2-6. Modified Alternative 5: Conceptual Alignment



Source: HTA, 2026

3 AFFECTED ENVIRONMENT

The following analysis summarizes the affected environment associated with the project alternatives for topics pertinent to NEPA.

3.1 Traffic and Transportation

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Transportation Technical Report* (Metro, 2025a). The summary addresses regional vehicle miles traveled (VMT), roadway network, transit network, and the active transportation network. The affected environment related to traffic and transportation does not significantly change between the project alternatives.

3.1.1 Vehicle Miles Traveled

VMT forecasts were extracted from Metro's Transportation Analysis Model 2018 (CBM18B). The model represents the six-county Southern California Association of Governments (SCAG) region (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial Counties), which was used as the basis for the evaluation of VMT. CBM18B uses demographic data and projections, and assumptions regarding regional socioeconomic and transportation network characteristics to develop trip estimates occurring between different locations in the region, the market share of each transportation mode, and the routing of these trips over the highway and transit networks. To calculate the VMT, the length of each roadway segment in the Project Study Area was multiplied by the forecast daily volume on that segment. VMT reduction for each project alternative was calculated by multiplying the number of trips for each project alternative by the length of each trip. Table 3-1 lists the regional VMT under existing conditions for the base year and forecast horizon year. Ambient population and employment growth would occur in the Project Study Area between the base year and horizon year.

Table 3-1. Existing Vehicle Miles Traveled Compared to 2045 Without Project Conditions

Scenario	Total Vehicle Miles Traveled
Existing Conditions (2019 Base Year)	456,869,300
2045 Without Project Conditions	568,557,200

Source: HTA, 2024

3.1.2 Roadway Network

The roadway network within the Project Study Area includes a wide range of facilities, including three freeways that provide regional access throughout Los Angeles County and Southern California, as well as multiple arterials, local roads, and intersections.

The freeways within the Project Study Area include:

- **I-405 (San Diego Freeway):** I-405 is the major north-south freeway traversing the Project Study Area in its entirety between Sylmar in the northern Valley and Irvine in Orange County. This freeway provides regional access between San Fernando and Irvine. Within the Project Study Area, the I-405 provides five to seven lanes in each direction, including carpool lanes and auxiliary lanes. The direction of peak traffic demand varies over the course of the day, with the greatest travel occurring from the Valley to the Westside during the morning commute period and the reverse pattern during the evening commute period. Ramps within the Project Study Area include National Boulevard, Olympic and Pico Boulevards, Santa Monica Boulevard, Wilshire Boulevard, Sunset Boulevard,

Moraga Drive, Getty Center Drive (via Sepulveda Boulevard), Skirball Center Drive, Ventura Boulevard, Burbank Boulevard, Victory Boulevard, Sherman Way, and Roscoe Boulevard on- and off-ramps. I-405 connects with US-101 and Interstate 10 (I-10) within the Project Study Area to provide regional east-west connectivity. On an average weekday, I-405 carries 353,000 vehicles on the Westside, 301,000 in the Sepulveda Pass, and 209,000 in the Valley (Caltrans, 2022a).

- **I-10 (Santa Monica Freeway):** I-10 is an east-west freeway that crosses the southern end of the Project Study Area for 3.5 miles. Within the Project Study Area, I-10 consists of four general-purpose lanes in each direction with no high-occupancy vehicle lanes. I-10 connects to State Route (SR) 1 in the City of Santa Monica, I-405 in West Los Angeles, and I-110/SR-110, US-101, and Interstate 5 (I-5) near downtown Los Angeles. On an average weekday, I-10 carries 215,000 vehicles through the Project Study Area (Caltrans, 2022a).
- **US-101 (Ventura Freeway):** US-101 is an east-west freeway that crosses the northern end of the Project Study Area for 5 miles. Within the Project Study Area, US-101 has five general purpose lanes in each direction, with auxiliary lanes near the I-405 interchange. It does not have high-occupancy vehicle lanes within the Project Study Area. Ramps within the Project Study Area include the Woodman Avenue, Van Nuys Boulevard, Sepulveda Boulevard, Haskell Avenue, Hayvenhurst Avenue, and Balboa Boulevard on- and off-ramps, and the White Oak Avenue off-ramp. US-101 connects with SR-134 and SR-170 in the Valley and I-10, SR-110, and I-5 near downtown Los Angeles. On an average weekday, US-101 carries 323,000 vehicles through the Project Study Area (Caltrans, 2022a).

The major roadways in the Project Study Area are shown on Figure 3-1 and their classifications as defined by the City of Los Angeles are listed in Table 3-2. Classifications are based on roadway and ROW widths and include the following types in the Project Study Area:

- Boulevard II facilities have roadway widths of 80 feet and total ROW widths of 110 feet.
- Avenue I facilities have roadway widths of 70 feet and total ROW widths of 100 feet.
- Avenue II facilities have roadway widths of 56 feet and total ROW widths of 86 feet.
- Collector streets have roadway widths of 40 feet and total ROW widths of 66 feet.
- Local streets have roadway widths between 30 and 36 feet and total ROW widths between 50 and 60 feet.

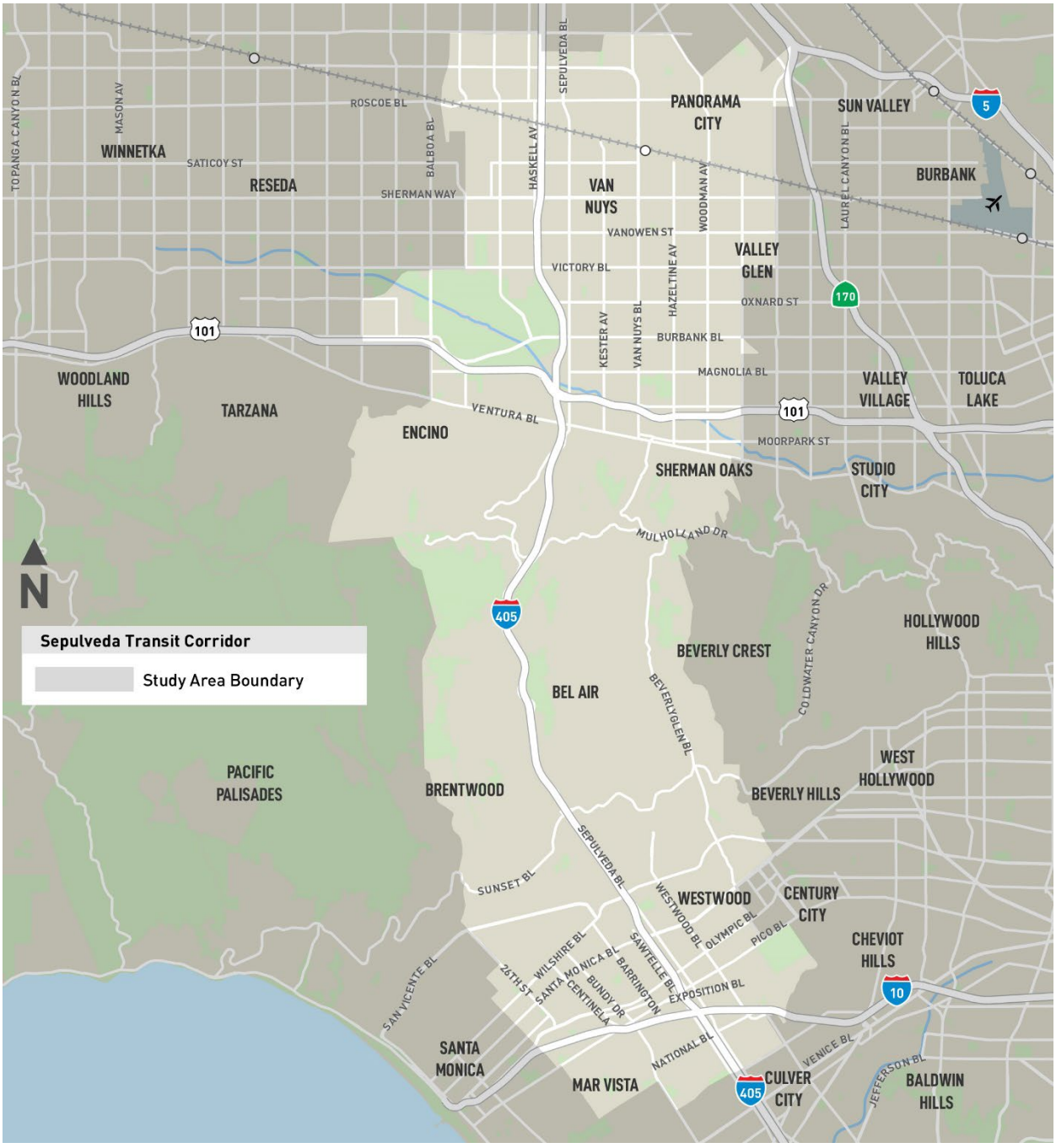
Table 3-2. Existing Major Arterials within the Project Study Area

Name	Mobility Plan 2035 Classification
Major North/South Arterials (listed from west to east)	
Centinela Avenue	Avenue I
Bundy Drive	Avenue I
Barrington Avenue	Avenue I (south of Pico Boulevard) Avenue II (north of Pico Boulevard)
Haskell Avenue	Avenue II
Sawtelle Boulevard	Avenue I
Sepulveda Boulevard	Boulevard II
Kester Avenue	Avenue II
Van Nuys Boulevard	Boulevard II
Westwood Boulevard	Avenue II (south of Wilshire Boulevard) Boulevard II (north of Wilshire Boulevard) Avenue I (between Le Conte Avenue and Wilshire Boulevard)

Name	Mobility Plan 2035 Classification
Beverly Glen Boulevard	Avenue I (south of Wilshire Boulevard) Avenue II (between Sunset Boulevard and Wilshire Boulevard, and between Ventura Boulevard and Mulholland Drive)
Hazeltine Avenue	Avenue II
Woodman Avenue	Avenue I
Major East/West Arterials (listed from south to north)	
National Boulevard	Avenue I
Exposition Boulevard	Collector Street (east of Sepulveda Boulevard), Local/Other Street (west of I-405)
Pico Boulevard	Avenue I
Olympic Boulevard	Boulevard II
Santa Monica Boulevard	Boulevard II
Wilshire Boulevard	Boulevard II
San Vicente Boulevard	Avenue II
Sunset Boulevard	Avenue I
Mulholland Drive	Local/Other Street
Ventura Boulevard	Boulevard II
Magnolia Boulevard	Avenue II
Burbank Boulevard	Boulevard II
Oxnard Street	Avenue II
Victory Boulevard	Boulevard II
Vanowen Street	Avenue II
Sherman Way	Boulevard II
Saticoy Street	Avenue II
Roscoe Boulevard	Boulevard II

Source: DCP, 2016; HTA, 2024

Figure 3-1. Existing Freeway and Arterial Network in the Project Study Area



Source: HTA, 2024

A level of service (LOS) analysis was conducted to evaluate existing traffic conditions in the Project Study Area. The results of the intersection LOS analysis are summarized in Table 3-3.

Table 3-3. Existing Intersection Level of Service

Intersection	Traffic Control	AM Peak LOS[a]	PM Peak LOS[a]
Sepulveda Boulevard/Raymer Street	Signal	A	C
Sepulveda Boulevard/Stagg Street	Signal	A	B
Sepulveda Boulevard/Covello Street	TWSC	**E**	**F**
Van Nuys Boulevard/Arminta Street	Signal	C	C
Van Nuys Boulevard/Keswick Street	Signal	A	B
Van Nuys Boulevard/Saticoy Street	Signal	D	D
Van Nuys Boulevard/Covello Street	Signal	C	D
Van Nuys Boulevard/Valerio Street	Signal	B	B
Hazeltine Avenue/Covello Street	TWSC	A	A
Woodman Avenue/Saticoy Street	Signal[b]	**E**	**E**
Woodman Avenue/Woodman Place	Signal	A	A
Haskell Avenue/I-405 SB Ramps (north of Sherman Way)	Signal	**F**	**F**
Haskell Avenue/Sherman Way	Signal	**E**	D
I-405 NB Off-Ramp/Sherman Way	TWSC[b]	C	C
I-405 NB Ramps/Sherman Way	Signal[b]	C	B
Orion Avenue/Sherman Way	TWSC	**F**	**F**
Sepulveda Boulevard/Sherman Way	Signal	**F**	**E**
Van Nuys Boulevard/Sherman Way	Signal	D	D
Sepulveda Boulevard/Gault Street	TWSC	**F**	**F**
Sepulveda Boulevard/Vose Street	Signal	C	B
Sepulveda Boulevard/Bassett Street	TWSC	D	**F**
Sepulveda Boulevard/Vanowen Street	Signal	D	D
Sepulveda Boulevard/Kittridge Street	TWSC	D	**F**
Haskell Avenue/I-405 SB Ramps (north of Victory Boulevard)	Signal	C	C
Haskell Avenue/Victory Boulevard	Signal	C	D
Sepulveda Boulevard/Victory Boulevard	Signal	D	D
Sepulveda Boulevard/Erwin Street	Signal	B	C
Sepulveda Boulevard/G Line Busway	Signal[b]	A	A
Sepulveda Boulevard/Oxnard Street	Signal	C	D
Van Nuys Boulevard/Victory Boulevard	Signal	D	D
Van Nuys Boulevard/Friar Street	Signal	A	A
Van Nuys Boulevard/Sylvan Street	Signal	A	A
Van Nuys Boulevard/Erwin Street	Signal[b]	A	A
Van Nuys Boulevard/Delano Street	Signal	A	A
Van Nuys Boulevard/Calvert Street	Signal	A	A
Van Nuys Boulevard/G Line Busway	Signal[b]	A	A
Van Nuys Boulevard/Aetna Street	Signal[b]	A	A
Van Nuys Boulevard/Oxnard Street	Signal	B	C
Van Nuys Boulevard/Tiara Street	TWSC	C	D
Van Nuys Boulevard/Califa Street	TWSC	**F**	**F**
Van Nuys Boulevard /Hatteras Street	Signal	A	A
Sepulveda Boulevard/Hatteras Street	Signal	A	A
Sepulveda Boulevard/Burbank Boulevard	Signal	**E**	**E**
Van Nuys Boulevard/Burbank Boulevard	Signal	D	D

Intersection	Traffic Control	AM Peak LOS[a]	PM Peak LOS[a]
Sepulveda Boulevard/Valleyheart Drive (south)	TWSC	B	**E**
Sepulveda Boulevard/La Maida Street	TWSC	C	**E**
I-405 SB Ramps-Sherman Oaks Avenue/Ventura Boulevard	Signal	D	D
Galleria Lane/Ventura Boulevard	Signal[b]	A	A
Sepulveda Boulevard/Moorpark Street	TWSC[c]	B	B
Sepulveda Boulevard/Ventura Boulevard	Signal	D	D
Sepulveda Boulevard/Dickens Street	Signal[b]	B	C
Saugus Avenue/Greenleaf Street	AWSC	B	B
Sepulveda Boulevard/I-405 NB Ramps-Greenleaf Street	Signal[b]	**F**	D
Sepulveda Boulevard/I-405 SB On-Ramp	Signal[b]	B	B
Van Nuys Boulevard/US-101 NB Ramps	Signal	C	B
Van Nuys Boulevard/US-101 SB Ramps	Signal	C	**E**
Van Nuys Boulevard/Hortense Street	Signal[b]	A	A
Van Nuys Boulevard/Milbank Street	Signal[b]	A	A
Van Nuys Boulevard/Moorpark Street	Signal	B	B
Cedros Avenue (east)/Ventura Boulevard	Signal[b]	C	B
Van Nuys Boulevard/Ventura Boulevard	Signal	C	**E**
Tyrone Avenue-Beverly Glen Boulevard/Ventura Boulevard	Signal	B	C
Sepulveda Boulevard/I-405 SB Off-Ramp	Signal[b]	C	B
Sepulveda Boulevard/I-405 NB On-ramp	Signal	A	A
Sepulveda Boulevard/I-405 NB Off-Ramp	Signal	A	B
Sepulveda Boulevard/Getty Center Drive	Signal	A	B
Church Lane/I-405 SB Ramps (Loop On-Ramp)	Signal[b]	B	C
Church Lane/Sunset Boulevard	Signal[b]	D	D
I-405 NB Ramps-Sepulveda Way/Sunset Boulevard	Signalc	D	A
Westwood Plaza/Strathmore Place	Signal[b]	B	B
Bonsall Avenue/Wilshire Boulevard WB Ramps	AWSC	B	B
Bonsall Avenue/Wilshire Boulevard EB Ramps	AWSC	B	B
Sepulveda Boulevard/Wilshire Boulevard	Signal	**E**	**E**
Veteran Avenue/Kinross Avenue	Signal[b]	B	B
Veteran Avenue/Wilshire Boulevard	Signal	**E**	**F**
Veteran Avenue/Ashton Avenue	TWSC	C	D
Gayley Avenue/Kinross Avenue	Signal	B	B
Gayley Avenue/Lindbrook Drive	Signal	B	B
Midvale-Gayley Avenue/Wilshire Boulevard	Signal	C	D
Barrington Avenue/Santa Monica Boulevard	Signal	B	B
Barry Avenue/Santa Monica Boulevard	TWSC	**E**	**F**
Federal Avenue/Santa Monica Boulevard	Signal	B	B
Colby Avenue/Santa Monica Boulevard	Signal	A	A
Butler Avenue/Santa Monica Boulevard	Signal	A	B
Sawtelle Boulevard/Santa Monica Boulevard	Signal	B	C
I-405 SB Ramps-Beloit Avenue/Santa Monica Boulevard	Signal[b]	C	D
I-405 NB Ramps-Cotner Avenue/Santa Monica Boulevard	Signal[b]	C	D
Sepulveda Boulevard/Santa Monica Boulevard	Signal	D	D
Bentley Avenue/Santa Monica Boulevard	TWSC	B	B
Bundy Drive/Olympic Boulevard	Signal	D	D
Bundy Drive/Exposition Boulevard	Signal	A	B
Bundy Drive/Pico Boulevard	Signal	D	**E**

Intersection	Traffic Control	AM Peak LOS[a]	PM Peak LOS[a]
Sawtelle Boulevard/Pico Boulevard	Signal	D	**E**
Sawtelle Boulevard/Exposition Boulevard	Signal	B	C
Cotner Avenue/Pico Boulevard	Signal	B	C
Sepulveda Boulevard/Pico Boulevard	Signal	D	D
Sepulveda Boulevard/Exposition Boulevard	Signal	B	B

Source: HTA, 2024

BOLD indicates LOS E or F

[a.] LOS A means excellent operations (All approaches to the intersection appear quite open, turning movements are easy and nearly all drivers find freedom of operation.). LOS B means very good operations (Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.). LOS C means good operations (Occasionally backups may develop behind turning vehicles. Most drivers feel somewhat restricted.). LOS D means fair operations (There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.). LOS F means poor operations. (Some long-standing vehicular queues develop on critical approaches.).

[b.] Highway Capacity Manual 2000 methodology was reported as a result of the following intersection conditions: non-National Electrical Manufacturers Association phasing, clustered intersections, the intersection having more than four approaches, or more than one exclusive lane on turning movements.

[c.] The intersection was analyzed as three eastbound through lanes because the Highway Capacity Manual 6th Edition methodology does not support more than three through lanes on the major street approach, and the Highway Capacity Manual 2000 methodology does not support intersections with too many lanes per leg.

AWSC = all-way stop control
EB = eastbound
LOS = level of service
NB = northbound
SB = southbound
TWSC = two-way stop control
WB = westbound

As listed in Table 3-3, most analyzed intersections are operating at LOS D or better, except the following 21 intersections:

- Sepulveda Boulevard/Covello Street – AM and PM peak hours
- Woodman Avenue/Saticoy Street – AM and PM peak hours
- Haskell Avenue/I-405 southbound (SB) Ramps (north of Sherman Way) – AM and PM peak hours
- Haskell Avenue/Sherman Way – AM peak hour
- Orion Avenue/Sherman Way – AM and PM peak hours
- Sepulveda Boulevard/Sherman Way – AM and PM peak hours
- Sepulveda Boulevard/Gault Street – AM and PM peak hours
- Sepulveda Boulevard/Bassett Street – PM peak hour
- Sepulveda Boulevard/Kittridge Street – PM peak hour
- Van Nuys Boulevard/Califa Street – AM and PM peak hours
- Sepulveda Boulevard/Burbank Boulevard – AM and PM peak hours
- Sepulveda Boulevard/Valleyheart Drive (south) – PM peak hour
- Sepulveda Boulevard/La Maida Street – PM peak hour
- Sepulveda Boulevard/ I-405 northbound (NB) Ramps-Greenleaf Street – AM peak hour

- Van Nuys Boulevard/US-101 SB Ramps – PM peak hour
- Van Nuys Boulevard/Ventura Boulevard – PM peak hour
- Sepulveda Boulevard/Wilshire Boulevard – AM and PM peak hours
- Veteran Avenue/Wilshire Boulevard – AM and PM peak hours
- Barry Avenue/Santa Monica Boulevard – AM and PM peak hours
- Bundy Drive/Pico Boulevard – PM peak hour
- Sawtelle Boulevard/Pico Boulevard – PM peak hour

3.1.3 Transit Network

The Project Study Area is served by several local and regional transit agencies, including Metro, Los Angeles Department of Transportation (LADOT), Metrolink commuter rail, Amtrak intercity rail, Santa Monica Big Blue Bus (BBB), Culver CityBus (CCB), Santa Clarita Transit (SCT), Antelope Valley Transit Authority (AVTA), and UCLA BruinBus. Transit service types within the Project Study Area include rapid bus, express/commuter bus, commuter rail, intercity rail, light rail transit, bus rapid transit, shuttles and circulators, and local bus lines. In addition, nine Metro bus routes operate 24 hours and offer half-hour or hour headways during owl service hours (12:00am to 4:00am). Public transit lines that serve the Project Study Area are summarized in Table 3-4. Existing and planned fixed guideway service within the Project Study Area is shown on Figure 3-2. Figure 3-3 shows existing bus services — including Metro, municipal, and local operators — that provide service to the Project Study Area.

Table 3-4. Existing Fixed-Route Transit Service within the Project Study Area

Operator	Route	Span of Service	Weekday Headways (in minutes)	
			Peak	Off-Peak
Rail				
Metro	E	3:43am – 12:46am	10	12
Metrolink	Ventura County	5:02am – 8:15pm	30 (in peak direction)	4 off-peak trains
Amtrak	Pacific Surfliner	7:47am – 9:09pm	Five daily trains in each direction	
Amtrak	Coast Starlight	NA	One daily train in each direction	
BRT				
Metro	901 (G Line)	24 hours (hourly owl service)	6	10
Rapid Bus				
BBB	Rapid 7	6:05am – 8:09pm	20	20
BBB	Rapid 12	5:30am – 10:00pm	10-12	12
CCB	6R	6:28am – 7:56pm	15	15
Metro	720	5:00am – 1:00am	8	11
Metro	761	3:57am – 11:13pm	15	15
Local Bus				
BBB	1	5:20am – 10:20pm	10-12	10-12
BBB	2	6:50am – 10:42pm	20	20
BBB	5	7:20am – 7:00pm	30	30
BBB	Local 7	4:50am – 11:58pm	15	15
BBB	Express 7	6:05am – 8:09pm	20	20
BBB	8	6:30am – 10:34pm	25-27	25-27
BBB	14	5:15am – 8:20pm	12-15	12-15
BBB	15	6:45am – 7:00pm	20	20
BBB	16	6:20am – 7:04pm	25	30
BBB	17	5:45am – 8:00pm	15	20
BBB	18	6:45am – 8:30pm	30	30

Operator	Route	Span of Service	Weekday Headways (in minutes)	
			Peak	Off-Peak
BBB	43	6:25am – 5:50pm	30	NA
CCB	3	6:00am – 9:45pm	20-30	30-40
CCB	6	5:00am – 12:07am	15-20	15-20
Metro	2	24 Hours (Hourly owl service)	7.5	10
Metro	4	24 hours (Half-hourly owl service)	7.5	7.5
Metro	20	24 Hours (Half-hourly owl service)	10-15	12
Metro	150	24 Hours (Hourly owl service)	20	20
Metro	152	3:41am – 1:46am	15	15
Metro	154	5:11am – 8:25pm	60	60
Metro	155	4:18am – 9:29pm	60	60
Metro	158	5:20am – 9:02pm	60	60
Metro	162	24 Hours (Hourly owl service)	15	15
Metro	164	4:41am – 10:54pm	15	15
Metro	165	4:29am – 11:35pm	15	15
Metro	166	4:36am – 10:34pm	15	15
Metro	167	4:36am – 10:44pm	50-60	50
Metro	169	4:53am – 7:46pm	60	60
Metro	233	24 Hours (Hourly owl service)	10	10
Metro	234	24 Hours (Hourly owl service)	10	10
Metro	236	4:55am – 10:25pm	60	60
Metro	237	5:09am – 10:17pm	60	60
Metro	240	24 hours (Half-hourly owl service)	10	10
Metro	602	5:31am – 1:23am	45	45
Express/Commuter Bus				
AVTA	786	4:00am – 5:20am, 2:50pm – 4:05pm	4 one-way trips	NA
BBB	R10	6:00am – 8:04am, 3:35pm – 6:05pm	3 one-way trips	NA
LADOT	422	4:55am – 8:00am, 1:55pm – 6:00pm	12 one-way trips	NA
LADOT	423	5:00am – 6:45am, 3:30pm – 6:35pm	9 AM one-way trips, 10 PM one-way trips	NA
LADOT	431	6:15am – 7:35am, 4:25pm – 5:55pm	4 one-way trips	NA
LADOT	534	6:50am – 8:10am, 3:43pm – 5:13pm	4 one-way trips	NA
LADOT	549	5:55am – 7:45am, 3:45pm – 6:05pm	5 AM one-way trips in both directions, 5 PM one-way trips in both directions	NA
LADOT	573	5:30am – 9:30am, 2:10pm – 6:45pm	15 AM southbound trips, 1 AM northbound trip, 14 PM northbound trips, 1 PM southbound trip	NA
LADOT	574	5:20am – 7:10am, 3:35pm – 6:00pm	5 one-way trips	NA
LBT	405	5:17am – 6:50am, 3:30pm – 5:30pm	3 one-way trips	NA
SCT	792	6:50am – 7:47am, 2:59pm – 5:25pm	3 one-way trips	NA
SCT	797	5:00am – 6:46am, 3:45pm – 7:45pm	5 one-way trips	NA

Operator	Route	Span of Service	Weekday Headways (in minutes)	
			Peak	Off-Peak
Shuttles and Circulators				
LADOT	PC/VN DASH	6:00am – 8:00pm	15	20
LADOT	VN/SC DASH	6:00am – 7:30pm	15	20
BruinBus	U1	7:25am – 5:55pm	15	15
BruinBus	U2	7:00am – 6:15pm	15-30	15-30
BruinBus	U3	10:00am – 5:00pm	30	30
BruinBus	U5	6:45am – 10:10pm	25	25

Source: HTA, 2024

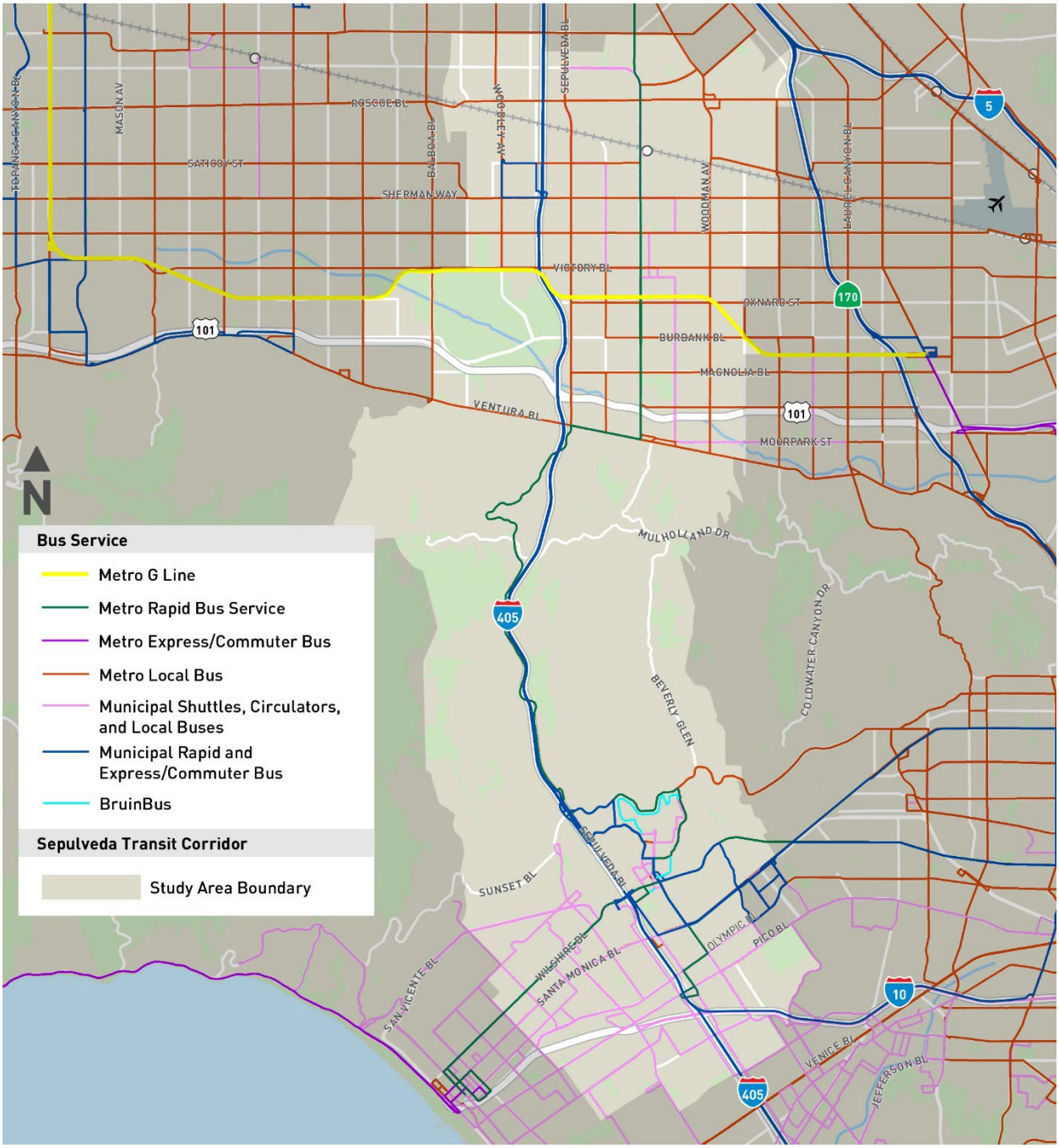
AVTA = Antelope Valley Transit Authority
BBB = Santa Monica Big Blue Bus
CCB = Culver CityBus
LADOT = Los Angeles Department of Transportation
LBT = Long Beach Transit
NA = not applicable
PC/VN DASH = Panorama City/Van Nuys DASH
SCT = Santa Clarita Transit
VN/SC DASH = Van Nuys/Studio City DASH

Figure 3-2. Existing and Planned Fixed Guideway Service in the Project Study Area



Source: HTA, 2024

Figure 3-3. Existing Bus Service in the Project Study Area



Source: HTA, 2024

3.1.4 Active Transportation

3.1.4.1 Pedestrian Facilities

Pedestrian facilities vary across the Project Study Area, depending on the density, mix of land uses and roadway facilities. In the Valley and on the Westside, sidewalks are well-connected and follow the grid pattern of roadway facilities. In the Bel-Air and Brentwood neighborhoods adjacent to the Sepulveda Pass, sidewalks are sparse and disconnected, given roadway slopes and topography.

3.1.4.2 Bicycle Facilities

Existing bicycle facilities in the Project Study Area consist of a network of approximately 123 miles of Class I, II, and III bicycle facilities, including 29.4 miles of Class I bicycle paths. Planned bicycle facilities in the Project Study Area include 180 miles of additional bicycle facilities, including 21.1 miles of Class I paths (SCAG, 2024). Table 3-5 lists the lengths of existing bicycle facilities in miles by classification within the Project Study Area. Existing and planned bicycle facilities are shown on Figure 3-4 and are classified using the California Department of Transportation (Caltrans) *Highway Design Manual* (Caltrans, 2022b). These facility classifications include the following:

- Class I Bikeways are also known as bicycle paths, shared-use paths, or bicycle trails. They provide a travel facility for the exclusive use of bicycles and pedestrians that is completely separated (by a physical barrier or open space) from roadways with cross flow by vehicles minimized.
- Class II Bikeways are also known as bicycle lanes. These facilities provide a striped lane for one-way bike travel on a street or highway.
- Class III Bikeways are also known as bicycle routes. They provide for shared use with pedestrian or motor vehicle traffic typically demarcated by signage or surface markings such as sharrows.
- Class IV Bikeways are protected bike lanes that are physically separated from the vehicle travel lane by more than the white stripe. Separation may be accomplished with flexible delineators or permanent barriers.

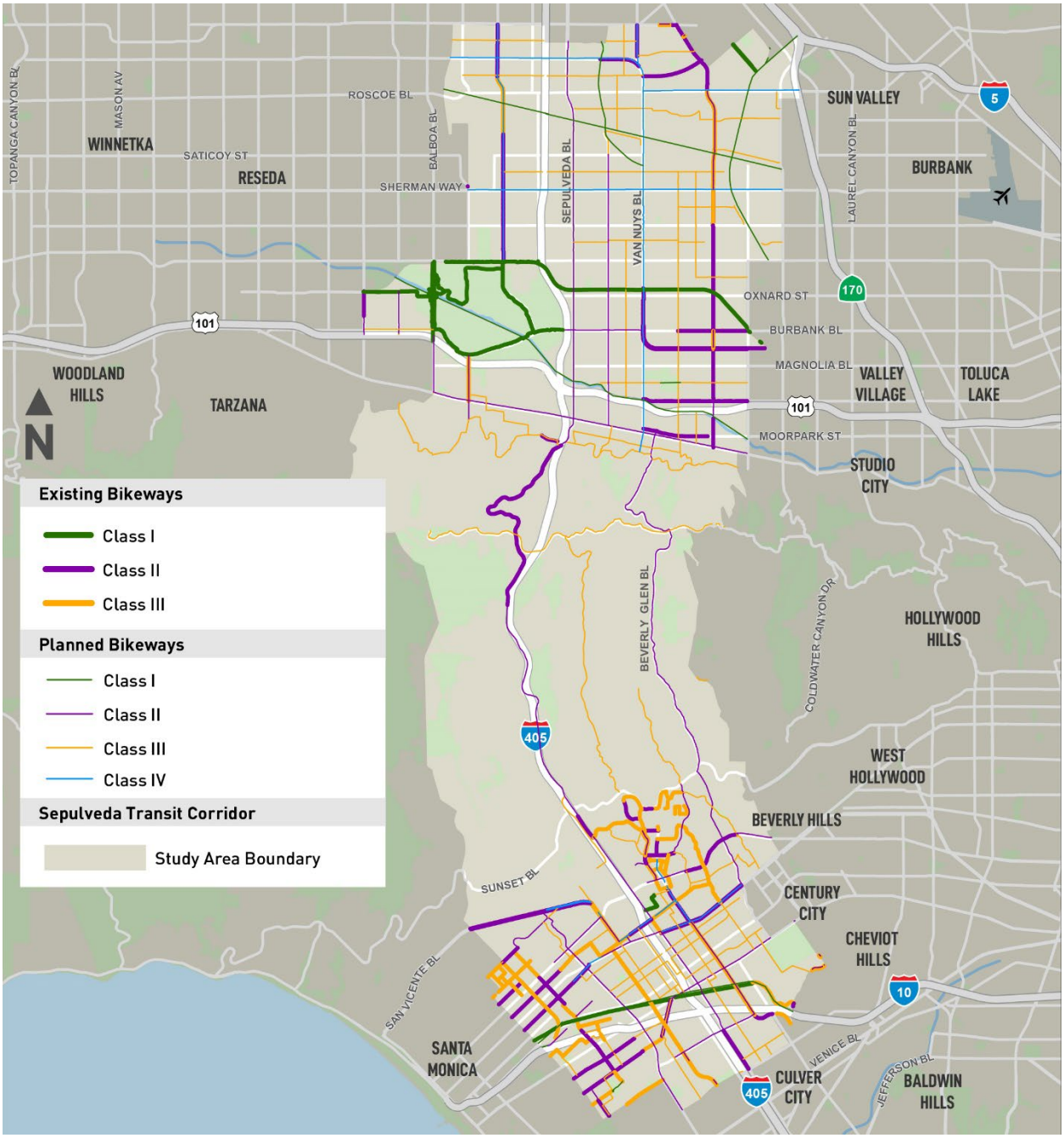
Table 3-5. Existing and Planned Bicycle Facility Miles within the Project Study Area

Class	Existing Facility Miles	Planned Facility Miles
I	29.4	21.1
II	53.2	51.3
III	40.7	80.6
IV	NA	26.9
Total	**123.3**	**179.9**

Source: SCAG, 2024; HTA, 2024

NA = not applicable

Figure 3-4. Existing and Planned Bicycle Facilities in the Project Study Area



Source: SCAG, 2024; HTA, 2024

3.2 Air Quality

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Air Quality Technical Report* (Metro, 2025b). The summary addresses compliance with federal and state air quality standards, existing pollutant concentrations in the Project Study Area, and land uses in the Project Study Area that are sensitive to high levels of air pollution. The affected environment

related to air quality standards and pollutant concentrations does not significantly change between the alternatives. The proximity of sensitive receptors to the alignments differs between alternatives.

3.2.1 Federal and State Air Quality Standards

The Federal Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set and revise National Ambient Air Quality Standards (NAAQS) for certain common and widespread pollutants, known as "criteria pollutants," and provides authority for the agency to add additional pollutants. Standards are in effect today for six pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (pm) (regulated as subsets of particles with diameters less than 2.5 microns and less than 10 microns denoted as $PM_{2.5}$ and PM_{10}, respectively), and lead (Pb). The current NAAQS are listed in Table 3-6 along with the corresponding averaging times. Also listed in Table 3-6 are the California Ambient Air Quality Standards (CAAQS), which are generally more stringent than the federal standards. In February 2024, the federal $PM_{2.5}$ annual standard was revised from 12 micrograms per cubic meter (µg/m^3) to 9 µg/m^3, making the federal standard more stringent than the state standard of 12 µg/m^3.

Table 3-6. Federal and California Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	CAAQS
Ozone (O_3)	1-Hour	—	0.09 ppm (180 µg/m^3)
	8-Hour	0.07 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)
Carbon Monoxide (CO)	1-Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
	8-Hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
Nitrogen Dioxide (NO_2)	1-Hour	0.100 ppm (188 µg/m^3)	0.18 ppm (339 µg/m^3)
	Annual Average	0.053 ppm (100 µg/m^3)	0.030 ppm (57 µg/m^3)
Sulfur Dioxide (SO_2)	1-Hour	0.075 ppm (196 µg/m^3)	0.25 ppm (655 µg/m^3)
	24-Hour	0.14 ppm (180 µg/m^3)	0.04 ppm (105 µg/m^3)
Respirable Particulate Matter (PM_{10})	24-Hour	150 µg/m^3	50 µg/m^3
	Annual Average	—	20 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	35 µg/m^3	—
	Annual Average	9.0 µg/m^3	12 µg/m^3
Lead (Pb)	30-Day Average	—	1.5 µg/m^3
	Rolling 3-Month Average	0.15 µg/m^3	—
Visibility-Reducing Particles	8-Hour	—	Extinction of 0.23 per kilometer
Sulfates	24-Hour	—	25 µg/m^3
Hydrogen Sulfide	1-Hour	—	0.03 ppm (42 µg/m^3)
Vinyl Chloride	24-Hour	—	ppm (26 µg/m^3)

Source: CARB, 2016; EPA, 2024

— = no standard
µg/m^3 = micrograms per cubic meter
CAAQS = California Ambient Air Quality Standard
mg/m^3 = milligrams per cubic meter
NAAQS = National Ambient Air Quality Standard
ppm = parts per million

The EPA is tasked with the regulatory authority of monitoring pollutant concentrations and determining whether areas have attained the NAAQS. Those areas with recurring concentrations of criteria pollutants exceeding the air quality standard values are designated as "Nonattainment" of the standard

and are required to prepare air quality plans to demonstrate regional control strategies that will reduce emissions. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Local monitoring data are used to designate areas as nonattainment, maintenance, attainment, or unclassified areas for ambient air quality standards. The four designations are defined as follows:

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- Unclassified—assigned to areas where data is insufficient to determine whether a pollutant is violating the standard in question.

Table 3-7 lists the attainment status designations for the non-desert portion of Los Angeles County within the South Coast Air Quality Management District (SCAQMD) jurisdiction. The South Coast Air Basin portion of Los Angeles County is currently designated nonattainment of the NAAQS for O_3 and $PM_{2.5}$, and is designated nonattainment of the CAAQS for O_3, PM_{10}, and $PM_{2.5}$.

Table 3-7. Attainment Status Designations – South Coast Air Basin Portion of Los Angeles County

Pollutant	Averaging Time	CAAQS Status	NAAQS Status
Ozone (O_3)	1-Hour	Nonattainment	Nonattainment (Extreme)
	8-Hour	Nonattainment	Nonattainment (Extreme)
Carbon Monoxide (CO)	1-Hour	Attainment	Attainment (Maintenance)
	8-Hour	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2)	1-Hour	Attainment	Unclassifiable/Attainment
	Annual Average	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2)	1-Hour	Attainment	Unclassifiable/Attainment
	24-Hour	Attainment	Unclassifiable/Attainment
Respirable Particulate Matter (PM_{10})	24-Hour	Nonattainment	Attainment (Maintenance)
	Annual Average	Nonattainment	No Federal Standard
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No State Standard	Nonattainment (Serious)
	Annual Average	Nonattainment	Nonattainment (Moderate)
Lead (Pb)	30-Day Average	Attainment	No Federal Standard
	3-Month Average	Attainment	Nonattainment (Partial)

Source: CARB, 2024; EPA, 2024

CAAQS = California Ambient Air Quality Standards
NAAQS = National Ambient Air Quality Standards

3.2.2 Existing Pollutant Concentrations

The attainment status designations are based on concentrations of air pollutants measured at air monitoring sites throughout the South Coast Air Basin. The SCAQMD divides the South Coast Air Basin into 38 Source Receptor Areas (SRA), the boundaries of which were determined by the proximity to the nearest air monitoring station and local topography and meteorological patterns. The SCAQMD operates

a total of 34 air monitoring sites that are used to characterize air quality within the 38 SRAs. The alignments transect portions of SRA 6 (West San Fernando Valley) and SRA 7 (East San Fernando Valley) in the northern portion and SRA 2 (Northwest Coastal Los Angeles County) in the southern portion. The project alternatives intersect with SRA 7 (East San Fernando Valley), although there is no active monitoring station in this SRA; thus, the SRA 6 monitoring station data will be used. Figure 3-5 displays SRAs relative to the Project Study Area, as well as the locations of monitoring stations in SRA 2 (West Los Angeles – Veteran's Administration monitoring site) and SRA 6 (Reseda monitoring site). The following discussions address pollutant concentrations measured at stations from 2021 to 2023.

Figure 3-5. SCAQMD Source Receptor Areas in the Project Study Area



Source: HTA, 2024

Table 3-8 lists pollutant concentrations measured at the Reseda monitoring station that provides data representative of air quality conditions within SRA 6. Concentrations of O_3 exceeded applicable standards numerous times during the most recent three-year period of data available. The 24-hour federal standard for $PM_{2.5}$ was also exceeded for one year during this period. The air monitoring data recorded at the Reseda monitoring station reflects the nonattainment status of the South Coast Air Basin portion of Los Angeles County for O_3 and $PM_{2.5}$. The Reseda monitoring station is not equipped to measure concentrations of PM_{10}. Concentrations of all other pollutants monitored at this site remained below applicable federal and state air quality standards, consistent with the attainment or maintenance designations corresponding to the South Coast Air Basin portion of Los Angeles County.

Table 3-8. Reseda Air Monitoring Station Data (SRA 6)

Pollutant	Averaging Time	Maximum Concentrations and Frequencies of Exceeded Standards		
		2021	2022	2023
Ozone	Maximum 1-Hour Concentration (ppm)	0.110	0.11	0.104
	Days >0.09 ppm (CAAQS)	4	7	10
	Maximum 8-Hour Concentration (ppm)	0.083	0.096	0.096
	Days >0.070 ppm (NAAQS/CAAQS)	33	24	30
Carbon Monoxide	Maximum 1-Hour Concentration (ppm)	2.6	2.2	2.3
	Days >20 ppm (CAAQS)	0	0	0
	Maximum 8-Hour Concentration (ppm)	1.9	1.8	1.7
	Days >9.0 ppm (NAAQS/CAAQS)	0	0	0
Nitrogen Dioxide	Maximum 1-Hour Concentration (ppm)	0.0542	0.0547	0.0481
	Days >0.10 ppm (NAAQS)	0	0	0
	Annual Average Concentration (ppm)	0.010	0.010	0.010
	>0.030 ppm (CAAQS)	0	0	0
Respirable Particulate Matter	Maximum 24-Hour Concentration (µg/m^3)	—	—	—
	Days >150 µg/m^3 (NAAQS)			
	Days >50 µg/m^3 (CAAQS)			
	Annual Average Concentration (µg/m^3)	—	—	—
	>20 µg/m^3 (CAAQS)			
Fine Particulate Matter	Maximum 24-Hour Concentration (µg/m^3)	55.5	20.5	21.9
	Days >35 µg/m^3 (NAAQS)	3	0	0
	Annual Average Concentration (µg/m^3)	10.1	8.8	8.8
	>12 µg/m^3 (CAAQS)	No	No	No
	>9 µg/m^3 (NAAQS)	No[a]	No	No

Source: SCAQMD, 2024

[a] The federal standard for annual $PM_{2.5}$ was revised to 9 µg/m^3 in 2024. Prior to 2024, the federal standard was 12 µg/m^3; therefore, concentrations in 2021 would not have exceeded the federal standard for annual $PM_{2.5}$.

— = no data
> = greater than
CAAQS = California Ambient Air Quality Standard
NAAQS = National Ambient Air Quality Standard
µg/m^3 = micrograms per cubic meter
ppm = parts per million
SRA = source receptor area

Table 3-9 lists pollutant concentrations measured at the West Los Angeles-Veterans Administration monitoring station that provides data representative of air quality conditions within SRA 2. Concentrations of O_3 exceeded applicable standards numerous times during the most recent three-year period of data available. The air monitoring data recorded at the West Los Angeles-Veterans Administration monitoring station reflects the nonattainment status of the South Coast Air Basin portion of Los Angeles County for the O_3. The West Los Angeles-Veteran's Administration monitoring station is not equipped to measure concentrations of particulate matter (PM_{10} and $PM_{2.5}$). Concentrations of all other pollutants monitored at this site remained below applicable federal and state air quality standards, consistent with the attainment or maintenance designations corresponding to the South Coast Air Basin portion of Los Angeles County.

Table 3-9. West Los Angeles - Veterans Administration Air Monitoring Station Data (SRA 2)

Pollutant	Averaging Time	Maximum Concentrations and Frequencies of Exceeded Standards		
		2021	2022	2023
Ozone	Maximum 1-Hour Concentration (ppm)	0.095	0.081	0.109
	Days >0.09 ppm (CAAQS)	1	0	1
	Maximum 8-Hour Concentration (ppm)	0.082	0.07	0.066
	Days >0.070 ppm (NAAQS/CAAQS)	1	0	0
Carbon Monoxide	Maximum 1-Hour Concentration (ppm)	2	1.7	1.4
	Days >20 ppm (CAAQS)	0	0	0
	Maximum 8-Hour Concentration (ppm)	1.6	1.5	1.2
	Days >9.0 ppm (NAAQS/CAAQS)	0	0	0
Nitrogen Dioxide	Maximum 1-Hour Concentration (ppm)	0.061	0.051	0.044
	Days >0.10 ppm (NAAQS)	0	0	0
	Annual Average Concentration (ppm)	0.010	0.011	0.009
	>0.030 ppm (CAAQS)	No	No	No
Respirable Particulate Matter	Maximum 24-Hour Concentration (µg/m^3)	—	—	—
	Days >150 µg/m^3 (NAAQS)			
	Days >50 µg/m^3 (CAAQS)			
	Annual Average Concentration (µg/m^3)	—	—	—
	>20 µg/m^3 (CAAQS)			
Fine Particulate Matter	Maximum 24-Hour Concentration (µg/m^3)	—	—	—
	Days >35 µg/m^3 (NAAQS)			
	Annual Average Concentration (µg/m^3)	—	—	—
	>12 µg/m^3 (CAAQS)			
	>9 µg/m^3 (NAAQS)			

Source: SCAQMD, 2024

— = no data
> = greater than
µg/m^3 = micrograms per cubic meter
CAAQS = California Ambient Air Quality Standard
NAAQS = National Ambient Air Quality Standard
ppm = parts per million
SRA = source receptor area

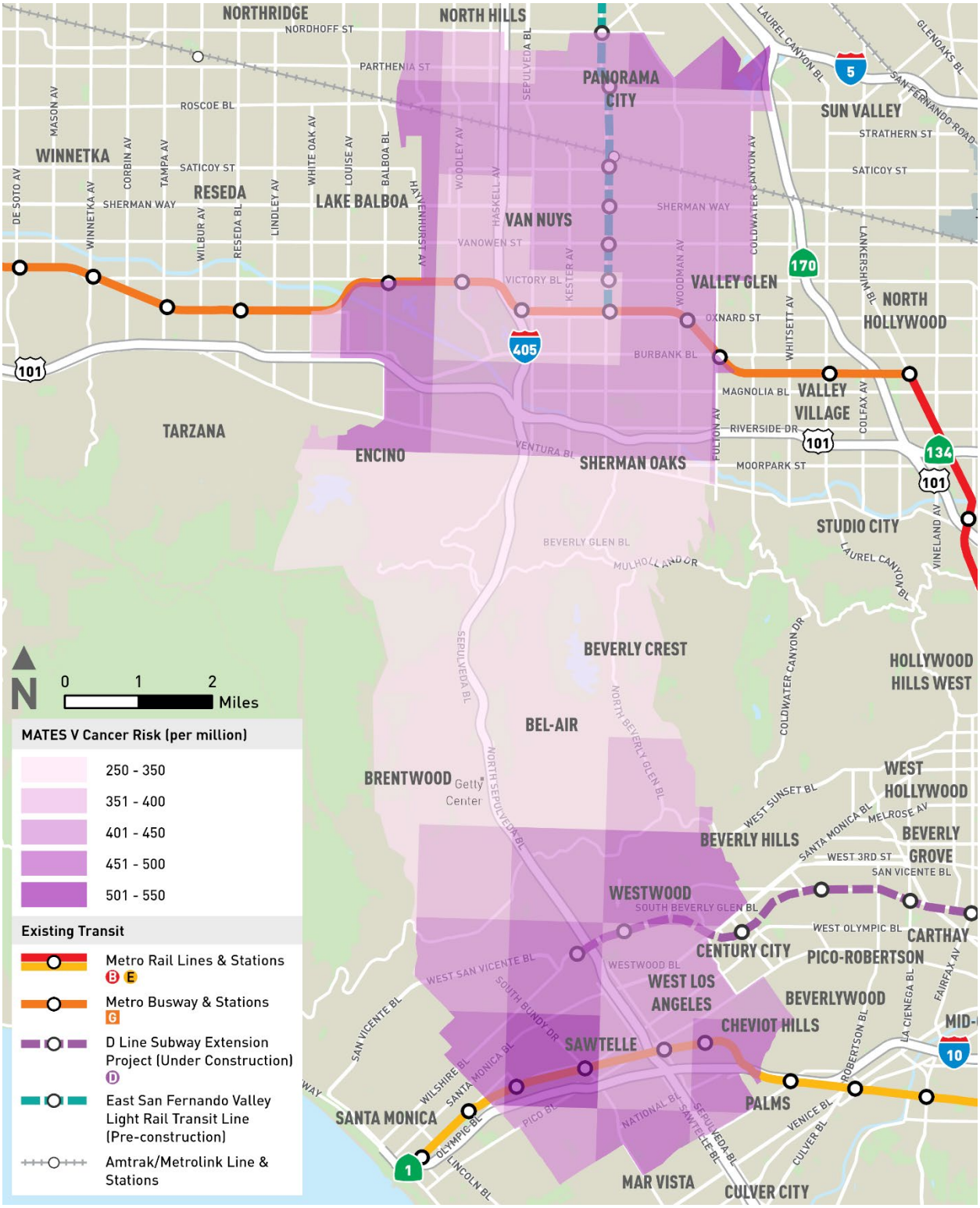
3.2.3 Ambient Carcinogenic Risk

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study conducted by the SCAQMD throughout the South Coast Air Basin to determine Basin-wide risks associated with major airborne carcinogens (pollutants that are scientifically documented to cause cancer). The most recent study is the MATES V published in 2021. Construction contracts shall include language that compels contractors to implement all fugitive dust control measures as detailed in South Coast Air Quality Management District Rule 403 (Fugitive Dust). MATES V found that air toxic levels continue to decline compared to previous MATES versions. Cancer risk is expressed as the number of extra cancer cases occurring over a 70-year lifetime per one million people exposed to toxic air contaminants. MATES V estimated cancer risk in the South Coast Air Basin ranged from 585 to 842 per million over a 70-year lifetime. Diesel particulate matter is the largest contributor to air toxics cancer risk (SCAQMD, 2021). Figure 3-6 shows the Project Study Area overlain on the MATES V Estimated Risk grid developed by SCAQMD. Ambient estimated risks in the Project Study Area range from approximately 250 per million to 550 per million according to MATES V modeling results.

3.2.4 Sensitive Receptors

Sensitive individuals refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend extended periods of time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (SCAQMD, 1993). Construction contracts shall include language that compels contractors to implement all fugitive dust control measures as detailed in South Coast Air Quality Management District Rule 403 (Fugitive Dust).

Figure 3-6. MATES V Estimated Cancer Risk in the Project Study Area



Source: SCAQMD, 2021

3.3 Communities and Neighborhoods

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Communities and Neighborhoods Technical Report* (Metro, 2025c). The summary includes neighborhood descriptions along with population and housing characteristics. This section also identifies properties located adjacent to the alignments that are assisted by the U.S. Department of Housing and Urban Development (HUD). The affected environment related to communities and neighborhoods does not change between the alternatives, although the proximity to HUD-assisted properties is dependent on the alignment.

3.3.1 Communities

A community is typically grouped by its geographical area. In urban areas, a community is generally supported by community facilities (e.g., schools, senior centers, parks, churches, etc.), as well as supporting commercial uses (e.g., grocery stores, cleaners, and restaurants). A residential neighborhood can be described as an area within a community that has a concentration or a large number of residents with residential uses as the predominant land use. However, residents may also be located in primarily non-residential areas. A community can be characterized by its demographic and socioeconomic profile, such as homogeneity and/or the diversity of the population, similarities in income, and shared cultural or ethnic backgrounds. The stability of a community is reflected by the number of long-time residents that reside in the community.

A description of each community within the Project Study Area is provided in the following sections and is generally listed from north to south. The Project is generally located in the San Fernando Valley and Westside portions of Los Angeles County. Within the Project Study Area, the San Fernando Valley is generally situated north of the Santa Monica Mountains and the Westside is generally south of the Santa Monica Mountains. The Project Study Area lies within the jurisdictions of the Cities of Los Angeles and Santa Monica and the unincorporated Sawtelle U.S. Department of Veterans Affairs (VA) community of Los Angeles County. Individual communities in the City of Los Angeles are grouped to form a community plan area (CPA). Since each Community Plan defines the existing and planned characteristics of communities in the CPA, the city-defined CPA boundaries are a contributing factor when assessing the effects of the Project on communities and neighborhoods. The Project Study Area has 16 communities that are in the City of Los Angeles: North Hills, Panorama City, Sun Valley, Lake Balboa, Van Nuys, North Hollywood, Encino, North Sherman Oaks, Sherman Oaks, Brentwood, Bel-Air, Beverly Crest, Westwood, West Los Angeles, Mar Vista, and Palms. Other communities not in the City of Los Angeles that are part of the Project Study Area include Sawtelle VA and the City of Santa Monica. The communities within the Project Study Area are illustrated on Figure 3-7.

3.3.1.1 North Hills

The North Hills community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Mission Hills-Panorama City-North Hills CPA. This community is surrounded by the City of Los Angeles Granada Hills and Mission Hills communities to the north, Panorama City community to the east, Lake Balboa community to the south, and Northridge community to the west. The portion of North Hills that is within the Project Study Area is primarily residential. Multi-family residential neighborhoods are generally clustered to the east and west sides of Sepulveda Boulevard. Sepulveda, Van Nuys, and Roscoe Boulevards are the commercial corridors in this community and generally separate the single-family and multi-family residential neighborhoods. An industrial district is generally situated towards the southwestern corner of this community.

Figure 3-7. Communities within the Project Study Area



Source: HTA, 2024

3.3.1.2 Panorama City

The Panorama City community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Mission Hills-Panorama City-North Hills CPA. This community is surrounded by the City of Los Angeles Mission Hills community to the north, Arleta and Sun Valley communities to the east, Van Nuys community to the south, and North Hills and Lake Balboa communities to the west. The portion of the community that is within the Project Study Area consists of a mix of single-family and multi-family residential neighborhoods. Within the Project Study Area, multi-family residential neighborhoods are generally concentrated towards the western portion of the community, while single-family residential neighborhoods are concentrated towards the eastern portion of the community. The central commercial area for the community is generally situated around Roscoe Boulevard/Van Nuys Boulevard. Smaller commercial districts are located around Nordhoff Street/ Van Nuys Boulevard, along Woodman Avenue (south of Nordhoff Street), and around Roscoe Boulevard/Woodman Avenue. Along the southerly community boundary, an industrial corridor is generally located along and around the LOSSAN rail corridor.

3.3.1.3 Sun Valley

The Sun Valley community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Sun Valley-La Tuna Canyon CPA. This community is surrounded by the City of Los Angeles Shadow Hills and Pacoima communities to the north, La Tuna Canyon community to the east, North Hollywood community and City of Burbank to the south, and Panorama City community to the west. The portion of the community that is within the Project Study Area consists of primarily single-family residential neighborhoods. An industrial district is concentrated along the southern portion of this community around Raymond Street and Sherman Way.

3.3.1.4 Lake Balboa

The Lake Balboa community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Reseda-West Van Nuys CPA. The community is referred to as the West Van Nuys community in the City of Los Angeles Reseda-West Van Nuys Community Plan. Lake Balboa is surrounded by the City of Los Angeles North Hills community to the north, Panorama City and Van Nuys communities to the east, Encino community to the south, and Reseda community to the west. The portion of Lake Balboa that is within the Project Study Area contains a significant amount of industrial development and includes the Van Nuys Airport. Within the Project Study Area, two small pockets of single-family residential neighborhoods, which are separated by the Van Nuys Golf Course, are located at the southern end of the community. Multi-family residences are generally situated along arterial streets, such as Van Owen Street, Hayvenhurst Avenue, and Victory Boulevard. A multi-family residential neighborhood is also located towards the northeasterly corner of this community.

3.3.1.5 Van Nuys

The Van Nuys community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Van Nuys-North Sherman Oaks CPA. The Van Nuys community is surrounded by the City of Los Angeles Panorama City community to the north, North Hollywood community to the east, North Sherman Oaks community to the south, and Lake Balboa community to the west. Industrial districts are generally located towards the northerly end of the community near the LOSSAN rail corridor; near the center of the community around the Metro G Line, east of Hazeltine Avenue; along Oxnard Street; and at the easterly end of the community, west of Woodley Avenue. The community is characterized by single-family residential neighborhoods that are separated by commercial corridors and multi-family residences along arterials. Commercial businesses generally line Sepulveda Boulevard

and Van Nuys Boulevard. Multi-family residences are generally located along arterial roadways, such as Sepulveda Boulevard, Kester Avenue, Hazeltine Avenue, Woodman Avenue, Sherman Way, Vanowen Street, Victory Boulevard, and Burbank Boulevard. A multi-family residential neighborhood is located near the center of the Van Nuys community, generally between Victory Boulevard to the north, Hazeltine Avenue to the east, Oxnard Street to the South, and Kester Avenue to the west. The San Fernand Valley Administration Center/Government Services Civic Center is also located towards the center of the Van Nuys community and has a mix of federal, state, and city services.

3.3.1.6 North Hollywood

The North Hollywood community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles North Hollywood-Valley Village CPA. The North Hollywood community is surrounded by the City of Los Angeles Sun Valley community to the north; City of Burbank to the east; Valley View, Studio City, and Toluca Lake to the south; and Van Nuys to the west. The portion of North Hollywood that is within the Project Study Area consists of primarily residential neighborhoods, with a commercial corridor generally along Sherman Way. A commercial district is generally located around Victory Boulevard/Cold Water Canyon Avenue, and a smaller commercial area is situated at the intersection of Vanowen Street/Cold Water Canyon Avenue. Multi-family residences are generally located along arterials and adjacent to commercial development. These multi-family residential and commercial corridors generally separate the single-family residential neighborhoods.

3.3.1.7 Encino

The Encino community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Encino-Tarzana CPA. This community is surrounded by the City of Los Angeles Reseda and Lake Balboa communities to the north; Van Nuys, North Sherman Oaks, and Sherman Oaks communities to the east; Brentwood and Pacific Palisades communities to the south; and Tarzana community to the west. The portion of Encino that is within the Project Study Area is predominantly characterized by single-family residential neighborhoods that is primarily separated by Ventura Boulevard, which serves as the community's major commercial corridor. Within the Project Study Area, multi-family residences line Burbank and Balboa Boulevards. Towards the eastern portion of this community, a few multi-family residences are situated behind the north and south side of the Ventura Boulevard commercial corridor. The Sepulveda Basin Recreation Area is a major open space area in the community.

3.3.1.8 North Sherman Oaks

The North Sherman Oaks community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Van Nuys-North Sherman Oaks CPA. This community is surrounded by the City of Los Angeles Van Nuys community to the north, Valley Village community to the east, Sherman Oaks and Studio City communities to the south, and Encino community to the west. North Sherman Oaks is predominantly characterized by single-family residential neighborhoods, with multi-family residences along arterial streets, such as Burbank Boulevard, Magnolia Boulevard, Sepulveda Boulevard, and Kester Avenue. Van Nuys Boulevard is the main commercial corridor within this community, and the Sherman Oaks Fashion Center is a major commercial shopping center that is situated on Riverside Drive.

3.3.1.9 Sherman Oaks

The Sherman Oaks community is in the San Fernando Valley portion of the City of Los Angeles and is part of the City of Los Angeles Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass CPA. This community is surrounded by the City of Los Angeles North Sherman Oaks community to the north, Studio City community to the east, Bel-Air and Beverly Crest communities to the south, and Encino community to the west. Ventura Boulevard serves as the community's major commercial corridor. Single-family residential neighborhoods are primarily located south of Ventura Boulevard. Towards the westerly portion of the community, multi-family residences are situated immediately south of Ventura Boulevard. North of Ventura Boulevard, multi-family residential dwellings are generally clustered along arterials and generally separate the single-family residential neighborhoods.

3.3.1.10 Brentwood

The Brentwood community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Brentwood-Pacific Palisades CPA. This community is surrounded by the Encino community to the north; Bel-Air and Westwood communities to the east; the City of Santa Monica and the West Los Angeles and unincorporated Sawtelle VA communities to the south; and the Pacific Palisades community to the west. A majority of the community consists of single-family residential neighborhoods, with a multi-family residential neighborhood towards the southeasterly portion of the community. Wilshire Boulevard and San Vicente Boulevard (east of Bundy Drive) serve as commercial corridors for the community.

3.3.1.11 Bel-Air

The Bel-Air community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Bel-Air-Beverly Crest CPA. The Bel-Air community is surrounded by the City of Los Angeles Sherman Oaks community to the north, Beverly Crest community to the east, Westwood community to the south, and Brentwood community to the west. Bel-Air is located entirely within the Project Study Area and consists of primarily single-family residential neighborhoods that are generally separated by canyons and hillsides. A limited number of multi-family residences and commercial centers are generally located towards the northerly and southwesterly portion of the community.

3.3.1.12 Beverly Crest

The Beverly Crest community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Bel-Air-Beverly Crest CPA. The Beverly Crest community is surrounded by the Sherman Oaks and Studio City communities to the north, the City of Beverly Hills and Westwood community to the south, Hollywood Hills West community to the east, and the Bel-Air community to the west. Beverly Crest consists of predominantly single-family residential neighborhoods that are generally separated by canyons and hillsides.

3.3.1.13 Westwood

The Westwood community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Westwood CPA. The Westwood community is surrounded by the Bel-Air and Beverly Crest communities to the north, City of Beverly Hills to the east, West Los Angeles community to the south, and Brentwood and unincorporated Sawtelle VA communities to the west. Westwood consists of primarily residential neighborhoods. The single-family residential neighborhoods in this community are generally separated by multi-family residential neighborhoods and corridors, as well as commercial districts and corridors. In addition to the multi-family residential corridors along Wilshire Boulevard and Beverly Glen Boulevard, multi-family residential neighborhoods are generally clustered towards the

westerly and southerly portions of the community. Commercial corridors are generally situated along Sepulveda Boulevard, Westwood Boulevard, and Santa Monica Boulevard. A commercial district (Westwood Village) is generally situated towards the westerly portion of the community. UCLA is a major public facility that is situated in this community. Prominent open space areas in this community include the Los Angeles Country Club, Holmby Park, and Westwood Park.

3.3.1.14 Sawtelle Veterans Affairs

Sawtelle VA is an unincorporated community of Los Angeles County and is situated in the Westside portion of the County. This community is surrounded by City of Los Angeles Brentwood community to the west and north, Westwood community to the north and east, and West Los Angeles community to the south. The unincorporated community is located entirely within the Project Study Area and primarily consists of the VA West Los Angeles Medical Center campus west of I-405 and the Los Angeles National Cemetery east of I-405. Residential dormitories are situated on the VA campus, and a small cluster of multi-family residences are situated at the southeasterly portion of this community.

3.3.1.15 West Los Angeles

The West Los Angeles community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Westwood CPA. The neighborhoods of West Los Angeles, Century City, Pico-Robertson, Cheviot Hills, Rancho Park, and Sawtelle are included in this community. The West Los Angeles community is surrounded by the Brentwood, Westwood, and unincorporated Sawtelle VA communities, as well as City of Beverly Hills, to the north; Wilshire and West Adams communities to the east; Palms and Mar Vista communities as well as Culver City to the south; and the City of Santa Monica to the west. West Los Angeles consists of mostly residential neighborhoods. Multi-family residential neighborhoods are generally concentrated towards the west side of I-405, as well as the northerly and southerly end of the community, while single-family residential neighborhoods are concentrated east of the I-405 freeway. Within the Project Study Area, commercial corridors (Sawtelle Boulevard, Westwood Boulevard, Wilshire Boulevard, Santa Monica Boulevard, and Pico Boulevard) generally separate these residential neighborhoods. Industrial districts are generally situated along the east and west sides of the I-405. The Rancho Park Golf Course is a prominent open space area in this community.

3.3.1.16 City of Santa Monica

The City of Santa Monica is in the Westside portion of the County. This community is generally surrounded by the City of Los Angeles Pacific Palisades and Brentwood communities to the north, West Los Angeles community to the east, Mar Vista community to the east and south, Venice community to the south, and Pacific Ocean to the west. Within the Project Study Area, single-family residential neighborhoods are generally clustered towards the northerly and southerly portion of the community, with multi-family residential neighborhoods situated near the center of the community. An industrial district is generally situated around Olympic Boulevard. Commercial corridors within the Project Study Area include Wilshire Boulevard, Santa Monica Boulevard, and Pico Boulevard. A commercial district that consists of mostly offices and the Santa Monica Municipal Airport is situated at the southerly end of the community.

3.3.1.17 Mar Vista

The Mar Vista community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Palms-Mar Vista-Del Rey CPA. The Mar Vista community is surrounded by the West Los Angeles community and City of Santa Monica to the north and west, Palms community to the east, Culver City to the south, and Venice community to the west. Within the Project Study Area, Mar Vista

consists of primarily single-family residential neighborhoods, with a multi-family residential neighborhood towards the northerly portion of the community (north of I-10). Clusters of multi-family residences are also generally located along Gateway Boulevard, National Boulevard, Barrington Avenue, and Sawtelle Boulevard. Pockets of commercial development are generally situated at the intersections of Gateway Boulevard/Barrington Avenue, National Boulevard/Bundy Drive, National Boulevard/Barrington Avenue, and National Boulevard/Sawtelle Boulevard.

3.3.1.18 Palms

The Palms community is in the Westside portion of the City of Los Angeles and is part of the City of Los Angeles Palms-Mar Vista-Del Rey CPA. The Palms community is surrounded by the West Los Angeles community to the north, Culver City to the east and south, and the Mar Vista community to the west. Within the Project Study Area, Palms consists of a mix of single-family and multi-family residential neighborhoods. Multi-family residences are generally located along National Boulevard, Rose Avenue, Palms Avenue, Sepulveda Boulevard, and Overland Avenue. These multi-family residential corridors generally separate single-family residential neighborhoods. A multi-family residential neighborhood is situated towards the southeasterly portion of the community that is within the Project Study Area. Commercial corridors within the Project Study Area are generally situated along Overland Avenue and at the intersections of Palms Boulevard/Sepulveda Boulevard and National Boulevard/Sepulveda Boulevard.

3.3.2 Demographics and Socioeconomic Characteristics

The character of a community can be described by its demographic and socioeconomic profile. The demographic and socioeconomic profile for the portions of the communities that are within the Project Study Area are presented in the following paragraphs. Demographic and socioeconomic information for the Project Study Area were obtained from the U.S. Census Bureau. Generally, the U.S. Census Bureau surveys the U.S. population each decade and gathers population and housing statistics. In addition, the U.S. Census Bureau conducts the American Community Survey, which is a survey of a random sample of the U.S. population to provide annual estimates of demographic and socioeconomic characteristics. For the purpose of this report, demographic and socioeconomic data for the census tracts that encompass the Project Study Area were gathered from the most recent 2019 American Community Survey. The following sections describe the demographic and socioeconomic characteristics for the portions of the communities that are within the Project Study Area, as well as for the City and County of Los Angeles.

3.3.2.1 Population

Communities within the Project Study Area vary in terms of population density. Areas with a higher population density generally demonstrate a need for expanded transit service. Table 3-10 lists the 2019 population for Los Angeles County, City of Los Angeles, and the portions of the communities that are within the Project Study Area. Within the Project Study Area, Bel-Air, and West Los Angeles have the lowest population density, while North Hollywood and Panorama City have the highest population density. The portions of Bel-Air, Beverly Crest, and West Los Angeles that are within the Project Study Area have population densities that are lower than Los Angeles County and the City of Los Angeles. All other communities within the Project Study Area have population densities that are higher than Los Angeles County.

Table 3-10. Population by Community (2019)

Community[a]	Total Population	Population Density (Persons per Acre)
Los Angeles County	10,081,570	3.3
City of Los Angeles	3,966,936	13.1
North Hills	26,897	21.7
Panorama City	57,571	26.8
Sun Valley	10,327	9.6
Lake Balboa	9,583	8.5
Van Nuys	129,380	22.1
North Hollywood	8,589	27.1
Encino	25,710	3.8
North Sherman Oaks	28,827	15.2
Sherman Oaks	34,853	11.5
Brentwood	30,285	5.1
Bel-Air	7,083	1.7
Beverly Crest	4,182	2.2
Westwood	55,858	23.5
West Los Angeles	57,368	20.0
City of Santa Monica	25,326	14.5
Mar Vista	15,163	16.1
Palms	9,612	22.8

Source: HTA, 2024; U.S. Census Bureau, 2020

[a] Data is provided for portions of the communities that are within the Project Study Area, except for data for Los Angeles County and the City of Los Angeles that is presented for the whole jurisdiction.

3.3.2.2 Households

Table 3-11 lists the number of households and average household size in 2019 for Los Angeles County, City of Los Angeles, and the portions of the communities that are within the Project Study Area. Within the Project Study Area, the average household size in North Hills, Panorama City, Sun Valley, Lake Balboa, North Hollywood, and Sawtelle VA is greater than Los Angeles County. The average household size in the Van Nuys portion of the Project Study Area is similar to Los Angeles County. The portions of Encino, North Sherman Oaks, Sherman Oaks, Brentwood, Bel-Air, Beverly Crest, Westwood, West Los Angeles, Santa Monica, Mar Vista, and Palms that are within the Project Study Area have average household sizes that are smaller than Los Angeles County. Sun Valley has the largest average household size, while Palms has the smallest average household size in the Project Study Area.

Table 3-11. Households in the Project Study Area (2019)

Community[a]	Households	Average Household Size (persons per household)
Los Angeles County	3,316,795	3.0
City of Los Angeles	1,383,869	2.8
North Hills	6,954	3.8
Panorama City	15,783	3.6
Sun Valley	2,562	4.1
Lake Balboa	3,095	3.4
Van Nuys	43,229	3.0
North Hollywood	2,712	3.1
Encino	9,590	2.7
North Sherman Oaks	13,225	2.2
Sherman Oaks	16,052	2.2
Brentwood	14,204	2.2
Bel-Air	2,897	2.4
Beverly Crest	1,603	2.6
Westwood	18,349	2.2
West Los Angeles	26,363	2.2
City of Santa Monica	10,934	2.3
Mar Vista	6,483	2.3
Palms	4,570	2.1

Source: HTA, 2024; U.S. Census Bureau, 2020

[a] Data is provided for portions of the communities that are within the Project Study Area, except for data for Los Angeles County and the City of Los Angeles that is presented for the whole jurisdiction.

3.3.2.3 Housing Units

Table 3-12 lists the number of housing units that were owner and renter occupied in 2019 for Los Angeles County, City of Los Angeles, and the portions of the communities that are within the Project Study Area. Within the Project Study Area, North Hills, Panorama City, Lake Balboa, Van Nuys, North Hollywood, North Sherman Oaks, Sherman Oaks, Brentwood, Westwood, Sawtelle VA, West Los Angeles, Santa Monica, Mar Vista, and Palms had a higher percentage of housing units that were renter occupied, while Sun Valley, Encino, Bel-Air, and Beverly Crest had a higher percentage of housing units that were owner occupied. Compared to other communities in the Project Study Area, Bel-Air and Beverly Crest had the highest percentage of owner-occupied housing units and lowest percentage of renter-occupied housing units, while Lake Balboa and Van Nuys had the lowest percentage of owner-occupied housing units and highest percentage of renter-occupied housing units.

Table 3-12. Housing Units in the Project Study Area (2019)

Community[a]	Total Housing Units	Owner Occupied (% of Housing Units)[b]	Renter Occupied (% of Housing Units)[b]
Los Angeles County	3,542,800	45.8	54.2
City of Los Angeles	1,493,108	36.8	63.2
North Hills	7,074	36.5	63.5
Panorama City	16,352	34.0	66.0
Sun Valley	2,597	66.3	33.7
Lake Balboa	3,247	22.2	77.8

Community[a]	Total Housing Units	Owner Occupied (% of Housing Units)[b]	Renter Occupied (% of Housing Units)[b]
Van Nuys	45,088	26.3	73.7
North Hollywood	2,815	29.1	70.9
Encino	10,086	70.3	29.7
North Sherman Oaks	14,259	37.8	62.2
Sherman Oaks	17,467	39.5	60.5
Brentwood	15,477	46.2	53.8
Bel-Air	3,453	82.6	17.4
Beverly Crest	1,903	82.0	18.0
Westwood	21,549	32.1	67.9
Sawtelle VA	69	35.4	64.6
West Los Angeles	28,106	33.7	66.3
City of Santa Monica	11,848	36.3	63.7
Mar Vista	6,861	43.4	56.6
Palms	5,039	26.8	73.2

Source: HTA, 2024; U.S. Census Bureau, 2020

a. Data is provided for portions of the communities that are within the Project Study Area, except for data for Los Angeles County and the City of Los Angeles that is presented for the whole jurisdiction.

b. Percentage may not add up to 100 due to rounding.

3.3.2.4 HUD-Assisted Properties

A HUD Multi-Family Assisted property includes properties that receive HUD project-based assistance through its Section 8 rental assistance program; Section 202 Housing for Low-income Elderly; or Section 811 Housing for Persons with Disabilities programs; and formerly assisted multi-family properties with continuing use restrictions. Consultation with HUD resulted in identification of the HUD-assisted properties shown on Figure 3-8 and described below. The properties associated with Modified Alternative 5 will be determined during the upcoming design process.

- Orangewood Court Apartments located at 5050 Sepulveda Boulevard (Less than 100 feet from Alternatives 4 and 5)
- Diamond Head Apartments located at 1554 Vanowen Street (600 feet from Alternatives 1 and 3)
- Emerald Pointe Apartments located at 14600 Saticoy Street (700 feet from Alternative 6)
- Villa Valley Apartments located at 15950 Sherman Way (2,200 feet from Alternatives 1 and 3)
- Sherman Way Senior Housing located at 15864 Sherman Way (1,700 feet from Alternatives 1 and 3)
- VPH Adult Retirement Center located at 15211 Sherman Way (400 feet from Alternatives 4 and 5)
- Dickens Court located at 14955 Dickens Court (2,100 feet from Alternative 5)
- The Plaza Apartments located at 10980 Wellworth Avenue (Less than 150 feet from Alternatives 3, 4, 5, and 6)
- New Vista Post-Acute Care Center located at 1516 Sawtelle Boulevard (200 feet from Alternatives 1, 3, and 6)
- Pico Veteran Senior Housing located at 10961 West Pico Boulevard (700 feet from Alternatives 4 and 5)

Figure 3-8. HUD-Assisted Properties



Source: HTA, 2024

3.4 Cultural Resources

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Cultural Resources and Tribal Cultural Resources Technical Report* (Metro, 2025d). Cultural resources are protected by several federal, state, and local regulations, statutes, and ordinances. Cultural resources are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, and/or scientific importance. The National Historic Preservation Act (NHPA) (54 United States Code 300101 et seq.) and its implementing regulations (36 Code of Federal Regulations [CFR] 800) establish a program for the preservation of historic properties throughout the U.S. and provide a framework for identifying and treating historical and archaeological resources. Section 106 of the NHPA requires that federal agencies, or projects under federal jurisdiction, take into account the effect of an undertaking on properties listed in or eligible for listing in the National Register of Historic Places (NRHP).

Historic resources eligible for listing in the NRHP are considered "historic properties" and may include buildings, sites, structures, objects, and historic districts. A potential historic property less than 50 years of age may be eligible under NRHP Criteria Consideration G if it has exceptional significance, and it can be demonstrated that sufficient time has passed to understand its historical importance (NPS, 1997:43). To be eligible for listing in the NRHP, a property must also have integrity, which is defined as "the ability of a property to convey its significance." The NRHP recognizes seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association (NPS, 1997:44-45).

The NHPA's implementing regulations include a provision for early and effective communication with interested parties, such as Native American tribes. Under provision 36 CFR 800.2(c)(2)(ii)(A), the lead agency is responsible for contacting local Native American representatives and informing them of the undertaking's intent and nature. The Native American representative is then provided "a reasonable opportunity to identify its concerns about historic properties; advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance; articulate its views on the undertaking's effects on such properties; and participate in the resolution of adverse effects."

The Cultural Resources Resource Study Area (RSA) was delineated based on the proposed physical configuration of the project alternatives and MSF sites, and includes all proposed ROW and acquisition and construction areas; staging areas; and all parcels adjacent to permanent site improvements and facilities, including tunnel boring machine (TBM) launch sites, stations, and power substations; parking facilities; and MSF sites and buildings. Where new infrastructure requires above-grade elements, such as the overhead contact system, elevated structures, sound walls, stations, or other equipment, the built environment includes the first tier of parcels or buildings adjacent to the alignment footprint within a reasonable viewshed of the new construction. For historical resources, the built environment also includes property acquisitions and adjacent areas where the project alternatives have the potential to indirectly impact historical resources. The built environment covering the underground alignments was exempted for historical resources because no construction impacts or permanent visual impacts to these resources would occur. The Archaeological Resources RSA, including tribal resources, encompasses areas where temporary or permanent ground disturbance may occur. Significant to tribal representatives through consultation, the Tribal Resources RSA includes a buffer adjacent to the alignment footprint within a reasonable viewshed of the new construction. The Cultural Resource RSAs for the project alternatives are shown on Figure 3-9. through Figure 3-13.

Figure 3-9. Alternative 1: Cultural Resources Resource Study Area Overview



Source: HTA, 2024

Figure 3-10. Alternative 3: Cultural Resources Resource Study Area Overview



Source: HTA, 2024

Figure 3-11. Alternative 4: Cultural Resources Resource Study Area Overview



Source: HTA, 2024

Figure 3-12. Alternative 5: Cultural Resources Resource Study Area Overview



Source: HTA, 2024

Figure 3-13. Alternative 6: Cultural Resources Resource Study Area Overview



Source: HTA, 2024

3.4.1 Built Environment

Archival research and field surveys identified over 100 federal, state, and local historic resources, which are listed in Table 3-13. There are 68 federally recognized historical resources that may be affected by Alternative 1. Research also identified 64 historical resources associated with Alternative 3, 65 historical resources associated with Alternative 4, 54 historical resources associated with Alternative 5, and 53 historical resources associated with Alternative 6. Refer to Appendix A of the *Sepulveda Transit Corridor Project Cultural Resources and Tribal Cultural Resources Technical Report* for maps showing the location of these resources (Metro, 2025d). The historical resources associated with Modified Alternative 5 will be determined during the upcoming design process.

Table 3-13. Historical Resources in the Built Environment Resource Study Area

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
1	13812 Saticoy Street	NA	13812 Saticoy Street	The industrial building located at 13812 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1956	1, 3, 4, 5, 6
2	13914 Saticoy Street	NA	13914 Saticoy Street	The industrial building located at 13914 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1958	1, 3, 4, 5, 6
3	13938 Saticoy Street	NA	13938 Saticoy Street	The industrial building located at 13938 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1959	1, 3, 4, 5, 6
4	13942 Saticoy Street	NA	13942 Saticoy Street	The industrial building located at 13942 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1959	1, 3, 4, 5, 6
5	Southern Pacific Railroad Warehouse	NA	7766 Van Nuys Boulevard	The Southern Pacific Railroad Warehouse located at 7766 Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the post-World War II railroad development and the Southern Pacific Railroad's transition to diesel locomotive engines.	1947	1, 3, 4, 5, 6
6	14704 Raymer Street	NA	14704 Raymer Street	The industrial property located at 14704 Raymer Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1954	1, 3, 4, 5
7	14746 Raymer Street	NA	14746 Raymer Street	The industrial property located at 14746 Raymer Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1967	1, 3, 4, 5
8	The Performing Arts Center	NA	7735 Sepulveda Boulevard	The Performing Arts Center located at 7735 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Googie design.	1961	4, 5
9	Valley Animal Hospital	NA	7721 Sepulveda Boulevard	The Valley Animal Hospital building located at 7721 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1968	4, 5

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
10	Lancer Lion II Apartments	NA	7657 Sepulveda Boulevard	The Lancer Lion II Apartments located at 7657 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the Live Better Electrically and Medallion Homes program and the electrical history of Los Angeles.	1964	4, 5
11	Air Raid Siren No. 110	NA	Northeast corner of Covello Street and Sepulveda Boulevard	The Air Raid Siren No. 110 is eligible for listing in the NRHP and CRHR and is significant under Criterion A for its association with World War II and Cold War military infrastructure.	1940	4, 5,
12	Sherman Way Street Trees	NA	Along either side of Sherman Way between Woodley Avenue and Sherman Circle	The Sherman Way Street Trees are eligible for listing in the local register and are significant as representing the street planting plan for Sherman Way (paved between 1911 and 1913), a major streetcar and automobile route that was the main corridor from central Los Angeles to Van Nuys.	1911	1, 3, 4, 5
13	6833 Sepulveda Boulevard	NA	6833 Sepulveda Boulevard	The multiple-family building located at 6833 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1967	4, 5
14	Van Nuys Boulevard Street Trees	NA	Between Sherman Way along Sherman Circle and Hamlin Street on Van Nuys Boulevard	The Van Nuys Boulevard Street Trees are eligible for listing in the local register significant as representing the street planting plan for Sherman Way (paved between 1911 and 1913; parts of which were renamed Van Nuys Boulevard and Chandler Boulevard), which was the main automobile and streetcar corridor from central Los Angeles to Van Nuys.	1911	1, 3, 4, 5, 6
17	6160 Sepulveda Boulevard	NA	6160 Sepulveda Boulevard	The industrial property located at 6160 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar industrial development of Van Nuys.	1953	4, 5
18	Air Raid Siren No. 117	NA	South side of Oxnard Street, west of Sepulveda Boulevard	The Air Raid Siren No. 117 is eligible for listing in the NRHP and CRHR and is significant under Criterion A for its association with World War II and Cold War military infrastructure.	1940	3, 4, 5

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
19	Cabana Motel	NA	5764 Sepulveda Boulevard	The Cabana Motel located at 5764 Sepulveda Boulevard is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion A/1 for its association with Los Angeles' postwar car culture and Criterion C/3 for its Modern design.	1946	3, 4, 5
20	El Cortez Motel	NA	5746 Sepulveda Boulevard	The El Cortez Motel located at 5746 Sepulveda Boulevard is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion A/1 for its association with Los Angeles's postwar car culture and Criterion C/3 for its Modern design.	1949	3, 4, 5
21	5724 Sepulveda Boulevard	NA	5724 Sepulveda Boulevard	The multiple-family building located at 5724 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1959	3, 4, 5
22	Kauai Surf	NA	15232 Martha Street	The Kauai Surf apartments building located at 15232 Martha Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1962	3, 4, 5
23	5450 Sepulveda Boulevard	NA	5450 Sepulveda Boulevard	The residential building located at 5450 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Monterey design.	1953	3, 4, 5
24	Cathedral of St. Mary Church	NA	5335 N. Sepulveda Boulevard	The Cathedral of St. Mary Church located at 5335 N. Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Byzantine Revival design.	1961	3, 4, 5
25	Lt. Patrick H. Daniels United States Army Reserve Center	NA	5161 Sepulveda Boulevard	The Lt. Patrick H. Daniels United States Army Reserve Center building located at 5161 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the Army Reserves in Los Angeles during the Vietnam War and under Criterion C/3 for its Modern design.	1959	3, 4, 5
26	11304 Isleta Street	NA	11304 Isleta Street	11304 Isleta Street is eligible for listing in the NRHP, CRHR, and local register under Criterion C/3 as an excellent example of Modern architecture.	1948	1
27	4700 Sepulveda Boulevard	NA	4700 Sepulveda Boulevard	The multiple-family building located at 4700 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Eclectic Streamline Moderne design.	1952	3, 4, 5

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
28	4737 Orion Avenue	NA	4737 Orion Avenue	The residential building located at 4737 Orion Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1964	1, 3, 4
29	4714 Orion Avenue	NA	4714 Orion Avenue	The residential building located at 4714 Orion Avenue is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1964	1, 3, 4
30	15233 Ventura Boulevard	NA	15233 Ventura Boulevard	The commercial property located at 15233 Ventura Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its International-style design.	1964	1, 3, 4
31/33	15300 Ventura Boulevard	NA	15300 Ventura Boulevard	The building is individually eligible for listing in the NRHP and is significant under Criterion C for its International-style design.	1964	1, 3, 4, 5
32	Sherman Oaks Circle Historic District	NA	Between Firmament Avenue and I-405	The Sherman Oaks Circle Historic District is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 as a residential subdivision that reflects both pre-and post-World War II residential development and architectural styles.	1928-1960	1, 3
34	15250 Ventura Boulevard	NA	15250 Ventura Boulevard	The commercial property located at 15250 Ventura Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its International-style design.	1970	1, 3, 4, 5
35	Dai Siani Ristorante (Sherwood Coiffeurs)	NA	4511 Sepulveda Boulevard	The building is eligible under NRHP and CRHR Criterion C/3 and is significant for its Modern design.	1950	1, 3, 4, 5
36	4506 Saugus Avenue	NA	4506 Saugus Avenue	The multiple-family building located at 4506 Saugus Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Contemporary design.	1977	3, 5
37	15224 Dickens Street	NA	15224 Dickens Street	The multiple-family residential building located at 15224 Dickens Street is eligible for listing in the NRHP and CRHR; significant under Criterion C/3 for its Colonial Revival design.	1948	1, 3, 4, 5
38	15564 Briarwood Drive	NA	15564 Briarwood Drive	The residential building located at 15564 Briarwood Drive is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern Post and Beam design.	1956	3, 4

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
39	15573 Briarwood Drive	NA	15573 Briarwood Drive	The residential building located at 15573 Briarwood Drive is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern Post and Beam design.	1955	4
40	3754 N Scadlock Lane	NA	3754 N Scadlock Lane	The residential building located at 3754 N Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1958	1, 3, 4
41	3700 N Scadlock Lane	NA	3700 N Scadlock Lane	The residential building located at 3700 N Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1958	1, 3, 4
42	3666 N Scadlock Lane	NA	3666 N Scadlock Lane	The residential building located at 3666 N Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1957	1, 3, 4
43	3601 Scadlock Lane	NA	3601 Scadlock Lane	The residential building located at 3601 Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1958	1, 3
44	Bill's Valley Car Wash	NA	7530 Van Nuys Boulevard	The Bill's Valley Car Wash located at 7530 Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its role in the commercial and industrial development of Van Nuys and under Criterion C/3 for its Googie design.	1962	6
45	Tacos Mexico	NA	7140 Van Nuys Boulevard	The Tacos Mexico building located at 7140 Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 as a late, and rare example of Mimetic architecture in Los Angeles; originally designed as an Arby's restaurant and resembled a covered wagon.	1968	6
46	Bank of America	NA	6551 N Van Nuys Boulevard	The Bank of America building located at 6551 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its New Formalist design.	1967	6

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
47	Van Nuys Utilities Center	NA	6550 N Van Nuys Boulevard	The Van Nuys Utilities Center located at 6550 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 as an unusual example of a Department of Water and Power office building that included an auditorium for demonstrating new electrical appliances, professionals who offered advice and assistance for remodeling homes, displays of the latest home appliances, and a customer service center; and under Criterion C/3 for its Modern design.	1956	6
48	Firestone	NA	6530 N Van Nuys Boulevard	The Firestone building located at 6530 N Van Nuys Boulevard is eligible for local register listing and is significant as reflecting the corporate architecture created for Firestone, which has been in continuous operation at this location since 1946.	1946	6
49	Hart's Pawn Shop	NA	6362 N Van Nuys Boulevard	The commercial building located at 6362 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its commercial block design.	1936	6
50	Owl-Rexall Drug Co.	NA	6353 N Van Nuys Boulevard	The Owl-Rexall Drug Co. building located at 6353 N Van Nuys Boulevard is eligible for local register listing and is significant as a rare example of a 1930s variety store in Van Nuys that illustrates the rapid commercial development of Van Nuys Boulevard during the prewar period.	1939	6
51	Chase Bank	NA	6300 N Van Nuys Boulevard	The Chase Bank building located at 6300 N Van Nuys Boulevard is eligible for local register listing and is significant as an example of Mid-century Modern commercial architecture with New Formalist elements; designed by notable local architect Peter J. Holdstock.	1968	6
52	Happy Dogs	NA	6235 N Van Nuys Boulevard	The Happy Dogs restaurant is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Googie design.	1954	6
53	6203 N Van Nuys Boulevard	NA	6203 N Van Nuys Boulevard	The commercial building located at 6203 N Van Nuys Boulevard is eligible for local register listing and is significant as an example of a 1920s mixed-use building located on a prominent corner on a historic streetcar route.	1926	6

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
54	San Fernando Valley Administrative Center Historic District (Van Nuys State Office Building, Van Nuys State Building)	NA	6162 N Van Nuys Boulevard	The Van Nuys State Office Building is a contributing resource to the San Fernando Valley Administrative Center Historic District which is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 as the City of Los Angeles' government administrative center for the Valley, developed primarily during the postwar period.	1984	6
55	5958 Van Nuys Boulevard	NA	5958 Van Nuys Boulevard	The commercial building located at 5958 Van Nuys Boulevard is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion C/3 for its One-Part Commercial Block design.	1937	6
56	Rob's Car Wash	NA	5328 N Van Nuys Boulevard	The Rob's Car Wash located at 5328 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Googie design.	c. 1960	6
57	Stanley Burke's/Corky's Restaurant and Sign; The Lamplighter	NA	5037-5053 North Van Nuys Boulevard	The local register-listed Stanley Burke's/Corky's Restaurant and Sign (LAHCM No. 1215) is significant under local register criteria as a purpose-built 1950s diner on a major commercial corridor in Sherman Oaks.	1958	6
58	Sherman Oaks Plaza Building	NA	4955 N Van Nuys Boulevard	The Sherman Oaks Plaza Building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 as late example of a Corporate International-style office building designed by notable local architect Maxwell Starkman.	1968	6
59	4449 Van Nuys Boulevard	NA	4449 Van Nuys Boulevard	The commercial building located at 4449 Van Nuys Boulevard is eligible for local register listing and is significant for its Two-Part Commercial Block design.	1947	6
60	Deauville House	NA	2212 N Linda Flora Drive	The Deauville House is eligible for local register listing significant for its Storybook Ranch design and as a work of a master architect, Earl C. Rahn.	1951	4, 5
61	1711 N Stone Canyon Rd.	NA	1711 N Stone Canyon Road	The residential building located at 1711 N Stone Canyon Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1961	4, 5

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
62	1780 N Stone Canyon Rd.	NA	1780 N Stone Canyon Road	The residential building located at 1780 N Stone Canyon Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Ranch design.	1961	4, 5
63	661 N Stone Canyon Rd.	NA	661 N Stone Canyon Road	The residential building located at 661 N Stone Canyon Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	1935	4, 5
64	Miller Residence	NA	10615 W Bellagio Road	The Miller Residence located at 10615 W Bellagio Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival commercial design and as the work of a master, Wallace Neff. The resource was identified through the Los Angeles Historic Resources Inventory. The resource is not visible from the public ROW. For this Project, this resource is considered a historical resource for the purposes of CEQA.	1939	4, 5
65	Ethel Guiberson/ Hannah Carter Japanese Garden	NA	10619 West Bellagio Road	The local register-listed Ethel Guiberson/Hannah Carter Japanese Garden (LAHCM No. 1141) is significant under local register criteria for its landscape architecture.	1961	4, 5
66	The John Thomas Dye School	NA	11414 Chalon Road	The John Thomas Dye School is eligible for the listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with educational development in Bel-Air, and under Criterion B/2 for its association with the professional lives and careers of Cathryn Robberts Dye and John Thomas Dye II.	1949	3
67	10940 Weyburn Avenue	NA	619 Sarbonne Road	The residential building located at 619 Sarbonne Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Streamline Moderne design.	1941	3
68	10811 Ambazac Way	NA	10811 Ambazac Way	The residential building located at 10811 Ambazac Way is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Monterey Revival design.	1931	3
69	121 N Udine Way	NA	121 N Udine Way	The residential property located at 121 N Udine Way was identified through the Los Angeles Historic Resources Inventory. The resource is not visible from the public ROW. For this Project, this resource is considered a historical resource for the purposes of CEQA.	1929	4, 5, 6

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
70	120 N Udine Way	NA	120 N Udine Way	The residential property located at 120 N Udine Way was identified through the Los Angeles Historic Resources Inventory. The resource is not visible from the public ROW. For this Project, this resource is considered a historical resource for the purposes of CEQA.	1936	4, 5, 6
71	Marymount High School (Main Administration Building, including Chapel and Auditorium	NA	10643-10685 Sunset Boulevard and 101-121 Marymount Place	The local register-listed Marymount High School (Main Administration Building, including Chapel and Auditorium) (LAHCM No. 254) is significant under local register criteria for its design and local significance.	1961	3, 4, 5, 6
72	UCLA Historic District	P-19-175802	Encompasses the east-west axis of the campus and is bounded by Westwood Boulevard and Circle Drive	The district includes 15 contributing resources and landscape features, and two non-contributing resources. The district is significant under NRHP Criterion A as the first public institution of higher education in Southern California, and under NRHP Criterion C for its design.	1929-1937	1, 3, 4, 5, 6
73	UCLA Ackerman Hall	P-19-190591	308 Westwood Plaza	The building is individually eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the history of UCLA and under Criterion C/3 for its Modern design.	1961	1, 3, 4, 5, 6
74	11752 Bellagio Rd.	NA	11752 Bellagio Road	The multiple-family residential building located at 11752 Bellagio Road is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1974	1
75	11734 Bellagio Rd.	NA	11734 Bellagio Road	The multiple-family residential building located at 11734 Bellagio Road is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1951	1

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
76	11728 Bellagio Rd.	NA	11728 Bellagio Road	The multiple-family residential building located at 11728 Bellagio Road is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1953	1
77	650 N. Sepulveda Boulevard	NA	650 N. Sepulveda Boulevard	The commercial building located at 650 N. Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	1947	1
78	Acanto Street Historic District	NA	Acanto Street	The Acanto Street Historic District is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern Stucco Box/Dingbat designs.	1948-1957	1
79	11371 Ovada Place	NA	11371 Ovada Place	The residential building located at 11371 Ovada Place is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Ranch design.	1952	1
80	11378 Ovada Place	NA	11378 Ovada Place	The commercial property located at 11378 Ovada Place is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Classical Revival design.	1948	1
81	11398 Thurston Circle	NA	11398 Thurston Circle	The residential building located at 11398 Thurston Circle is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Cape Cod/Ranch design.	1976	1
82	Holiday Inn (Hotel Angeleno)	NA	170 Church Lane	The building is eligible for listing in NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1970	1
83	University Crest Historic District		Bounded by Sunset Boulevard to the north, Veteran Avenue to the east, Montana Avenue to the south, and Sepulveda Boulevard to the west	The University Crest Residential Historic District is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 as an excellent example of residential suburban planning and development from the early automobile era in Westwood, and under Criterion C/3 for its cohesive collection of Period Revival residential architecture.	1920-1959	1

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
84	11284 Montana Avenue	NA	11284 Montana Avenue	The multiple-family residential building located at 11284 Montana Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1953	1
85	522 S. Sepulveda Boulevard	NA	522 S. Sepulveda Boulevard	The residential building located at 522 S. Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Contemporary design.	1968	1, 3
86	West Los Angeles Veterans Affairs Historic District and National Cemetery	P-19-173043	11301 Wilshire Boulevard	The historic district is listed in the NRHP under Criterion A and C for its association with the government's development of Veterans health care and for its distinctive architecture. The district includes 66 contributing resources and 44 non-contributing resources. The Wadsworth Chapel (Building 20) and Trolley Building (Building 66), which are both outside the Cultural Resources Study Area for Alternatives 1 and 3, are contributing resources to the district and are also individually eligible for the NRHP.	1888	1, 3
87	UCLA Veterans Rehabilitation Services	P-19-189982	1000 Veteran Avenue	The UCLA Veterans Rehabilitation Services building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Contemporary design and as a work of a master, Welton Beckett and Associates.	1960	1, 3, 4, 5, 6
88	Engine Company #37	P-19-173149	1090 Veteran Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 and C/3 for its association with the Veterans Service Administration during World War II and its design.	1942	1, 3
89	Campbell's Book Store		10918 Le Conte Avenue	The commercial building located at 10918 Le Conte Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion c/3 for its Streamline Moderne design.	1933	1, 4, 5, 6
90	Holmby Building	NA	921 Westwood Boulevard	The building (LAHCM No. 1223) is significant under local register criteria as an excellent example of Mediterranean Revival commercial architecture in Westwood Village, and as the work of master architect Gordon B. Kaufmann.	1929	1, 3, 4, 5, 6
91	924 Westwood Boulevard	NA	924 Westwood Boulevard	The commercial building located at 924 Westwood Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its international design.	1971	1, 3, 4, 5, 6

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
92	California Pizza Kitchen	NA	1001 Broxton Avenue	The commercial building at 1001 Broxton Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the original development of Westwood by the Janss Corporation and under Criterion C/3 for its Spanish Colonial Revival commercial architecture.	1931	1, 3
93	10940 Weyburn Avenue		10940 Weyburn Avenue	The commercial building located at 10940 Weyburn Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Spanish Colonial Revival design.	1934	1, 3, 4, 5, 6
94	Chatam Restaurant		10930 Weyburn Avenue	The Chatam Restaurant building located at 10930 Weyburn Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its One-Part Commercial Block design.	1940	1, 3, 4, 5, 6
95	Desmond's	NA	1001 Westwood Boulevard	The commercial building at 1001 Westwood Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival commercial design.	1942	1, 4, 5, 6
96	Bullock's Department Store	NA	1000 S Westwood Boulevard	The Bullock's Department Store is eligible for local register listing and is significant as an individual building that represents a very early phase of commercial development in a neighborhood, and as a rare example of its type.	1932	1, 3, 4, 5, 6
97	Kelly Music Building/Alice's Restaurant	NA	1041 Westwood Boulevard	The Kelly Music Building/Alice's Restaurant (LAHCM No. 1201) is significant under local register criteria for its association with the early development of Westwood Village and as one of the earliest works by master architect Paul Revere Williams.	1929	1, 4, 5, 6
98	Penney's	NA	1056 Westwood Boulevard	The Penney's building at 1056 Westwood Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Spanish Colonial Revival commercial architecture.	1937	1, 4, 6
99	Janss Investment Company Building	NA	1081 Westwood Boulevard	The Janss Investment Company Building (LAHCM No. 364) is significant under local register criteria for its Mediterranean Revival design.	1930	1, 4, 5, 6
100	Glendale Federal Savings and Loan Association	NA	1090 Westwood Boulevard	The Glendale Federal Savings and Loan Association building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1943	1, 4, 5, 6

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
101	Westwood Village Streetlight	NA	Westwood and Kinross, northwest corner, adjacent to Janss Investment Company Building	The Westwood Village Streetlight is eligible for local register listing and is significant as one of the last remaining ornamental streetlights that were installed throughout Westwood Village.	1926	1, 4, 5, 6
102	Bratskeller Egyptian Theater (Ralphs Grocery Store)	P-19-174110	1142 Westwood Boulevard	The Bratskeller Egyptian Theater (Ralphs Grocery Store) building (LAHCM No. 360) is significant for its Mediterranean Revival design and as one of the first buildings constructed in the Westwood area.	1929	1, 4, 5, 6
103	Gayley Center	NA	1101 Gayley Avenue	The Gayley Center is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Late Modern commercial architecture and as a work of noted architects Krisel-Shapiro & Associates.	1979	1, 3, 4, 5, 6
104/105	Linde Medical Building	P-19-189273	10921 Wilshire Boulevard	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its International-style design.	1962	3, 4, 5, 6
106	Tishman Building	NA	10950 W Wilshire Boulevard	The Tishman Building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Corporate Modern high-rise architecture and as the work of master architect Welton Becket.	1971	1, 3, 4, 5, 6
107	1220 Veteran Avenue	P-19-173150	1220 Veteran Avenue	The building is individually eligible for listing in the NRHP and is significant under Criterion C for its design and as a work of a master architect, George J. Fosdyke.	1936	1, 3, 6
108	Westwood Federal Building	P-19-189274	11000 Wilshire Boulevard	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its New Formalist design and association with master architects of Welton Becket and Associates, with Paul R. Williams and A. C. Martin and Associates.	1966	1, 3
109	LADWP Westwood Distribution Headquarters	P-19-173148	1400 S Sepulveda Boulevard	The LADWP Westwood Distribution Headquarters is considered a historical resource for the purposes of CEQA.	1932	1, 3, 5, 6
110	1400 Greenfield Avenue		1400 Greenfield Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1952	1, 3, 4, 5, 6
111	1410 S Bentley Avenue		1410 S Bentley Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1964	1, 6

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
112	1410 Camden Avenue		1410 Camden Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	1936	1, 6
113	1418 S Bentley Avenue		1418 S Bentley Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1965	1, 6
115	1511 S Bentley Avenue	NA	1511 S Bentley Avenue	The multiple-family building located at 1511 S Bentley Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Contemporary and Stucco Box/Dingbat design.	1972	6
116	1516 Pontius Avenue	NA	1516 Pontius Avenue	The commercial building located at 1516 Pontius Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1972	6
117	1527 Pontius Avenue	NA	1527 Pontius Avenue	The commercial building located at 1527 Pontius Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1960	6
118/119	General Telephone Company Building	NA	1544 Cotner Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Art Deco design.	circa 1953	3, 6
120	Louise Green Millinery Co. Building	NA	1616 Cotner Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1973	1, 3
121	Western Electric Supply Co. Building	NA	1620 Cotner Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1966	1, 3
122	Photo Electronics Corp. Building	NA	1944 Cotner Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1967	1, 3
123/124	Dual Ultimate Pharmacy	NA	2020 Cotner Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1966	3
125	2114 Cotner Avenue	NA	2114 Cotner Avenue	The industrial building located at 2114 Cotner Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	1969	1, 3

Map Reference #	Resource Name	Primary Number	Location	Eligibility/Significance Statement	Construction Year	Alternative
126/127	Big Tommy's	NA	11285 and 11289 W. Pico Boulevard	The Big Tommy's restaurant building is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with Los Angeles commerce and car culture.	1957; 1946	1
128	2467 Sawtelle Boulevard	NA	2467 Sawtelle Boulevard	The multiple-family residential building located at 2467 Sawtelle Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	1962	1, 3
129	2435 Military Avenue	NA	2435 Military Avenue	The commercial building located at 2435 Military Avenue is eligible for listing in the local register for its Modern and Contemporary design.	1960	3, 4, 5
130	West End Hotel	NA	1538 S Sawtelle Boulevard	The West End Hotel located at 1538 Sawtelle Boulevard is eligible for listing in the local register and is significant for its rare and intact projecting blade signage.	c. 1930	6
131	11271 W Massachusetts Avenue	NA	11271 W. Massachusetts Avenue	The 11271 W Massachusetts Avenue building is eligible for local register listing and is significant as a rare surviving example of a late 1920s commercial building in West Los Angeles.	1920	6
132	Laemmle Theater	NA	11521 Santa Monica Boulevard	The Laemmle Theater located at 11521 Santa Monica Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Italian Renaissance design.	1923	6
133	313 S Church Lane	NA	313 S. Church Lane	313 S Church Lane is eligible for listing in the NRHP and CRHR under Criterion C/3 at the local level, as well as for the local register, as an excellent example of Modern architecture.	1949	1

Source: HTA, 2024

CRHR = California Register of Historical Resources
LAHCM = Los Angeles Historic-Cultural Monument
NA = not applicable
NRHP = National Register of Historic Places

A South Central Coastal Information Center (SCCIC) records search identified 25 previously recorded built environment resources associated with Alternative 1. Research also identified 22 historical resources associated with Alternative 3, 17 historical resources associated with Alternative 4, 17 historical resources associated with Alternative 5, and 15 historical resources associated with Alternative 6. The SCCIC resources for each alternative are listed in Table 3-14. The historical resources associated with Modified Alternative 5 will be determined during the upcoming design process.

Table 3-14. SCCIC Previously Recorded Built Environment Resources in the Resource Study Area

Primary Number (P-19-)	Resource Name	Construction Date/Time Period	Eligibility Evaluation/NRHP Status Code	Alternative
173043	Los Angeles Veterans Administration Medical Center Historic District and National Cemetery	1923-1953	3	1, 2, 3
173148	LADWP Westwood Distribution	1933	7N	1, 3, 6
173149	Engine Co. #37	c. 1942	7	1, 3
173150	1222 Veteran Avenue	1938	7N	1, 3, 6
173163	UCLA Greenhouse Complex Building #1	1930-1955	6 - Demolished	1, 3, 4, 5, 6
173164	UCLA Greenhouse Complex Building #2	1930-1955	6 - Demolished	1, 3, 4, 5, 6
173165	UCLA Greenhouse Complex Building #3	1930-1955	6 - Demolished	1, 3, 4, 5, 6
173166	UCLA Greenhouse Complex Building #4	1930-1955	6 - Demolished	1, 3, 4, 5, 6
173535	Fox Westwood Village Theatre	1931	7	1, 4, 5, 6
174110	Ralphs Grocery Store	1933	1S	1, 4, 5, 6
175802	UCLA District	1929-1935	2S2	1, 3, 4, 5, 6
180601	Daughters of the American Revolution Trees	1929	6	1, 3, 4, 5, 6
187565	Mulholland Drive over SR 405 Bridge	1959	3	1, 3
187951	USAR Center, Daniels Hall	1958	7	1, 3, 4, 5
188093	Sepulveda Flood Control Dam	1939	3	1, 3
188227	Weyburn-Classic Building	1936	6Y	1, 3, 4, 5, 6
188473	7102 Sepulveda Boulevard	1963	6Y	4, 5
188905	Sepulveda Boulevard Bridge #53-1099S	1959	6Y	1, 3
189273	Linde Medical Building	1962/1968	8	1, 3, 4, 5, 6
189274	Westwood Federal Building	1966	3	1, 3
189764	Westdale Savings and Loan	1961	3	4, 5
189982	UCLA, Rehabilitation Center	1963	3S	1, 3, 6
190024	11154 Exposition Boulevard	1944	6Y	1, 3
190024	11151 Exposition Boulevard	1941	6Y	4
190024	11150 Exposition Boulevard	1940	6Y	5
190025	11162 Exposition Boulevard	1942	6Z	1, 3
190025	11159 Exposition Boulevard	1939	6Z	4
190025	11158 Exposition Boulevard	1938	6Z	5
190026	11174 Exposition Boulevard	1941	6Z	1, 3
190026	11171 Exposition Boulevard	1938	6Z	4
190026	11170 Exposition Boulevard	1937	6Z	5
190058	641-647 N Sepulveda Boulevard	1965	6Y	1
190042	Upper Stone Canyon Reservoir	1954	6Y	6
190591	UCLA Ackerman Hall	1966	2S7	1, 3, 4, 5, 6

Source: HTA, 2024

NRHP = National Register of Historic Places

SCCIC =South Central Coastal Information Center
Status Codes:

1S Individual property listed in National Register (NR) by the Keeper. Listed in the California Register (CR).
2D Contributor to a district determined eligible for NR by the Keeper. Listed in the CR.
2S2 Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.
3 Appears eligible for NR to person completing or reviewing form.
3S Appears eligible for NR as an individual property through survey evaluation.
3CS Appears eligible for CR as an individual property through survey evaluation.
6 Determined ineligible for NR.
6Y Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or Local Listing.
6Z Found ineligible for NR, CR or Local designation through survey evaluation.
7 Not evaluated.
7N Needs to be reevaluated (formerly NR Status Code 4).

3.4.2 Archaeological and Tribal Cultural Resources

The specialized RSA for archaeological and tribal cultural resources was delineated based on the proposed physical configuration of the project alternatives and MSF sites. The RSA is defined as the geographic area where the Project has potential to have direct and indirect impacts to resources. The RSA includes areas where temporary or permanent ground disturbance may occur, such as all proposed ROW, acquisition and construction areas, TBM launch sites; stations; power substations; parking facilities; and MSF sites. Where new above-grade elements, such as the overhead contact system or elevated structures, are proposed in landscapes identified as significant to tribal representatives through consultation, the RSA includes a buffer adjoining the alignment within a reasonable viewshed of the new construction. The buffer is included because the introduction of new infrastructure would have the potential to cause new visual, audible, or atmospheric intrusions on the setting of adjacent resources.

The RSA north and south of the Santa Monica Mountains is an alluvial depositional environment. Geologic mapping indicates that areas are primarily situated on Late Holocene to Pleistocene-aged alluvial fan deposits. The young age of the Holocene soils indicates that the sediments that they formed on were deposited in the last 5,000 years and, therefore, have a moderate potential for burial of older archaeological deposits. Generally, the younger a surficial alluvial landform is, the higher its potential for preservation of buried archaeological deposits. People are known to have inhabited the region beginning at least 13,000 years ago, indicating soils from the Late Pleistocene through the late Holocene have potential to contain archaeological resources. Older Pleistocene soils present at depth are not likely to contain archaeological resources. In addition, it has been demonstrated that archaeological sites are not distributed randomly across the landscape, but tend to correlate with certain environmental factors, including slope (flatter being more positively correlated) and distance to water and other resources.

No archaeological resources were observed during cultural field surveys because the majority of the RSA is paved. Exposed surfaces available for inspection consisted primarily of landscape features, which are often small and contain heavily disturbed soils or imported fill. An SCCIC records search is summarized in Table 3-15. The search identified ten resources associated with each project alternative. The archaeological resources associated with Modified Alternative 5 will be determined during the upcoming design process.

Table 3-15. SCCIC Previously Recorded Archaeological Resources in the Resource Study Area

Primary Number (P-19-)	Resource Description	Construction Date/Time Period	Eligibility Evaluation/NRHP Status Code	Alternative
003803	Santa Monica Air Line Railroad Segment	1875	3S	1, 3, 4, 5, 6
000382	Kuruvungna/Serra Springs – Native American Village; historically significant springs; historic high school; prehistoric and historic artifacts and historic foundations	Prehistoric; 1770s; 1924-1960s	5	1, 3, 4, 5, 6
003336	Historic refuse deposit	Circa 1850s to 1900	7	1, 3, 4, 5, 6
004667	Historic refuse deposit	1929-1935	7	1, 3, 4, 5, 6
004668	Historic refuse deposit	1940-1960	6	1, 3, 4, 5
004669	Prehistoric shell and groundstone; historic refuse deposit; brick-lined dry well	Prehistoric; 1910s-1960s	7	1, 3, 4, 5, 6
004670	Historic refuse deposit	1931-1968	7	3, 6
004864	Historic refuse deposit	1880-1920	7	3, 4, 5, 6
004865	Historic refuse deposit	1899-1906	7	3, 4, 5, 6
100029	Isolated sun colored amethyst glass fragment	Historic	6Z	1, 3, 4, 5, 6

Source: HTA, 2024

NRHP = National Register of Historic Places
SCCIC =South Central Coastal Information Center
Status Codes:
3S Appears eligible for NR as an individual property through survey evaluation.
5 Recognized as historically significant by local government.
6 Determined ineligible for listing in the NRHP.
6Z Found ineligible for NRHP, CRHR, or local designation through survey evaluation.
7 Not evaluated.

No documented villages have been recorded within the RSA. However, the village of *Koruuvanga* is located within 1 mile of all project alternatives, and the village of *Siutcanga* is located approximately 2 miles west of the northern end of the RSA. Both villages were visited by the Portolá expedition in August of 1769, contain burial grounds, retain an archaeological footprint, and continue to be significant places to tribes of the greater Los Angeles area. Archaeological investigations and construction monitoring in the vicinity of these locations have encountered burials and material culture consistent with a long-term habitation site.

No formally recorded indigenous travel routes have been documented within the RSA. A review of ethnographic literature, historic maps, and comments provided by tribal representatives indicates that Sepulveda Pass constitutes an important travel corridor.

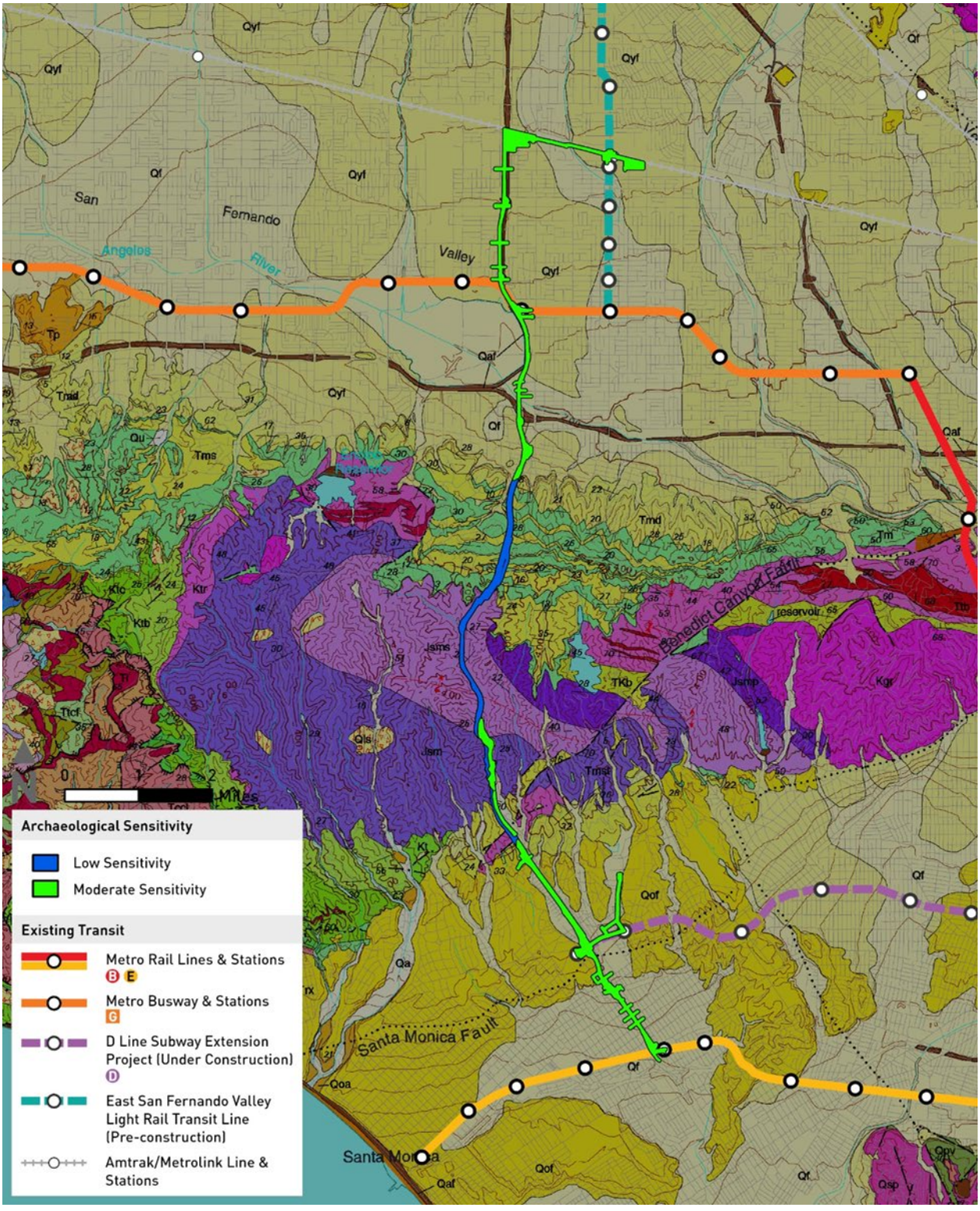
All of the project alternatives are in proximity to several water courses that are important to Gabrieliño tribes. The northern portion of the RSA is intersected by the Los Angeles River just north of the Santa Monica Mountains in an area just east of where a confluence of drainages meets the river. To the east of the RSA, this area is now referred to as the Sepulveda Basin, and multiple prehistoric archaeological sites have been documented in the vicinity. The Sepulveda Pass also historically has had water running through it. There are several springs mapped near the southern portion of the RSA. These riparian environments would have provided ideal locations for the acquisition of a variety of resources, and Native people would have been likely to spend time in these areas. Though many of the water courses

have been eradicated or channelized, historically they would have provided sources of fresh water that created ideal conditions for certain plant resources and local fauna. Habitation sites and activity areas were also commonly established near reliable sources of fresh water.

Additionally, a 2018 archaeological sensitivity analysis of the VA campus suggests a third site of Native American origin may be present in the vicinity (Onken et al., 2018). As part of an environmental study undertaken in support of an update to the Master Plan for the Veterans Affairs Greater Los Angeles Healthcare System campus, Duke Cultural Resources Management conducted an archaeological sensitivity analysis to determine what parts of the VA campus have high, moderate, low, or very low potential to encounter previously unidentified archaeological resources (Onken et al., 2018). This study references a 2015 archaeological monitoring report by Abdo-Hintzman and Mirro that reported on the identification of scattered marine shell fragments on a Pleistocene terrace scarp interpreted to be the displaced and redeposited remains of a Native American shell midden site originally within the campus boundary. The sensitivity model indicated that approximately 17 percent of the campus exhibits Holocene age soils that have increased potential for buried prehistoric archaeological deposits. Sensitivity ranking also considered proximity to water sources and previously recorded resources. Full-time or spot-check archaeological monitoring or buried site testing was recommended for all areas except those identified as having very low sensitivity (Onken et al., 2018).

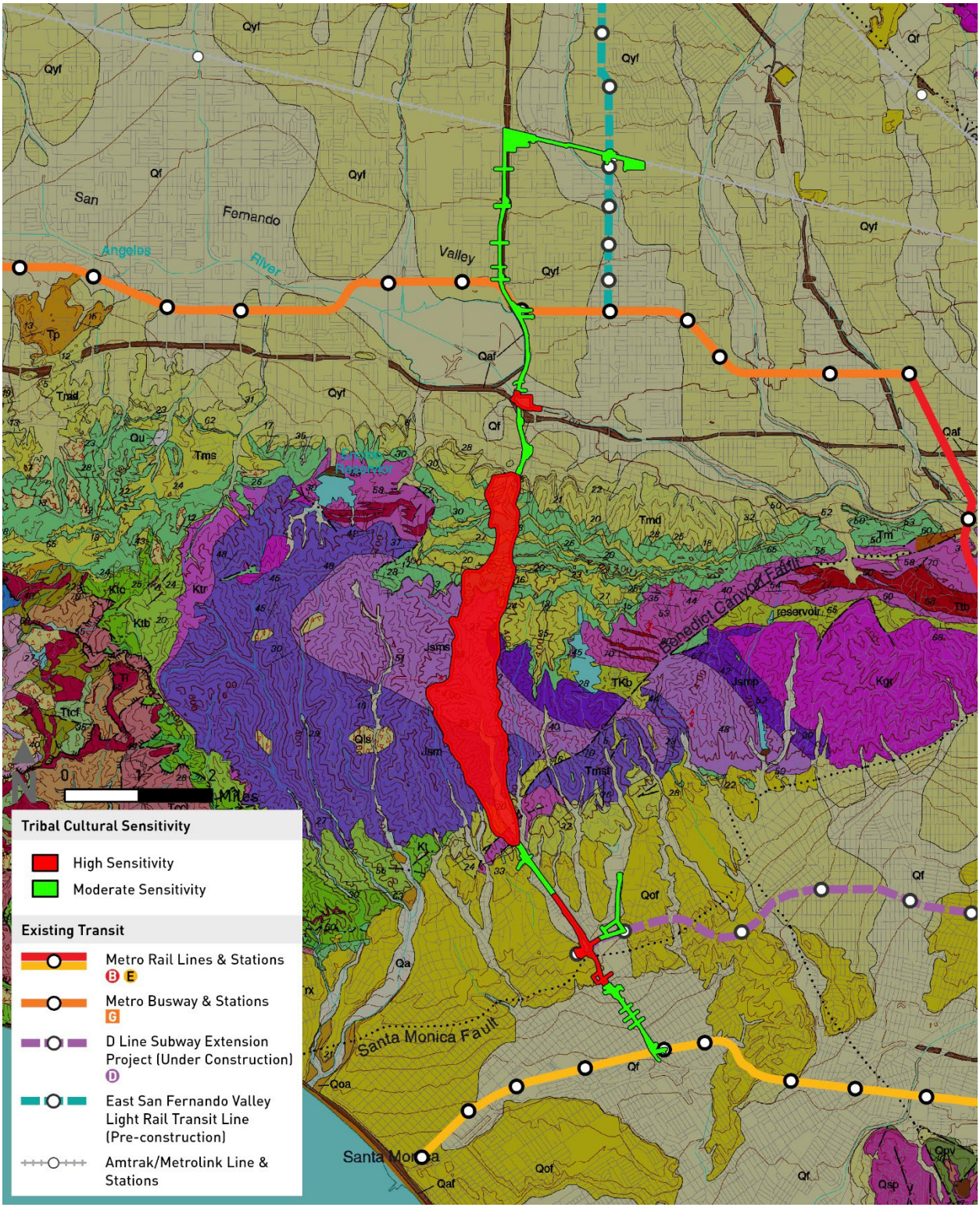
Figure 3-14 through Figure 3-23 depict the estimated archaeological and tribal cultural sensitivity of the alignments. Areas with low potential for archaeological resources include older geologic deposits, such as components to be constructed at great depth or near-surface components in areas with older surficial deposits, and areas with well documented high levels of previous subsurface ground disturbance. Areas with moderate potential to encounter archaeological resources include portions of the project alternatives within Late Pleistocene to Holocene alluvial deposits, particularly with limited previous ground disturbance, and areas in proximity to previously recorded archaeological resources in or near the RSA. Project alternative components with proximity to sites with prehistoric components, as well as areas on the Sawtelle VA campus which have evidence of prehistoric use (Onken et al., 2018) and historic age archaeological deposits, contribute to the sensitivity of at-grade and mass excavation locations in the vicinity of the resources.

Figure 3-14. Alternative 1: Archaeological Sensitivity



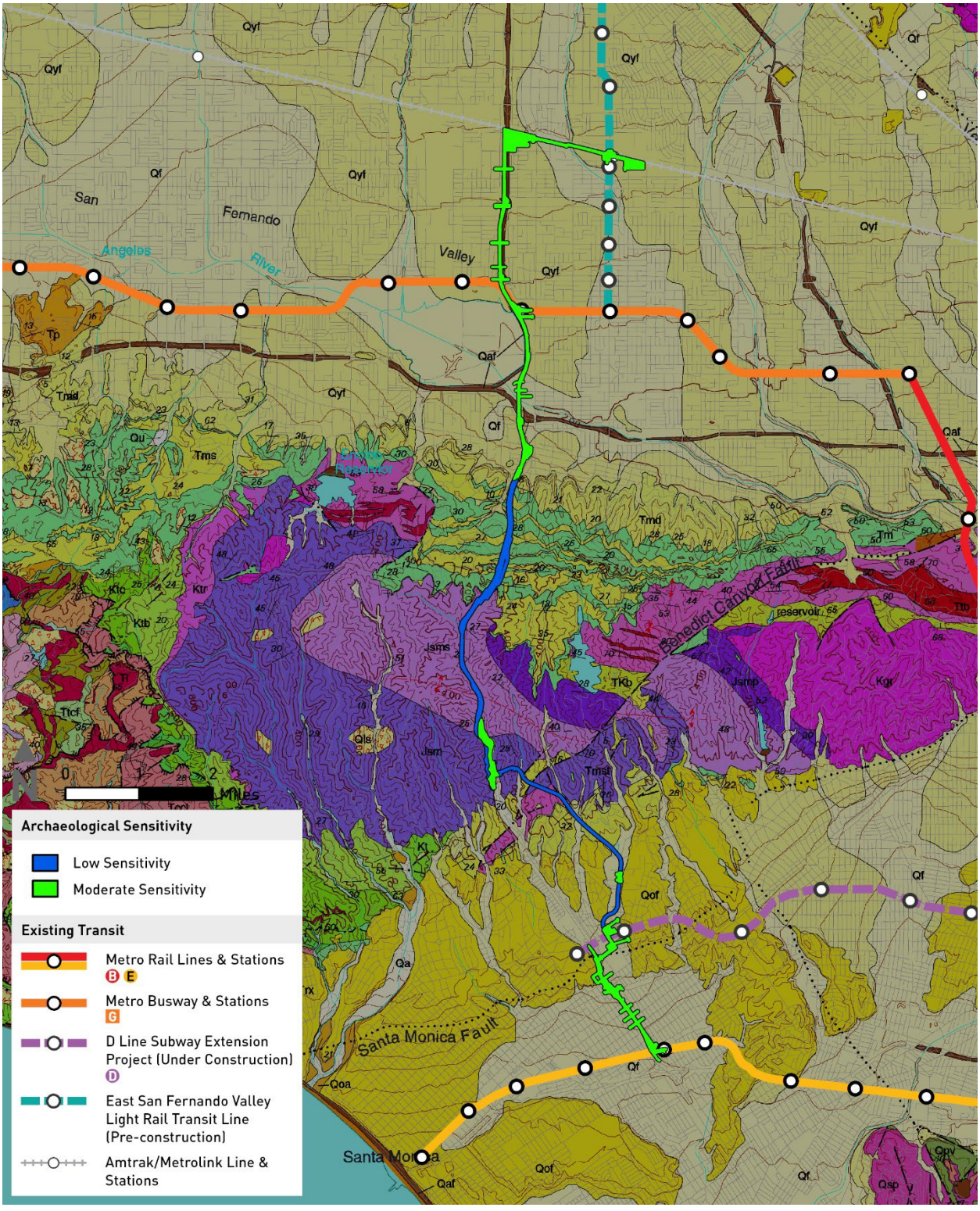
Source: HTA, 2024

Figure 3-15. Alternative 1: Tribal Cultural Sensitivity



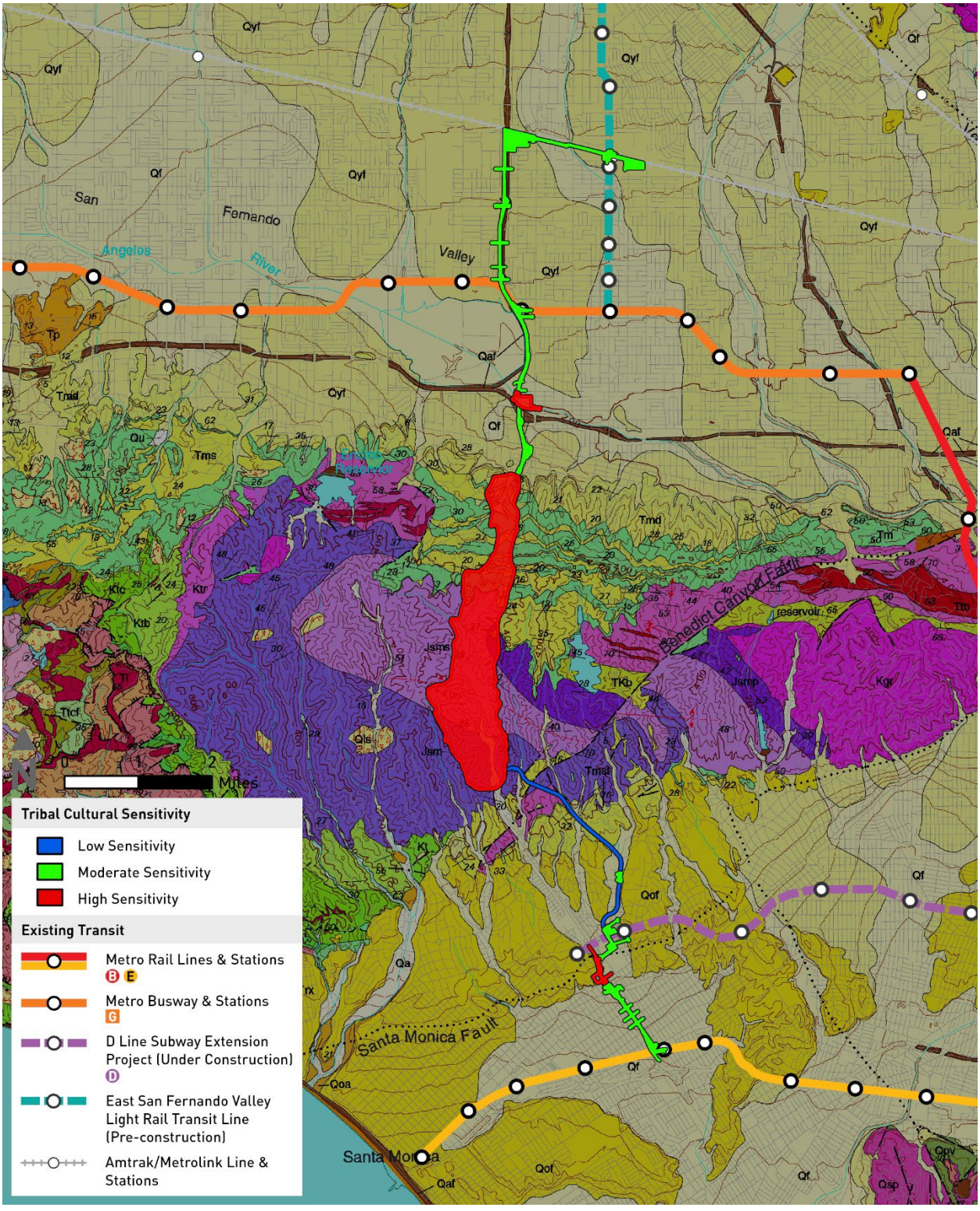
Source: HTA, 2024

Figure 3-16. Alternative 3: Archaeological Sensitivity



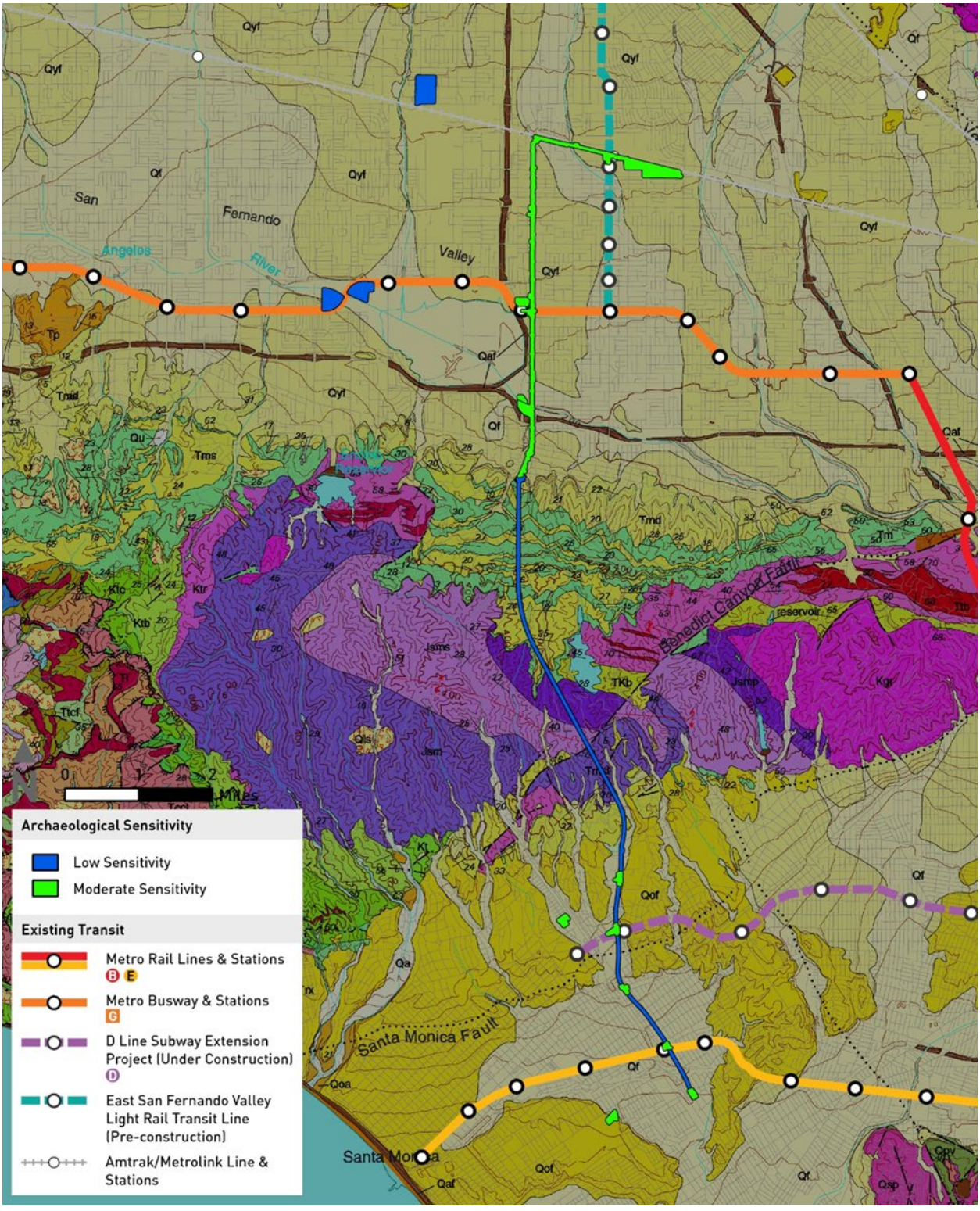
Source: HTA, 2024

Figure 3-17. Alternative 3: Tribal Cultural Sensitivity



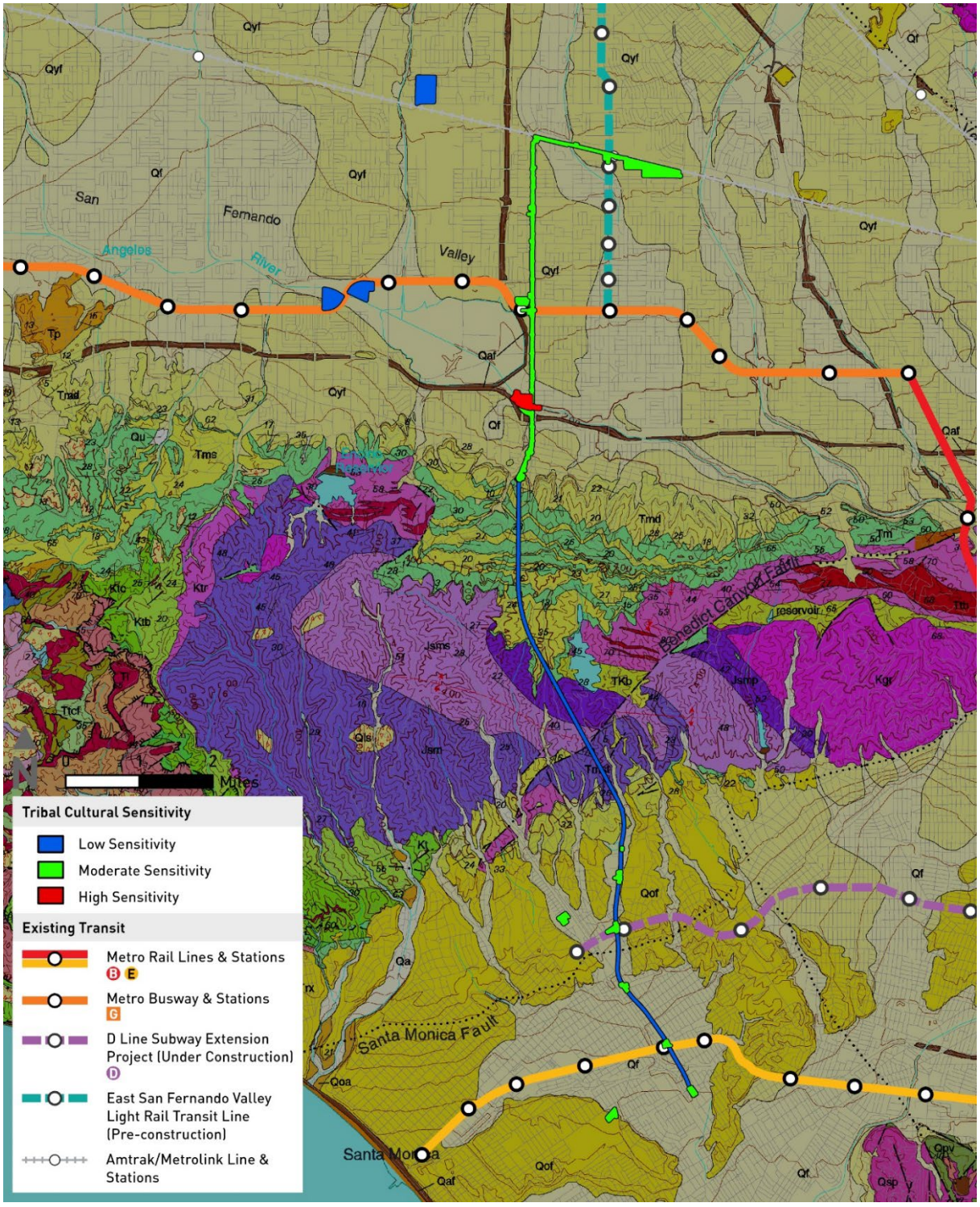
Source: HTA, 2024

Figure 3-18. Alternative 4: Archaeological Sensitivity



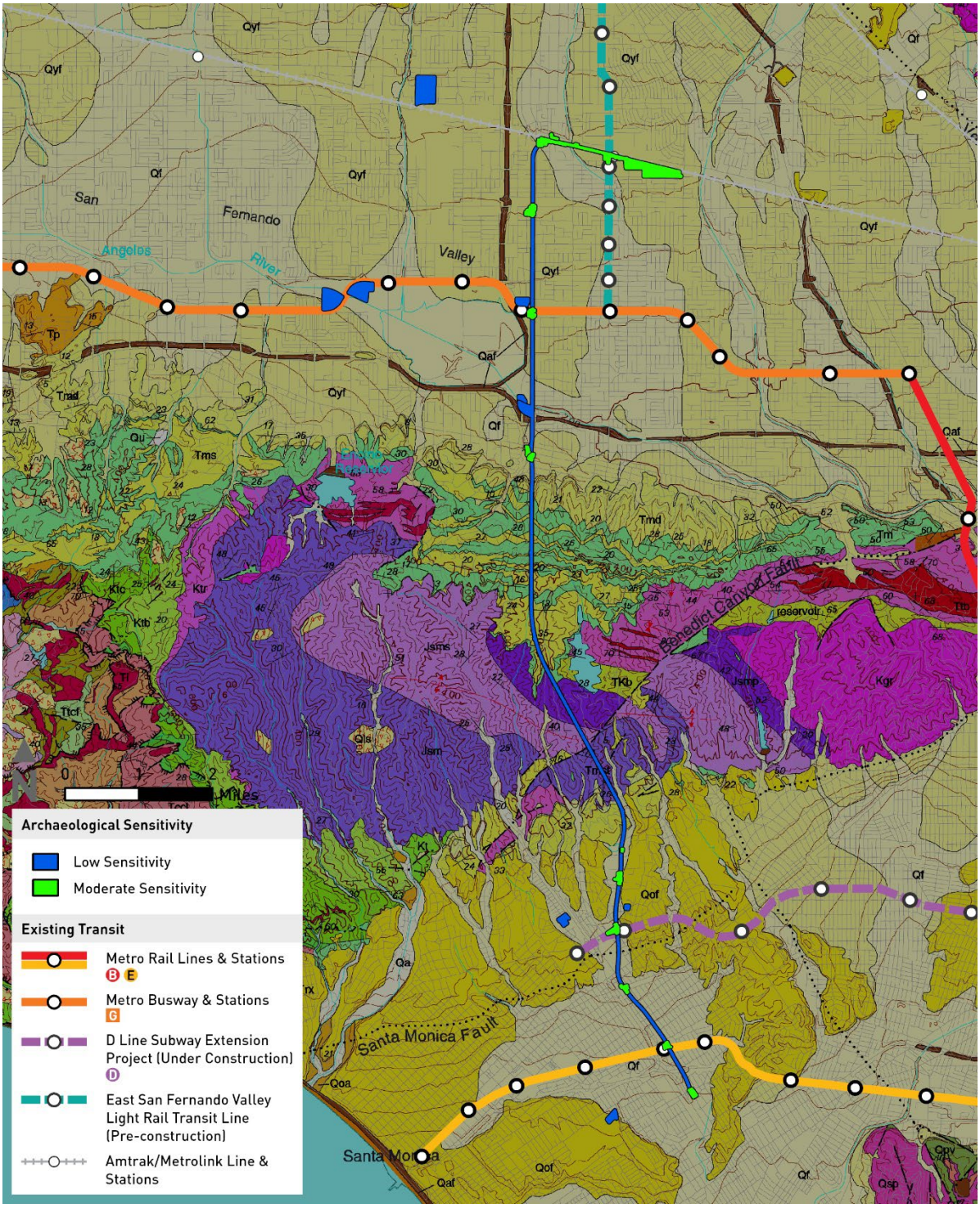
Source: HTA, 2024

Figure 3-19. Alternative 4: Tribal Cultural Sensitivity



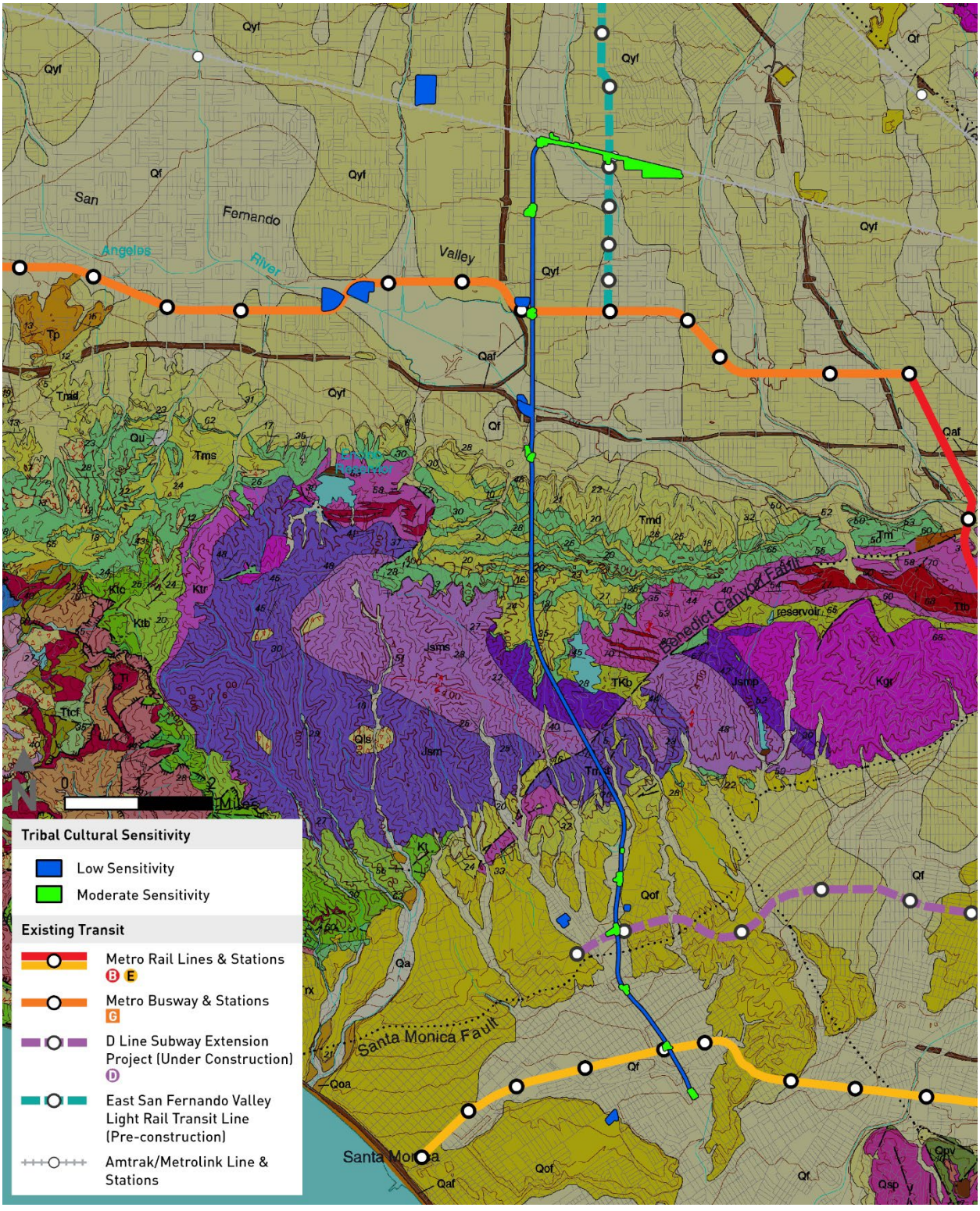
Source: HTA, 2024

Figure 3-20. Alternative 5: Archaeological Sensitivity



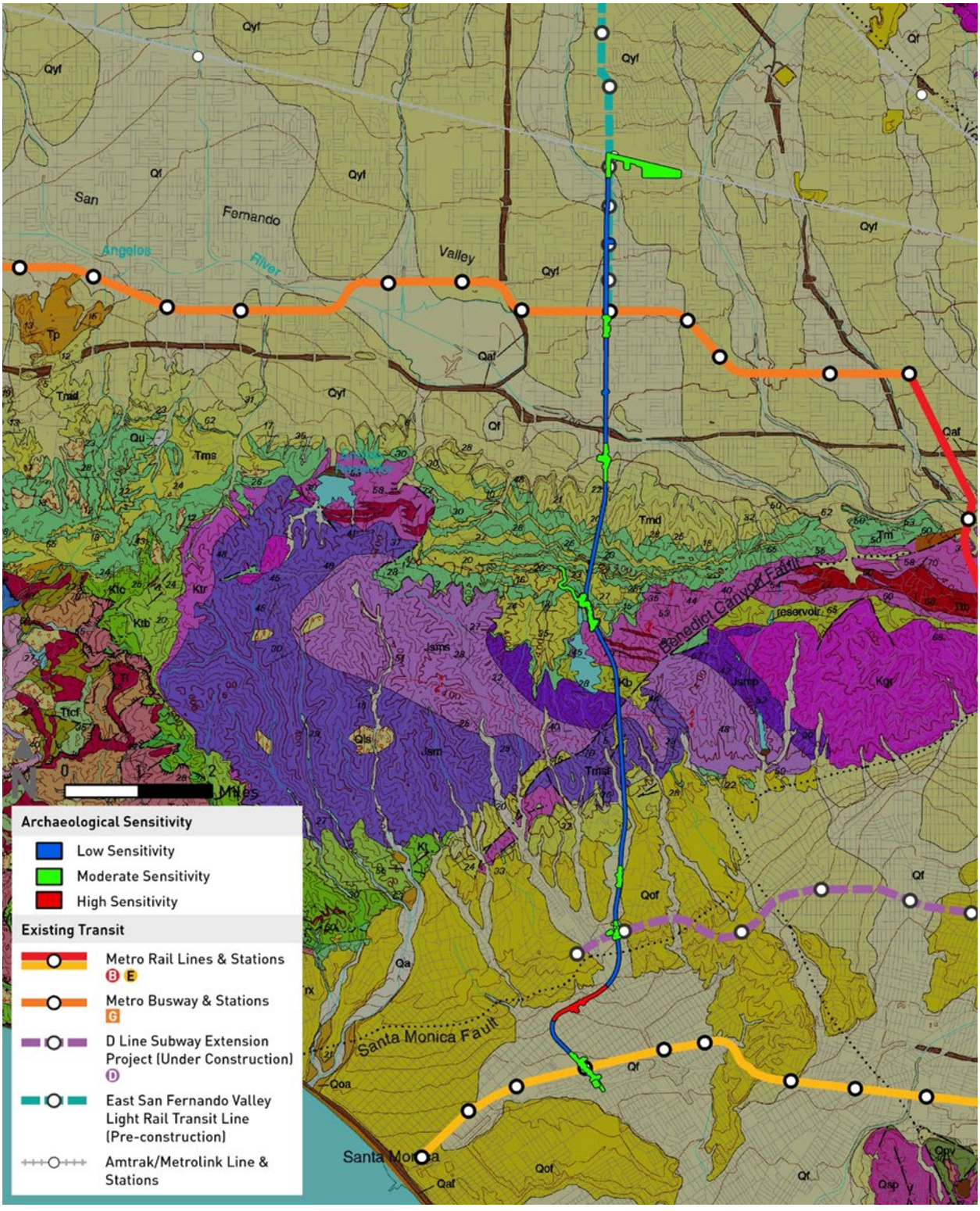
Source: HTA, 2024

Figure 3-21. Alternative 5: Tribal Cultural Sensitivity



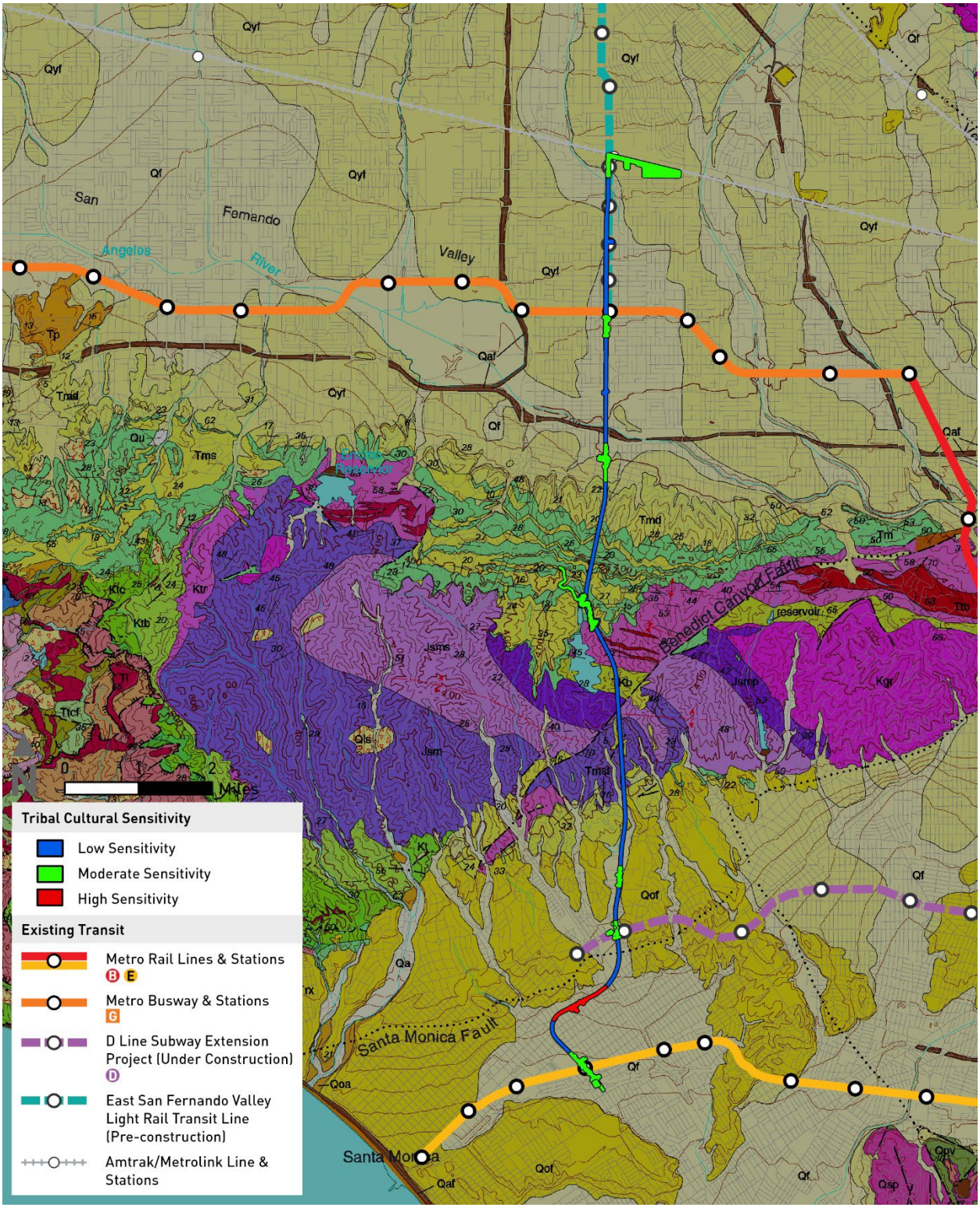
Source: HTA, 2024

Figure 3-22. Alternative 6: Archaeological Sensitivity



Source: HTA, 2024

Figure 3-23. Alternative 6: Tribal Cultural Sensitivity



Source: HTA, 2024

3.4.3 Human Remains

An SCCIC records search, archival research, and archaeological field surveys did not identify human remains within the RSA. However, one historic cemetery, the Los Angeles National Cemetery, was identified within the RSA. Additionally, burials have been documented at a location within 0.5 miles of the RSA for Alternatives 1 and 3; 0.8 miles of the RSA for Alternatives 4 and 5; and 200 feet of the RSA for Alternative 6. The resources associated with Modified Alternative 5 will be determined during the upcoming design process.

While the Los Angeles National Cemetery is located in the Built Environment RSA for all project alternatives, the probability of encountering human remains during construction is low because the cemetery is located outside of the Project footprint, and no construction activities would occur within the cemetery grounds. Los Angeles National Cemetery is a contributing element to the West Los Angeles VA Historic District, which is listed in the NRHP. While unlikely, due to the age of the Los Angeles National Cemetery and the documentation of at least one internment in the area prior to the official founding of the cemetery, there is low potential for unmarked and forgotten graves to lie outside of the existing cemetery footprint.

The Gabrieliño Village site of *Koruuvanga* is identified by the Native American Heritage Commission as a Sacred Site. At least two burials have been identified at the site, along with grave goods, and other Native American material culture. The current boundaries of the archaeological site are located within approximately 0.5 miles of the RSA for Alternatives 1 and 3 and within approximately 0.8 miles of the RSA for Alternatives 4 and 5. These project alternatives are not likely to encounter human remains associated with the site. The current boundaries of the archaeological site are approximately 200 feet north of the Alternative 6 RSA and this alignment has increased potential to encounter human remains associated with the site.

3.5 Ecosystems and Biological Resources

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report* (Metro, 2025e). The summary addresses federally protected wildlife and plant species, critical habitat, wildlife corridors, and jurisdictional resources. The affected environment related to ecosystems and biological resources does not significantly change between the alternatives.

The specific Project Study Area for ecosystem and biological effects includes the footprint of the project alternatives plus a surrounding 500-foot radius buffer around areas of temporary or permanent ground disturbance. The ground-disturbance buffer captures potential indirect impacts to biological resources from implementation of the Project; it was not applied to the underground tunnel segments because significant indirect impacts, such as those potentially caused by grouting operations and surface-level equipment use, are not anticipated with their construction. While indirect impacts are anticipated to be less than significant beyond the 500-foot radius buffer, home ranges for some wildlife in the vicinity (e.g., mountain lions) 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 is approximated by the area between Sunset Boulevard in the south and Valley Vista Boulevard in the north.

3.5.1 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, reptiles (e.g., common snakes, common lizards), small mammals (e.g., squirrels, rabbits, opossums, racoons, 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 the 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, 2019), 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.

The affected environment for the PEL Study presents only special-status wildlife species listed as endangered, threatened, or a candidate for listing under the federal Endangered Species Act. Additionally, species receive federal protection under the Bald and Golden Eagle Protection Act (i.e., bald eagle, golden eagle) and the Migratory Bird Treaty Act. Table 3-16 lists 13 special-status wildlife species with an assessment of their potential to occur within the Project Study Area. Refer to the *Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report* (Metro, 2025e) for wildlife species protected by California.

Table 3-16. Special-Status Wildlife Species Potential to Occur within the Project Study Area

Scientific Name	Common Name	Status	Potential for Occurrence
Invertebrates			
Branchinecta lynchi	Vernal pool fairy shrimp	Federally Threatened	**No Potential**. Suitable habitat is not present in the Project Study Area.
Danaus plexippus pop. 1	Monarch	Federal Candidate for Listing	**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.
Euphilotes battoides allyni	El Segundo blue butterfly	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.

Scientific Name	Common Name	Status	Potential for Occurrence
Fish			
Catostomus santaanae	Santa Ana sucker	Federally Threatened	**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). 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	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Oncorhynchus mykiss irideus pop. 10	Steelhead – Southern California Distinct Population Segment	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Amphibians			
Anaxyrus californicus	Arroyo toad	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Rana draytonii	California red-legged frog	Federally Threatened	**No Potential**. Suitable habitat is not present in the Project Study Area.
Rana muscosa	Southern mountain yellow-legged frog	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Reptiles			
Actinemys pallida	Southwestern pond turtle	Federally Threatened	**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.
Birds			
Charadrius nivosus nivosus	Western snowy plover	Federally Threatened	**No Potential**. Suitable habitat is not present in the Project Study Area.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	Federally Threatened	**No Potential**. Suitable habitat is not present in the Project Study Area.
Empidonax traillii extimus	Southwestern willow flycatcher	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Gymnogyps californianus	California Condor	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.

Scientific Name	Common Name	Status	Potential for Occurrence
Empidonax traillii extimus	Southwestern willow flycatcher	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Polioptila californica	Coastal California gnatcatcher	Federally Threatened	**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 some of the urban canyons in the Project Study Area and that may be used for dispersal. There are species records primarily south of the Project Study Area (Kenneth Hahn State Recreation Area and Ballona Ecological Wetland Reserve, but the species is a short distance disperser; and given the lack of suitable habitat north of the Project Study Area, the species is unlikely to occur within the Project Study Area. Furthermore, the species appears to be rare within the Santa Monica Mountains).
Rallus obsoletus levipes	Light-footed Ridgway's rail	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Sterna antillarum browni	California least tern	Federally Endangered	**No Potential**. Suitable habitat is not present in the Project Study Area.
Vireo bellii pusillus	Least Bell's vireo	Federally Endangered	**Present**. Occupied nesting and foraging habitat is present within the Project Study Area within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek. Specifically, the species was detected in Bull Creek in 2015 and 2018 and in the Sepulveda Basin Wildlife Preserve in 2023. 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 on the site (observations recorded in 2015, 2022, and 2023).

Source: HTA, 2024

Potential to Occur Guidelines:
Present = Species is documented as occurring in the Project Study Area within the last 10 years.

Low = Suitable habitat within the Project Study Area is of low quality. There are no known recent occurrences (within the past 50 years) within or near the Project Study Area.

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

3.5.2 Vegetation

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Project Study Area are generally absent and consist mainly of the land use cover class developed. Developed, ruderal, and agricultural, and cleared land uses 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 plant 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 the Project Study Area, include ceanothus chaparral, laurel sumac shrubland, toyon shrubland, and various other native vegetation communities.

Trees Within Proposed Construction Areas

Numerous trees occur within the Project Study Area, although field assessments were only conducted on trees within the combined Tree Survey Area for all project alternatives. The northern and southern portions of the Project Study Area are 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 Project Study Area. In the central, less developed portion of the Tree Survey Area, native trees are more frequent, especially east and west of I-405 freeway from Valley Vista Boulevard to Getty Center Drive. Table 3-17 lists the total trees and trees within the Ground-Disturbance Area associated with each alternative that are protected by the City of Los Angeles Protected Tree and Shrub Ordinance. The trees associated with Modified Alternative 5 will be determined during the upcoming design process.

Table 3-17. Total and Protected Trees within the Ground-Disturbance Areas

Alternative and/or MSF	Total Trees	Protected Trees
Alternative 1	3,282	250
Alternative 3	2,926	158
Alternative 4	1,638	82
Alternative 5	1,225	69
Alternative 6	938	329
MSF Base Design for Alternatives 1 and 3	32	0
MSF Design Option 1 for Alternatives 1 and 3	206	0
Electric Bus MSF for Alternative 1	15	0
MSF for Alternatives 4 and 5	43	0
MSF for Alternative 6	36	0

Source: HTA, 2024

Special-Status Plant Species

The affected environment for the PEL Study presents only special-status plant species listed as endangered, threatened, or a candidate for listing under the federal Endangered Species Act. Refer to the *Sepulveda Transit Corridor Project Ecosystem and Biological Resources Technical Report* (Metro, 2025e) for wildlife species protected by California. There were six special-status plant species identified as having a potential to occur within the Project Study Area from database searches. These species are listed in Table 3-18 with an assessment of their potential to occur within the Project Study Area. Most special-status plant species have no potential to occur within the Project Study Area due to a lack of suitable habitat primarily due to urban development. However, native vegetation habitats that occur within the Santa Monica Mountains that traverse the Project Study Area provide habitat potentially suitable for a few special-status plants.

Table 3-18. Special-Status Plant Species with Potential to Occur within the Project Study Area

Scientific Name[a]	Common Name	Status	Potential for Occurrence in the Project Study Area (Present/High/Moderate/Low)
Astragalus brauntonii	Braunton's milk-vetch	Federally Endangered	**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.
Astragalus pycnostachyus var. *lanosissimus*	Ventura Marsh milk-vetch	Federally Endangered	**No Potential.** No suitable habitat is present in the Project Study Area.
Astragalus tener var. *titi*	Coastal dunes milk-vetch	Federally Endangered	**No Potential.** No suitable habitat is present in the Project Study Area.
Chloropyron maritimum ssp. *maritimum*	Salt marsh bird's beak	Federally Endangered	**No Potential.** No suitable habitat is present in the Project Study Area.
Dodecahema leptoceras	Slender-horned spineflower	Federally Endangered	**Low.** Suitable habitat is present within the Project Study Area; however, there are no occurrences of the species recorded in the Project Study Area.
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	Federally Threatened	**Low.** Suitable habitat is present in the Project Study Area; however, the nearest occurrence (5 miles to the west) is from 1960s.

Source: HTA, 2024

Potential to Occur Guidelines:

Moderate = Suitable habitat present within the Project Study Area is of marginal quality. No records occur in the Project Study Area, but the species has been documented over 1 mile from the Project Study Area within the past 20 years.

Low = Suitable habitat within the Project Study Area is of low quality. There are no known recent occurrences (within the past 50 years) within or near the Project Study Area.

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

3.5.3 U.S. Fish and Wildlife Service Critical Habitat

Critical habitat areas are designated by the U.S. Fish and Wildlife Service (USFWS) for species listed under the federal Endangered Species Act as space for individual populations to grow and for normal behavior by the species. Critical habitat areas provide cover, shelter, food, water, light, minerals and other nutritional or physiological requirements for survival of the species. Critical habitats provide sites for breeding and rearing offspring and habitat that are protected from disturbances and are representative of the historical geographical distribution of the species. No USFWS-designated critical habitat coincides with the Project Study Area. The nearest critical habitat for plant species listed under the federal Endangered Species Act 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.

3.5.4 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; 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. 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 functional barriers to 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 the presence of four wildlife corridors

along I-405 in the Santa Monica Mountain: 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). National Park Service (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, 2024). 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, 2019). 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 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 Study Area 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 Migratory Bird Treaty Act such as 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.

3.6 Geotechnical Considerations

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* (Metro, 2025f). The summary addresses seismicity and liquefaction.

3.6.1 Seismicity

The entire Southern California region is seismically active. The region is crisscrossed by a network of major regional faults and minor local faults. The state passed the Alquist-Priolo Earthquake Fault Zoning Act of 1972 is “to regulate development near active faults so as to mitigate the hazard of surface fault rupture.” State geologists are required to delineate Earthquake Fault Zones around active and potentially active faults to reduce fault-rupture risks to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults. Cities and counties must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Typically, structures for human occupancy are not allowed within 50 feet of the trace of an active fault. The Santa Monica Fault in West Los Angeles is the only active fault located within 1 mile of the project alternatives. Major regional and local faults are identified in Table 3-19 for all project alternatives. The distance of major fault lines from Modified Alternative 5 will be determined during the upcoming design process.

Table 3-19. Summary of Major Regional and Local Faults

Fault Name	Alquist-Priolo Earthquake Fault Zone	Distance from Alternative 1 (miles)	Distance from Alternative 3 (miles)	Distance from Alternative 4 (miles)	Distance from Alternative 5 (miles)	Distance from Alternative 6 (miles)
Charnock Fault	NO	3.2	3.2	2.6	2.6	3.4
Chatsworth Fault	NO	7.3	7.3	7.7	7.7	8.6
Clearwater Fault	NO	26.0	26.0	26.2	26.2	26.5
Del Valle Fault	NO	17.3	17.3	17.5	17.5	18.5
Eagle Rock Fault	NO	13.4	13.4	12.9	12.9	13.1
Hollywood Fault	YES	1.9	1.8	1.7	1.7	2.0
Holser Fault	NO	14.2	14.2	14.4	14.4	14.9
Malibu Coast Fault	YES	10.7	10.7	12.0	12.0	12.6
Mission Hills Fault	NO	4.2	4.2	4.4	4.4	4.5
Newport-Inglewood-Rose Canyon Fault	YES	1.9	1.8	1.8	1.8	3.1
Northridge Blind Thrust Fault	NO	8.3	8.3	8.4	8.4	8.5
Northridge Hills Fault	NO	1.3	1.3	1.5	1.5	1.9
Overland Avenue Fault	NO	0.8	0.8	0.7	0.7	1.8
Oak Ridge Fault	NO	19.5	19.5	19.9	19.9	20.8
Palos Verdes Fault	NO	15.2	15.2	14.7	14.7	15.0
Puente Hills Blind Thrust System	NO	18.9	18.9	18.3	18.3	19.7
Raymond Fault	YES	13.2	13.2	12.5	12.5	12.7
San Andreas Fault	YES	29.5	29.5	29.5	29.5	29.5
San Gabriel Fault	YES	10.4	10.4	10.4	10.4	10.4
Santa Felicia Fault	NO	21.5	21.5	21.9	21.9	22.7

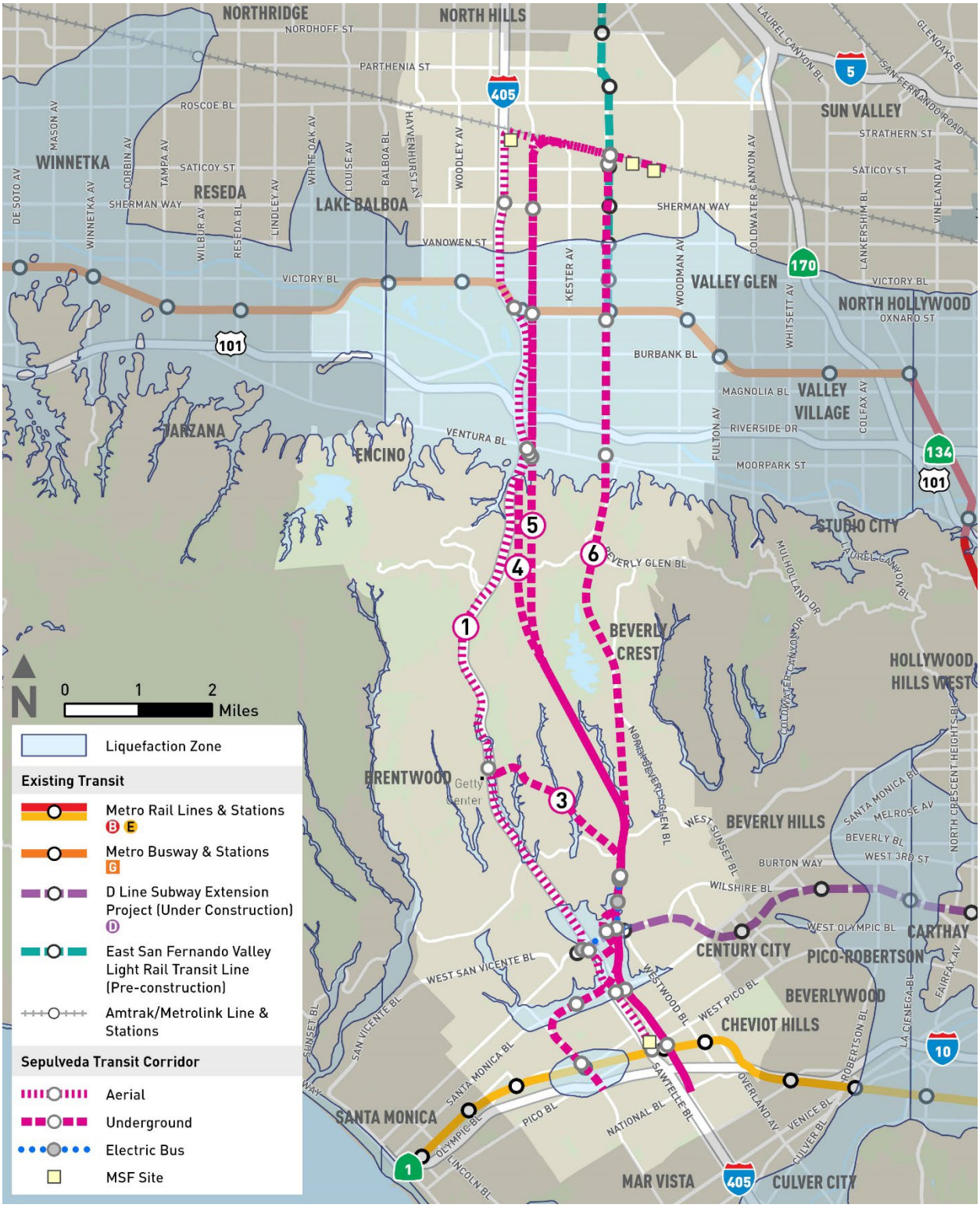
Fault Name	Alquist-Priolo Earthquake Fault Zone	Distance from Alternative 1 (miles)	Distance from Alternative 3 (miles)	Distance from Alternative 4 (miles)	Distance from Alternative 5 (miles)	Distance from Alternative 6 (miles)
Santa Monica Fault	YES	Crosses Alternative 1 north of Massachusetts Avenue and Interstate 405	Crosses Alternative 3 north of Massachusetts Avenue and Interstate 405	Crosses Alternative 4 southeast of South Bentley Avenue and Massachusetts Avenue	Crosses Alternative 5 southeast of South Bentley Avenue and Massachusetts Avenue	Crosses Alternative 6 north of Massachusetts Avenue and Interstate 405
Sierra Madre Fault	YES	4.7	4.7	4.8	4.8	5.3
Simi-Santa Rosa Fault	YES	8.5	8.5	9.0	9.0	9.8
Verdugo Fault	NO	6.9	6.9	6.4	6.4	3.4

Source: USGS, 2017a, 2017b, 2017c, 2017d, and 2023a; SCEDC, 2023a, 2023b, 2023c, 2023d, 2023e, 2023f, 2023g, 2023h, 2023i, 2023j, 2023k, 2023l, 2023m, 2023n, 2023o, 2023p, 2023q, and 2023r; and Shaw et al., 2022

3.6.2 Liquefaction

Liquefaction involves a sudden loss in strength of a saturated, cohesionless, uniformly particle-sized soil, typically caused by ground shaking activities, which causes temporary transformation of the soil to a fluid mass. In rare instances, groundborne vibrations can cause liquefaction from activities such as tunnel boring or pile driving. If the liquefying layer is near the ground surface, the effects may resemble those of quicksand. If the layer is deep below the ground surface, it may provide a sliding surface for the material above it and/or cause differential settlement of the ground surface, which may damage building foundations by altering weight-bearing characteristics. Structures built on these soils may tilt or settle when the soils liquefy. Liquefaction more often occurs in earthquake-prone areas underlain by young sandy alluvium where the groundwater table is less than 50 feet below ground surface. Figure 3-24 shows liquefaction zones in the Project Study Area.

Figure 3-24. Liquefaction Zones in the Project Study Area



Source: Los Angeles County, 2022

3.7 Growth-Inducing Impacts

The following summarizes existing conditions relevant to growth-inducing effects. Refer to the *Sepulveda Transit Corridor Project Growth Inducing Impacts Technical Report* for additional existing condition information relevant to the project alternatives (Metro, 2025g). The existing conditions related to growth-inducing effects are similar for the project alternatives.

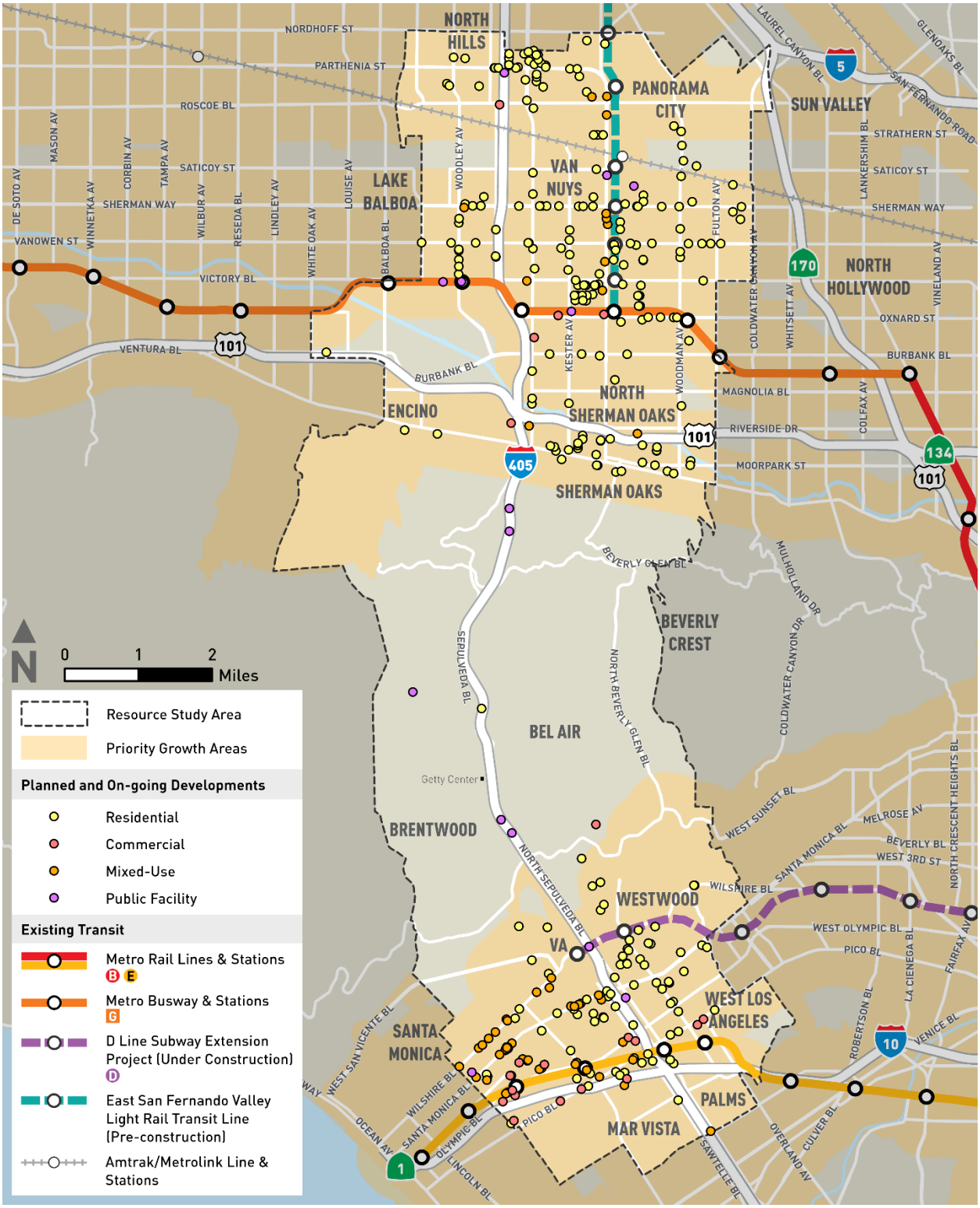
Analysis of growth-inducing impacts evaluates reasonably anticipated growth in comparison to the population, housing, and employment projections developed by a federally designated metropolitan planning organization, which is SCAG for Los Angeles County. SCAG develops, refines, and maintains regional and local socioeconomic forecasting/allocation models. The socioeconomic estimates and projections are used for federal- and state-mandated long-range planning efforts, such as the SCAG 2024-2050 RTP/SCS (SCAG, 2024). The SCAG regional growth forecast represents the most likely growth scenario for the Southern California region in the future and takes into consideration recent and past trends, key technical assumptions, regional growth policies, and local plans and policies. In determining the growth forecast for the region, SCAG incorporates population, housing, and employment estimates maintained by local jurisdictions and unincorporated communities in Southern California. The regional forecasted growth is estimated by SCAG at the regional and jurisdictional level and at the transportation analysis zone (TAZ) level.

SCAG uses land use tools to direct new growth toward Priority Development Areas (PDAs), which include Transit Priority Areas, Neighborhood Mobility Areas, Livable Corridors and Spheres of Influence (SCAG, 2024). As a general principle, the more overlapping PDAs an area has, the more that growth within the area aligns with the goals of the 2024-2050 RTP/SCS. PDAs are based on both existing conditions and future planned infrastructure, and their boundaries are based on data available at the time of development of the 2024-2050 RTP/SCS (SCAG, 2024). These elements of PDAs are defined as follows:

- **Transit Priority Areas:** Areas within 0.5 mile of an existing or planned major transit stop, as defined in Section 21099 (a)(7) of the Public Resource Code (PRC).
- **Neighborhood Mobility Areas**: Areas with a high number of intersections, low observed travel speed, high mix of uses and high accessibility to “everyday” destinations. These are areas where Complete Streets and sustainability policies support and encourage replacing or reducing single and multi-occupant automobile use with walking, bicycling, skateboarding and slow-speed electric vehicles (such as e-bikes, scooters, senior mobility devices and neighborhood electric vehicles).
- **Livable Corridors**: A strategy to increase residential and commercial density along key arterial roadways as well as transit improvements, active transportation improvements, and land use policies.
- **Spheres of Influence**: A planning boundary outside of a local agency’s legal boundary (such as the city limit line) that designates the agency’s probable future boundary and service area.

While PDAs are not limited to specific land uses, they are characterized by the location of major existing and planned transit stops and transit corridors, employment density, and residential to non-residential land use connections. Figure 3-25 displays PDAs within the Project Study Area.

Figure 3-25. Priority Growth Areas in the Project Study Area



Source: DCP, 2023a; City of Santa Monica, 2023; SCAG, 2024

Table 3-20. Priority Development Areas within the Project Study Area[a]

Jurisdiction/Affected Community	Acreage Located within a PDA (%)	Acreage Located Outside a PDA (%)
Los Angeles County[b]		
Los Angeles County	63.7	36.3
City of Los Angeles[b]		
City of Los Angeles	62.0	38.0
City of Los Angeles Affected Communities[b]		
Bel-Air	7.4	92.6
Beverly Crest	10.2	89.8
Brentwood	14.7	85.3
Encino	64.1	35.9
Lake Balboa	82.3	17.7
Mar Vista	100.0	0.0
North Hills	99.8	0.2
North Hollywood	100.0	0.0
North Sherman Oaks	92.3	7.7
Palms	100.0	0.0
Panorama City	87.4	12.6
Sawtelle VA	81.5	18.5
Sherman Oaks	51.8	48.2
Sun Valley	75.5	24.5
Van Nuys	98.7	1.3
West Los Angeles	96.3	3.7
Westwood	91.1	8.9
UCLA Campus[c]	91.9	8.1
City of Santa Monica[b]		
Santa Monica	99.9	0.1
Total	**64.0**	**36.0**

Source: U.S. Census Bureau, 2022b

[a.] The Project Study Area refers to Transportation Analysis Zones whose centroids would lie within the Project Study Area.

[b.] Data at the Los Angeles County and City of Los Angeles jurisdictional level is provided for regional comparison. The Total summarizes the affected communities of the City of Los Angeles and the City of Santa Monica and does not include the Los Angeles County or City of Los Angeles jurisdiction level data.

[c.] The UCLA campus would be entirely within the affected community of Westwood. The data for Westwood is therefore inclusive of the data for the UCLA campus.

PDA = priority development area

Table 3-21 lists the population and housing growth trend from the year 2016 to 2021 for Los Angeles County and the City of Los Angeles. The table also includes the affected communities within the Project Study Area. Based on the U.S. Census Bureau estimates for 2016 and 2021, Los Angeles County experienced housing growth and population declines, a trend which is also reflected for the City of Los Angeles (U.S. Census Bureau, 2017, 2022). Overall, the Project Study Area experienced annual housing growth and annual population declines. Within the Project Study Area, some of the affected communities experienced both annual population and housing growth. However, the general pattern across most of the affected communities reflects the broader trend of increasing housing availability and declining population numbers. These inconsistencies may be partially indicative of outward migration

patterns that occurred due to the 2020 COVID-19 pandemic. In the first year of the pandemic, the population of LA County declined by 160,000, which was more than any other county in the nation. Among the affected communities, the UCLA campus experienced the greatest annual population growth (+3.76 percent) but also the greatest decline in annual housing growth (-1.84 percent), which may indicate that growing student enrollment numbers have outpaced the available housing on-campus. Sun Valley experienced the greatest annual population decline (-4.27 percent), and Sawtelle VA experienced the greatest annual housing growth (+3.43 percent).

Table 3-21. Historic Population and Housing Growth within the Project Study Area

Jurisdiction/Affected Community	2016-2021 Average Annual Growth (%)[a]	
	Population	Housing
Los Angeles County[b]		
Los Angeles County	-0.07	+0.50
City of Los Angeles[b]		
City of Los Angeles	-1.69	-0.80
City of Los Angeles Affected Communities[b]		
Bel-Air	-3.50	-1.37
Beverly Crest	-0.49	-1.02
Brentwood	+0.38	+0.15
Encino	+1.88	+0.63
Lake Balboa	+3.49	+1.56
Mar Vista	-0.75	+0.24
North Hills	+0.82	+0.81
North Hollywood	-0.69	+1.36
North Sherman Oaks	-0.95	+0.11
Palms	-1.80	+0.07
Panorama City	-1.24	+0.81
Sawtelle VA	+1.16	+3.43
Sherman Oaks	-0.28	+0.69
Sun Valley	-4.27	+0.13
Van Nuys	-0.18	+0.84
West Los Angeles	-1.85	-0.17
Westwood	+0.06	+0.47
UCLA Campus[c]	+3.76	-1.84
City of Santa Monica[b]		
City of Santa Monica	-0.10	+0.53
Total	**-0.43**	**+0.44**

Source: US Census Bureau, 2017 and 2022

[a] The Project Study Area refers to Transportation Analysis Zones whose centroids would lie within the Project Study Area.

[b] Data at the Los Angeles County and City of Los Angeles jurisdictional level is provided for regional comparison. The Total summarizes the affected communities of the City of Los Angeles and the City of Santa Monica and does not include the Los Angeles County or City of Los Angeles jurisdiction level data.

[c] The UCLA campus is entirely located within the affected community of Westwood. The data for Westwood is therefore inclusive of the data for UCLA.

Table 3-22 lists the employment growth trend from the year 2016 to 2021 for Los Angeles County and the City of Los Angeles. The table also includes the affected communities within the Project Study Area. Based on U.S. Census Bureau OntheMap data, the affected communities in the Project Study Area experienced a mix of gains and losses in employment growth between 2016 and 2021. Overall, the Project Study Area experienced annual employment growth (+1.25 percent). The affected community of the UCLA campus (+8.07 percent) saw the greatest annual employment growth rates, while Mar Vista (-8.91 percent) experienced the greatest annual employment decline.

Table 3-22. Historic Employment Growth within the Project Study Area

Jurisdiction/Affected Community	2016 – 2020 Annual Average Growth (%)[a]
Los Angeles County[b]	
Los Angeles County	+0.53
City of Los Angeles[b]	
City of Los Angeles	+0.33
City of Los Angeles Affected Communities[b]	
Bel-Air	-3.67
Beverly Crest	+1.05
Brentwood	-3.71
Encino	+0.03
Lake Balboa	+0.30
Mar Vista	-8.91
North Hills	-2.30
North Hollywood	+1.81
North Sherman Oaks	-1.49
Palms	+2.80
Panorama City	+0.41
Sawtelle VA	+1.52
Sherman Oaks	+0.15
Sun Valley	-5.60
Van Nuys	-0.62
West Los Angeles	+3.83
Westwood	+5.01
UCLA Campus[c]	+8.07
City of Santa Monica[b]	
City of Santa Monica	-0.60
Total	**+1.22**

Source: SCAG, 2024

[a] The Project Study Area refers to Transportation Analysis Zones whose centroids would lie within the Project Study Area

[b] Data at the Los Angeles County and City of Los Angeles jurisdictional level is provided for regional comparison. The Total summarizes the affected communities of the City of Los Angeles and the City of Santa Monica and does not include the Los Angeles County or City of Los Angeles jurisdiction level data.

[c] The UCLA campus is entirely located within the affected community of Westwood. The data for Westwood is therefore inclusive of the data for UCLA.

Regarding forecasted growth, Table 3-23 lists the SCAG-derived forecasted population, housing, and employment growth for Los Angeles County and the City of Los Angeles from 2019 to 2045. The table also includes the portions of the City of Los Angeles and the City of Santa Monica affected communities that are within the Project Study Area. The forecasted growth considers transit capital projects identified in the SCAG 2024-2050 RTP/SCS, including the Project. Historic trends demonstrated a mix of population and housing gains and losses in the Project Study Area. These inconsistencies may be indicative of either a redistribution of growth throughout the region or outward migration patterns resulting from the 2020 COVID-19 pandemic. However, based on the SCAG forecast data, population and housing growth rates are expected to trend toward positive growth. The forecast numbers show a trend of housing growth matching or exceeding population growth rates. This compares with the historical trend of population decline and housing across the affected communities. It indicates an expectation that housing growth patterns would adjust to match existing and future population trends. The affected communities of Beverly Crest and Brentwood are anticipated to experience annual population decline and annual housing growth. The affected community of Palms is anticipated to have the greatest annual population growth rate (+1.07 percent), while the UCLA campus is anticipated to have the greatest annual housing growth rate (+1.75 percent). Overall, the affected communities in the Project Study Area are expected to experience annual employment growth rates. Within the Project Study Area, the affected community of Van Nuys is anticipated to have the greatest annual employment growth rate (+0.34 percent).

Table 3-23. SCAG Forecasted Percentages of Population, Housing, and Employment Growth in Affected Communities within the Project Study Area

Jurisdiction/Affected Community	2016 – 2045 Annual Average Growth (%)[a]		
	Population	Housing	Employment
Los Angeles County			
Los Angeles County[b]	+0.26	+0.74	+0.31
City of Los Angeles			
City of Los Angeles[b]	+0.36	+0.99	+0.35
City of Los Angeles Affected Communities[b]			
Bel-Air	+0.16	+0.71	+0.22
Beverly Crest	-0.04	+0.47	+0.30
Brentwood	-0.22	+0.20	+0.03
Encino	+0.26	+0.83	+0.13
Lake Balboa	+0.11	+0.72	+0.30
Mar Vista	+0.35	+0.82	+0.31
North Hills	+0.06	+0.78	+0.26
North Hollywood	+0.13	+0.81	+0.05
North Sherman Oaks	+0.53	+0.98	+0.25
Palms	+1.07	+1.65	+0.07
Panorama City	+0.00	+0.72	+0.29
Sawtelle VA	+0.25	+0.60	+0.07
Sherman Oaks	+0.25	+0.67	+0.25
Sun Valley	+0.12	+0.86	+0.22
Van Nuys	+0.26	+0.91	+0.34
West Los Angeles	+0.63	+1.05	+0.30
Westwood	+0.68	+1.22	+0.23
UCLA Campus[c]	+0.50	+1.75	+0.12

Jurisdiction/Affected Community	2016 – 2045 Annual Average Growth (%)[a]		
	Population	Housing	Employment
City of Santa Monica[b]			
City of Santa Monica	+0.47	+0.90	0.00
Total	**+0.32**	**+0.88**	**+0.21**

Source: SCAG, 2024

[a.] The Project Study Area refers to Transportation Analysis Zones whose centroids would lie within the Project Study Area

[b.] Data at the Los Angeles County and City of Los Angeles jurisdictional level is provided for regional comparison. The Total summarizes the affected communities of the City of Los Angeles and the City of Santa Monica and does not include the Los Angeles County or City of Los Angeles jurisdiction level data.

[c.] The UCLA campus is entirely located within the affected community of Westwood. The data for Westwood is therefore inclusive of the data for UCLA.

SCAG = Southern California Association of Governments

Planned and on-going developments within the Project Study Area demonstrate the actualization of forecasted growth projections. On-going developments include multi-family residential housing (including market rate and affordable housing), mixed-used developments, commercial/retail facilities, and public facilities. Residential developments would construct new or expanded housing units and thus would directly result in population and housing growth, while new commercial, retail, office, and public facilities developments would directly result in employment growth.

Redevelopment projects are not anticipated to directly, or indirectly result in permanent growth, unless such projects would construct additional housing units. Student housing projects on the UCLA campus would construct new housing units. However, these units would not directly or indirectly result in unplanned population growth within the UCLA campus or Westwood community but would merely accommodate planned growth of students enrolled at UCLA. According to the UCLA Long Range Development Plan, student enrollment numbers are the primary indicators of population, housing, and employment growth on the UCLA campus. UCLA Housing & Hospitality manages both on-campus and off-campus housing units. Since 2010, Housing & Hospitality-operated on-campus housing has expanded to more than 4,700 undergraduate beds, with the goal of providing 66 percent of all students housing on or within one mile of campus. Currently 47 percent of students live on or within one mile of campus. Public facilities development projects include the construction of new facilities that would directly result in employment growth, such as the proposed 92,000-square-foot office building for UCLA. Zoning projects refer to projects that would directly increase the land use density within a given area, thus increasing the total housing capacity of the applicable jurisdiction. Such projects include parcel maps, specific plans, subdivisions, tentative tract maps, transit neighborhood plans, and zone change projects. Zoning projects may include entitlements and development agreements that increase the land use density of an affected community in exceedance of the maximum density of the housing elements of local general plans. The zoning projects may not yet have associated planned developments for the respective parcel[s]. Transportation Improvement Projects refer to transportation and highway projects. Transit and transportation projects are not considered to directly foster population, housing, or employment growth. Rather, the Transportation Improvement Projects aim to increase the capacity or improve the efficiency of the transportation and transit network and direct projected population and economic growth in the greater SCAG region toward PDAs.

A total of 346 planned and on-going developments are within the Project Study Area, over 33 percent of which are in the affected community of Van Nuys, and nearly 16 percent are in the affected community of West Los Angeles. If fully built out, the planned and on-going developments would construct over 6 million square feet of new commercial real estate and approximately 23,000 new housing units within the Project Study Area. The City of Santa Monica is anticipated to have the greatest number of mixed-use and commercial developments of each of the affected communities, while the community of Van Nuys has the greatest number of planned and on-going multi-family residential developments. Figure 3-25 shows and Table 3-24 lists the planned and on-going developments in the Project Study Area.

Table 3-24. Planned and On-Going Development in the Project Study Area

Affected Community	Total Developments	Developments in PDAs	Total Commercial Square Footage in PDAs	Total Dwelling Units in PDAs
Multi-Family Developments				
Brentwood	4	3	—	118
Encino	2	2	—	284
Lake Balboa	1	1	—	65
Mar Vista	8	7	—	514
North Hills	34	32	—	1,321
North Hollywood	3	3	—	91
North Sherman Oaks	7	7	—	384
Palms	0	—	—	—
Panorama City	15	15	—	1,130
City of Santa Monica	2	2	—	55
Sawtelle VA	1	1	—	1,200
Sherman Oaks	29	29	—	1,093
Sun Valley	1	1	—	100
Van Nuys	102	98	—	4,149
West Los Angeles	37	36	—	1,991
Westwood	17	15	—	452
UCLA Campus[c]	0	—	—	—
Total	**262**	**251**	—	**12,823**
Mixed-Use Development				
Brentwood	1	1	73,984	24
Mar Vista	2	2	11,141	202
North Sherman Oaks	1	1	27,000	249
Palms	1	1	60,000	409
Panorama City	2	2	252,450	550
City of Santa Monica	18	18	360,040	2,907
Sherman Oaks	1	1	44,000	325
Van Nuys	7	7	25,705	1,086
West Los Angeles	12	12	662,212	4,134
Total	**45**	**45**	**1,516,532**	**9,886**
Commercial				
Bel-Air	1	1	62,615	—
Encino	1	1	1,995	—
Lake Balboa	1	1	123,950	—

Affected Community	Total Developments	Developments in PDAs	Total Commercial Square Footage in PDAs	Total Dwelling Units in PDAs
Mar Vista	1	1	1,600,000	—
City of Santa Monica	9	9	486,527	—
Van Nuys	3	3	180,731	—
West Los Angeles	4	4	1,069,000	—
Total	**20**	**20**	**3,524,818**	—
Public Facility				
Brentwood	1	1	160,880	—
City of Santa Monica	1	1	799,000	—
Van Nuys	1	1	23,000	—
West Los Angeles	1	1	92,000	—
Total	**4**	**4**	**1,074,880**	—
Zoning Projects[a]				
Encino	1	1	—	—
Panorama City	1	1	—	—
Sun Valley	1	1	—	13
Van Nuys	2	2	—	10
West Los Angeles	1	1	—	11
Westwood	2	2	—	25
Total	**8**	**8**	—	**59**
Transportation Improvement Projects[b]				
Bel-Air/Sherman Oaks	2	2	—	—
Encino	2	2	—	—
North Hills	1	1	—	—
Sawtelle VA	1	1	—	—
Van Nuys	1	1	—	—
Total	**7**	**7**	—	—
Grand Total	**346**	**335**	**6,116,230**	**22,768**

Source: DCP, 2023b; City of Santa Monica, 2023

[a] Zoning Projects include parcel map, specific plan, subdivision, tentative tract map, transit neighborhood plans, and zone change projects, which aim to increase the allowable density on a parcel.

[b] Transportation Improvement Projects include bus rapid transit, highway improvement, and rail projects, which aim to increase the capacity or improve the efficiency of the transportation and transit network. The Project is excluded from the transportation improvements listed in this table.

[c] The UCLA campus is entirely located within the affected community of Westwood. The data for Westwood is therefore inclusive of the data for UCLA.

— = no data or no resource
PDA = priority growth area

The 2025 wildfires are anticipated to affect housing stock in the region. In particular, the Palisades Fire which occurred west of Project Study Area, destroyed approximately 5,500 homes and the Eaton Fire which occurred approximately 16 miles east of the Project Study Area destroyed approximately 6,100 homes. As result, it is likely that short term housing supply will be affected while homes in the affected areas are rebuilt.

3.8 Hazardous Materials and Hazards

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Hazards and Hazardous Materials Technical Report* (Metro, 2025h). The summary addresses hazardous materials, methane hazard zones, and proximity to airports.

3.8.1 Hazardous Materials from Known Release Sites

Publicly available databases maintained under PRC Section 65962.5 (i.e., the Cortese List) were searched to determine the presence of known hazardous materials. The Hazardous Waste and Substances Site List (the EnviroStor database) is maintained by the Department of Toxic Substances Control (DTSC) (DTSC, 2023). The State Water Resources Control Board (SWRCB) maintains the GeoTracker database, an information management system for tracking Leaking Underground Storage Tank (LUST) Cleanup sites, permitted underground storage tanks (USTs), Cleanup Program sites, Military Cleanup sites, Land Disposal sites, Waste Discharge Requirement sites, and Oil and Gas Monitoring sites (SWRCB, 2023). A government agency database records search was conducted by Environmental Data Resources Inc. (EDR) with results listed in Table 3-25. The database search results are identical for the project alternatives. Figure 3-26 through Figure 3-35**Error! Reference source not found.** show hazardous facilities within 0.5 mile of Alternatives 1 through 6. The numbers in the figures correspond to Table B-1 in Appendix B of the Technical Report. The hazardous materials sites associated with Modified Alternative 5 will be determined during the upcoming design process.

Table 3-25. EDR Database Search Results

Agency Database	Number of Sites Identified
Aboveground Petroleum Storage Tank Facilities: A listing of aboveground storage tank petroleum storage tank locations.	34
California Environmental Reporting System Hazardous Waste: A list of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal that fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and Resource Conservation and Recovery Act Hazardous Waste Generator programs.	268
California Environmental Reporting System Tanks: A list of sites in the CalEPA Regulated Site Portal that fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.	73
California Environmental Reporting System: Provides an overview of regulated hazardous materials and waste, state, and federal cleanups, affected ground and surface waters, and toxic materials activities across the spectrum of environmental programs for any given location in California.	443
California Hazardous Material Incident Report System: Contains information on reported hazardous material incidents (accidental releases or spills).	121
California Integrated Water Quality System: Tracks information about places of environmental interest, manages permits and other orders, tracks inspections, and manages violations and enforcement activities.	149
CORTESE—Hazardous Waste & Substances Sites List: Identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration.	64

Agency Database	Number of Sites Identified
HIST CORTESE: Identifies historical public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration.	61
Statewide Spills, Leaks, Investigations and Cleanup Cases (GEOTRACKER): Lists Regional Water Quality Control Board Cleanup Program Sites.	8
Cleaner Facilities: These facilities include power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; dry-cleaning plants, except rugs; carpet and upholstery cleaning; industrial launderers; laundry and garment services.	95
Emissions Inventory Data: Toxics and criteria pollutant emissions data collected by the California Air Resources Board and local air pollution agencies.	209
ENVIROSTOR: DTSC's Site Mitigation and Brownfields Reuse Program's EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites; State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.	17
Facility Inventory Database: Contains a historical listing of active and inactive UST locations from SWRCB.	222
Registered Waste Tire Haulers Listing: A listing of registered waste tire haulers.	52
Facility and Manifest Data: The data is extracted from the copies of hazardous waste manifests received each year by DTSC. The annual volume of manifests is typically 700,000 to 1,000,000 annually, representing approximately 350,000 to 500,000 shipments.	2,933
Calsites Database: Contains potential or confirmed hazardous substance release properties. It is no longer updated by the state agency. It has been replaced by ENVIROSTOR.	1
EnviroStor Permitted Facilities Listing: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.	1
Hazardous Waste Tracking System: DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.	4,441
Active UST Facilities: Active UST facilities gathered from the local regulatory agencies.	449
LUST— LUST sites included in GeoTracker.	102
Statewide Environmental Evaluation and Planning System: This UST listing was updated and maintained by a company contacted by SWRCB in the early 1990s. The listing is no longer updated or maintained.	226
Hazardous Substances Storage Contained Database: Facilities on a historic list of UST sites.	172
National Pollutant Discharge Elimination System Permits Listing: A listing of permits, including stormwater.	78
Solid Waste Information System: Active, Closed and Inactive Landfills.	7
Waste Discharge System: Sites which have been issued waste discharge requirements.	2
Enforcement & Compliance History Information: Provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.	1,211
EDR Exclusive Historical Auto Stations: Listing of potential gas station/filling station/service station sites.	222
EDR Exclusive Historical Cleaners: Listing of potential dry cleaner sites.	114

Agency Database	Number of Sites Identified
Facility Index System/Facility Registry System: Contains both facility information and "pointers" to other sources that contain more detail. Includes the following databases in this report: Permit Compliance System, Aerometric Information Retrieval System, Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes, Federal Underground Injection Control, Criminal Docket System used to track criminal enforcement actions for all environmental statutes, Federal Facilities Information System, State Environmental Laws and Statutes, and Polychlorinated Biphenyls Activity Data System.	1,370
Non-Generators/No Longer Regulated: The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by Resource Conservation and Recovery Act.	951
Resource Conservation and Recovery Act Information System Large Quantity Generators: Sites that generate, transport, store, treat, and/or dispose of hazardous wastes as defined by Resource Conservation and Recovery Act. Facilities permitted to generate more than 1,000 kg of hazardous waste or over 1 kg of acutely hazardous waste per month.	45
Resource Conservation and Recovery Act Information System Small Quantity Generators: Sites that generate, transport, store, treat and/or dispose of hazardous wastes. Facilities permitted to generate more than 100 kg per month but less than 1,000 kg per month of non-acutely hazardous materials.	203
Resource Conservation and Recovery Act Information System Small Quantity Generators: Sites that generate, transport, store, treat and/or dispose of hazardous wastes. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste.	1
Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators): Sites that generate, transport, store, treat and/or dispose of hazardous wastes. Very small quantity generators generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.	2
Superfund Enterprise Management System: Hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of the federal Superfund Program. The list contains data on potentially hazardous waste sites that have been reported by states, municipalities, private companies, and private persons. This dataset also contains sites which are either proposed to or on the National Priorities List and the sites which are in the screening and assessment phase for possible inclusion on the list.	1
Superfund Enterprise Management System Archive: Sites that have no further interest under the Federal Superfund Program based on available information.	5

Source: ICF, 2022a, 2022b

DTSC = Department of Toxic Substances Control
EDR = Environmental Data Resources Inc.
kg = kilogram
LUST = leaking underground storage tank
UST = underground storage tank
SWRCB = State Water Resources Control Board

Figure 3-26. Alternative 1: Hazardous Material Sites Within 0.5 Miles (South)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-27. Alternative 1: Hazardous Material Sites Within 0.5 Miles (North)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-28. Alternative 3: Hazardous Material Sites Within 0.5 Miles (South)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-29. Alternative 3: Hazardous Material Sites Within 0.5 Miles (North)



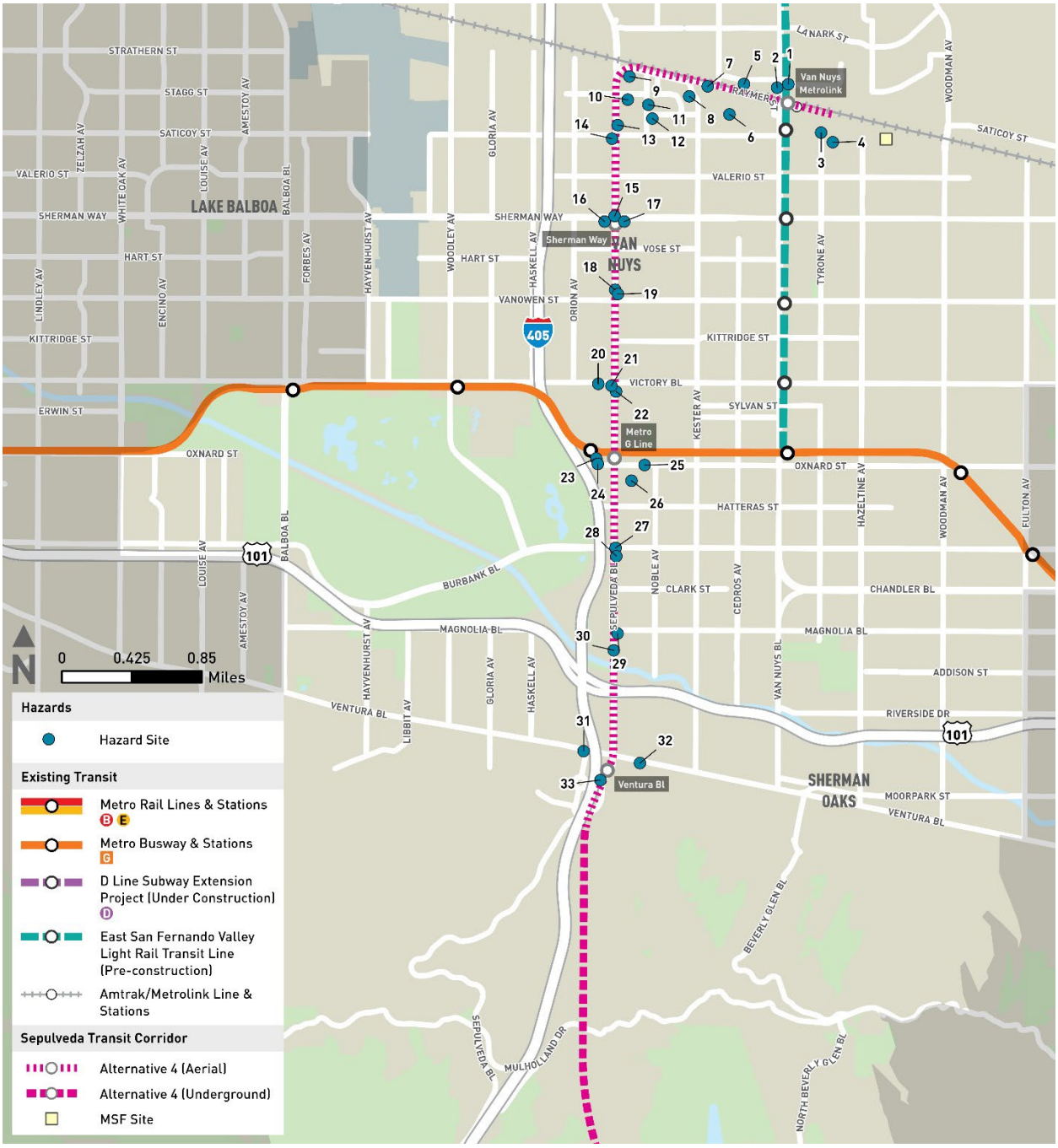
Source: DTSC, 2023; SWRCB, 2023

Figure 3-30. Alternative 4: Hazardous Material Sites Within 0.5 Miles (South)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-31. Alternative 4: Hazardous Material Sites Within 0.5 Miles (North)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-32. Alternative 5: Hazardous Material Sites Within 0.5 Miles (South)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-33. Alternative 5: Hazardous Material Sites Within 0.5 Miles (North)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-34. Alternative 6: Hazardous Material Sites Within 0.5 Miles (South)



Source: DTSC, 2023; SWRCB, 2023

Figure 3-35. Alternative 6: Hazardous Material Sites Within 0.5 Miles (North)



Source: DTSC, 2023; SWRCB, 2023

The project alternatives are located near the one of the four San Fernando Valley Superfund Site areas, which could affect the Project by exposing construction workers to contaminated groundwater or the general public through the intrusion of volatile organic compounds into stations. The San Fernando Valley (Area 4) Superfund site is a 5,860-acre area with areas of contaminated groundwater near the LADWP Pollock Well Field. Historical manufacturing work in the groundwater basin, dating back to World War II, contaminated the groundwater in the region with volatile organic compounds, including

trichloroethylene and tetrachloroethylene. The regional plume associated with this site could affect the northern portions of Alternatives 1, 4, 5, and 6. The potential for the regional plume to affect Modified Alternative 5 will be determined during the upcoming design process. The EPA completed an interim investigation of the Pollock Well Field in 1994. The EPA did not select a remedy for the site because the LADWP constructed a wellhead treatment project to clean the water in the Valley Basin. Since 1999, LADWP's Granular Activated Carbon Treatment Plant at the Pollock Well Field has been treating groundwater to meet drinking water standards and returned to the public water supply system. Because the LADWP built a volatile organic compound treatment facility to prevent air quality impacts, the EPA determined that further cleanup was not immediately necessary. The EPA is evaluating the effectiveness of the Pollock Well Field Project and will determine the need for additional cleanup actions at the site. While the site awaits further investigation on the nature and extent of contamination in this area, the Pollock wellhead treatment operation continues to treat groundwater to meet drinking water standards and reduce the potential of exposure to contaminated water. The EPA conducted an initial round of indoor air sampling of homes in the Atwater Village area in February 2022. Sampling results from this first sampling event indicated that indoor air in the homes sampled was not impacted by volatile organic compounds migrating from the groundwater into homes. To verify that VOCs from the contaminated groundwater are not impacting indoor air quality in the area, an additional round of indoor air sampling of homes, businesses and schools in the Atwater Village neighborhood was conducted in winter 2023. Results from the initial sampling indicate that VOCs would not affect proposed stations under the proposed Project Alternatives (EPA, 2023).

3.8.2 Other Potential Hazardous Materials

The following information on other potential hazardous materials applies to all project alternatives. Yellow-thermoplastic and yellow-painted traffic stripe and pavement marking that was applied to roadways before 1997 contained as much as 2.6 percent lead. In addition, lead alkyl compounds were first added to gasoline in the 1920s to boost octane levels and improve engine performance. Beginning in 1973, the EPA ordered a gradual phase-out of lead from gasoline that substantially reduced the prevalence of leaded gasoline by the mid-1980s. Prior to the 1970s, EPA estimated that vehicles emitted approximately 75 percent of the lead consumed in leaded gasoline as particulate matter in tailpipe exhaust (DTSC, 2004). Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably paint. Aerially deposited lead can be present along major roadway corridors, such as Van Nuys Boulevard, Sepulveda Boulevard, and I-405. DTSC regulations specify the levels at which lead in soil is considered to be a risk. In areas where road construction would occur, Caltrans has found lead within 30 feet of the edge of the pavement and within the top 6 inches of the soil. In some cases, lead has been found as deep as 2-3 feet below the surface. Therefore, soils in major roadway corridors have the potential to be contaminated with aerially deposited lead from car emissions that occurred prior to the elimination of lead in gasoline (DTSC, 2016).

Wood utility poles may be treated with preserving chemicals resulting in treated wood waste if removal is necessary. Treated wood waste contains hazardous chemicals that pose a risk to human health and the environment. Arsenic, chromium, copper, creosote, and pentachlorophenol are among the chemicals added to preserve wood. These chemicals are known to be toxic or carcinogenic. Harmful exposure to these chemicals may result from dermal contact with treated wood waste, or from inhalation or ingestion of treated wood waste particulate (DTSC, 2024).

Related to building materials, asbestos is designated as a hazardous substance when the fibers have potential to come in contact with air because the fibers are small enough to lodge in the lung tissue and cause health problems. Emissions of asbestos fiber to the ambient air, which can occur during activities

such as renovation or demolition of structures made with asbestos containing materials (e.g., insulation), are regulated in accordance with Section 112 of the Federal Clean Air Act.

Lead arsenate is used as an herbicide, insecticide, or rodenticide. Lead arsenates were historically used by railroad companies as a means of weed control along a railroad ROW. Pesticide residues from lead arsenate bind tightly to the surface soil layer, where they can remain for decades. As a result, such residues, if present, could pose a human health risk when the soil is excavated. Lead and arsenic are the primary constituents of lead arsenate pesticide. Both lead and arsenic could be toxic at high concentrations in soil and are highly toxic to humans.

Polychlorinated biphenyls (PCBs) are organic chemicals, usually in the form of an oil, that were historically used in electrical equipment. PCBs are most commonly associated with pole-mounted electrical transformers, but they were also used in insulators and capacitors in building electrical equipment. PCBs were commonly used in the small capacitor within fluorescent light ballasts. Ballasts manufactured through 1979 may contain PCBs. On-site fluorescent light features and electrical transformers that were manufactured prior to and throughout 1979, or reasonably suspected to have been manufactured before or throughout 1979, shall be assumed to contain PCBs. PCBs-containing florescent light bulbs would be of concern if they are leaking as they may expose workers handling the fixtures to a variety of adverse health effects.

The EPA defines household hazardous waste as “leftover products such as paints, cleaners, oils, batteries, and pesticides that contain potentially hazardous ingredients that could be corrosive, toxic, ignitable, or reactive.” According to the EPA, Americans generate approximately 1.6 million tons of household hazardous waste per year, while the average home can accumulate as much as 100 pounds of household hazardous waste in the basement and garage or in storage closets. Methods of improper disposal of household hazardous wastes commonly include pouring them down the drain, on the ground, into storm sewers, or in some cases putting them out with the trash. Though the dangers of such disposal methods might not be immediately obvious, improper disposal of these wastes can pollute the environment and pose a threat to human health.

Constructing the Project would require relocating subterranean utility facilities. Metropolitan Water District of Southern California (MWD) operates a major 96-inch water main that underlies Sepulveda Boulevard, in addition to other smaller water lines. The Pipeline and Hazardous Materials Safety Administration Public Map Viewer identifies the following three high-pressure hazardous liquid pipelines within and in the vicinity of each project alternative.

- Torrance Valley Pipeline Company operates a crude oil pipeline as part of the Saticoy-Slauson system. As of May 20, 2022, the pipeline was reported active and filled. The 13.34-mile pipeline originates east of the Van Nuys Airport at Woodley Avenue. It travels south to the intersection of Woodley Avenue and Victory Boulevard when it travels east along Victory Boulevard to the intersection of Victory Boulevard and Sepulveda Boulevard. The pipeline parallels Sepulveda Boulevard, with its terminus at the intersection of Sepulveda Boulevard and Montana Avenue.
- Shell Pipeline Company operates a gasoline pipeline as part of the Ventura Products Line system. As of June 15, 2022, the pipeline was indicated to be active and filled. The 12.25-mile pipeline originates near the intersection of Sepulveda Boulevard and Bellagio Road where it travels south, parallel to Sepulveda Boulevard, and continues south beyond I-10.

- Chevron Pipeline Company operates a gasoline pipeline as part of the El Segundo-Van Nuys Production subsystem. As of August 3, 2022, the pipeline was indicated to be active and filled. The 17.14-mile pipeline originates near the intersection of Oxnard Street and Sepulveda Boulevard. The pipeline travels south parallel to Sepulveda Boulevard and continues south beyond I-10.

3.8.3 Methane Hazard Zones

Methane gas, commonly known as natural gas, may underlay the site. Potential hazards associated with methane include fire or explosion due to methane gas accumulations, since it is a highly flammable substance, and human health risks associated with natural gas poisoning. Exposure to high concentrations of methane can result in long-term health effects such as respiratory, cardiovascular, and neurological issues, though this is generally a concern in confined spaces rather than outdoor environments. Methane and other flammable or toxic gases, notably hydrogen sulfide, are often associated with naturally occurring petroleum deposits or active and former oil fields. These areas may have a potential for subsurface accumulations of methane and other volatile gases. Both methane and hydrogen sulfide are highly flammable and, in high concentrations, pose explosion hazards to the public. Exposure to high levels of hydrogen sulfide can also cause long-term health effects, including impaired cognitive function, respiratory irritation, and neurological impacts. In the City of Los Angeles, there are two types of methane hazard zones: methane zones and methane buffer zones. A methane zone is closer to the source of the subsurface methane gas and/or hydrogen sulfide. Whereas a methane buffer zone surrounds the outer limits of a methane zone. These zones are mostly a result of naturally surfacing tar and crude oil. Figure 3-36 through Figure 3-40 show the methane hazard zones in relation to each project alternative. The methane hazard zones in relation Modified Alternative 5 will be determined during the upcoming design process.

Figure 3-36. Alternative 1: Methane Hazard Zones



Source: GeoForward, 2021

Figure 3-37. Alternative 3: Methane Hazard Zones



Source: GeoForward, 2021

Figure 3-38. Alternative 4: Methane Hazard Zones



Source: GeoForward, 2021

Figure 3-39. Alternative 5: Methane Hazard Zones



Source: GeoForward, 2021

Figure 3-40. Alternative 6: Methane Hazard Zones



Source: GeoForward, 2021

3.8.4 Proximity to Airports

The project alternatives are located in proximity to the Van Nuys Airport. Alternatives 1 and 3 are located 0.9 miles from the Van Nuys Airport at the nearest project component, Alternatives 4 and 5 are located 1.3 miles from the Van Nuys Airport at the nearest project component, and Alternative 6 is located 2.3 miles from the Van Nuys Airport at the nearest project component. The Van Nuys Airport proximity for Modified Alternative 5 will be determined during the upcoming design process. The Santa Monica City Council approved a plan to formally close the Santa Monica Airport in 2028. Both the *Van Nuys Airport Plan* and *Los Angeles County Airport Land Use Plan* (ALUC, 2023a, 2023b) indicate that all project alternatives would be located outside each Airport Influence Area, which is the area where current or future airport-related noise, overflight, safety, or airspace protection factors may substantially affect land uses or necessitate restrictions on those uses. Because the alignments and MSFs would be outside of the Airport Influence Area, there are no airport land use plans applicable to the project alternatives.

Figure 3-41. Airport Influence Area



Source: ALUC, 2023a, 2023b

3.9 Land Use

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Land Use and Development Technical Report* (Metro, 2025i). The summary addresses the land use distribution in the Project Study Area and land uses near proposed stations and MSF locations. The area studied for this topic consisted of a 0.5-mile buffer area (0.5 mile on each side of the alignment and the proposed MSF site options) where potential secondary or indirect impacts may occur. In addition, the existing land uses within a 1-mile radius were evaluated for the proposed stations. The 0.5-mile buffer for the alignments and MSF site options was consistent with the methodology used for other Metro rail projects to identify potential impacts to parcels located immediately adjacent to and one parcel out from the project footprint. The 1-mile radius was used for the proposed stations, which was consistent with Metro's First/Last Mile Policy.

The Project Study Area consists of various City of Los Angeles neighborhoods, including West Los Angeles, Westwood, Brentwood, Sherman Oaks, and Van Nuys. The majority of single-family residential land uses within the Project Study Area are located in Brentwood, Bel-Air, Encino, and Sherman Oaks, while multi-family residential is concentrated in the Westwood, Sawtelle, and Van Nuys neighborhoods. The Sepulveda Basin Recreation Area (located in the northwest portion of the Project Study Area) and Westridge-Canyonback Wilderness Park (located in the western portion of the Project Study Area) are the two largest areas of open space and recreation lands in the Project Study Area. Businesses and industrial parks are also concentrated within Van Nuys, along Van Nuys Boulevard and Victory Boulevard. Commercial uses within the Project Study Area range from local neighborhood/commercial main street retails to large regional malls and shopping centers within West Los Angeles, Westwood, Santa Monica, and Sherman Oaks. In addition, the Project site is not located within the City of Santa Monica; however, the Project Study Area falls within the City of Santa Monica in the southern portion of Alternative 1. The Project Study Area includes properties within the City of Santa Monica. The City of Santa Monica is an urban community located west and south of City of Los Angeles. Almost all of the land in the City of Santa Monica is developed with established residential neighborhoods, commercial corridors, light industrial and creative office uses, a civic center, parks, schools and other community-serving facilities, public services, and utilities.

Table 3-26 lists the distribution of land types within the Project Study Area by each alternative. The greatest percentages of land uses are residential and open space/recreation. Table 3-27 lists zoning for proposed stations and MSF sites, in addition to nearby notable land uses. Figure 3-42 through Figure 3-46 identify the existing land uses in the Project Study Area for each project alternative. The land use distribution associated with Modified Alternative 5 will be determined during the upcoming design process.

Table 3-26. Land Use Distribution within the Project Study Area

Land Use Types	Percentage of Total Acres				
	Alt. 1	Alt. 3	Alt. 4	Alt. 5	Alt. 6
Single-Family Residential	27	29	34	33	29
Multi-Family Residential	27	29	34	33	29
Mixed Residential	<1	<1	<1	<1	<1
Mixed Residential and Commercial	<1	<1	<1	<1	<1
Commercial and Services	5	5	6	6	6
Education	5	5	5	5	5
Public Facilities	4	4	4	4	6

Land Use Types	Percentage of Total Acres				
	Alt. 1	Alt. 3	Alt. 4	Alt. 5	Alt. 6
General Office	5	5	4	4	5
Industrial	4	4	4	4	4
Open Space and Recreation	10	10	7	7	6
Transportation, Communications, and Utilities	2	2	<1	1	1
Military Installations	<1	<1	<1	<1	<1
Vacant	8	8	6	6	5

Source: SCAG, 2024

Alt. = Alternative

Table 3-27. Station Area Land Use Analysis

Project Component	Alternatives	Zoning	Land Use Summary
Stations			
Metro E Line/Sepulveda Station	1 and 3	Public Facilities	Nearby land uses primarily include single-family residential, multi-family residential, commercial, and industrial. Notable nearby properties include Sawtelle Japantown and One Westside, which houses Google offices.
	4 and 5	Industrial	
Metro E Line/Bundy Station	6	Public Facilities, Commercial, and Multi-Family Residential	Nearby land uses primarily include single-family residential, multi-family residential, industrial, commercial, general office, and open space/recreation. Notable nearby properties include ACE Hardware, Staples, and the Anawalt Lumbar Company, Stoner Recreational Park and Center, the Department of Water and Power West Los Angeles, Fox 11 Media Center, and institutional/public facilities.
Santa Monica Boulevard Station	1 and 3	Public Facilities and Manufacturing	Nearby land uses primarily include single-family residential, multi-family residential, commercial, facilities, industrial, and open space/recreation land uses. Notable nearby properties include Sawtelle Japantown and Westwood Recreation Center.
	4 and 5	Public Facilities, Commercial, and Multi-Family Residential	
	6	Commercial	
Wilshire/Metro D Line Station	1 and 3	Public Facilities	Nearby land uses primarily include multi-family residential, public facilities, and open space and recreation land use. Notable nearby properties include the Federal Building, the VA Medical Center, and open space/recreation.
	4, 5, and 6	Commercial	
UCLA Gateway Plaza Station	3, 4, 5, and 6	Public Facilities	Nearby land uses primarily include single-family and multi-family residential, commercial, public facility, general office, and open space/recreation. Notable nearby properties include the Ronald Regan Medical Center, UCLA Specialty Centers, and Mildred E. Mathias Botanical Garden.

Project Component	Alternatives	Zoning	Land Use Summary
Getty Center Station	1 and 3	Public Facilities and Single-Family Residential	Nearby land uses primarily include open space/ recreation, single-family residential, commercial, and education. Notable nearby properties include the Getty Center and the Mount Saint Mary's University Los Angeles (Chalon Campus).
Ventura Boulevard/ Sepulveda Boulevard Station	1, 3, 4, 5	Public Facilities and Commercial	Nearby land uses primarily include single-family residential, multi-family residential, commercial, public facilities, and education. Notable nearby properties include the Sherman Oaks Galleria and the Sepulveda Basin Recreation Area.
Ventura Boulevard/ Van Nuys Boulevard Station	6		
Metro G Line Sepulveda Station	1, 3, 4, and 5	Public Facilities and Manufacturing	Nearby land uses primarily include single-family residential, multi-family residential, commercial, public facilities, industrial, and open space/recreation. Notable nearby properties include Sepulveda Basin Wildlife Reserve and Delano Park.
Metro G Line Van Nuys Station	6	Manufacturing and Commercial	
Sherman Way Station	1 and 3	Public Facilities	Nearby land uses primarily include single-family residential, multi-family residential, commercial, facilities, industrial, and education. Notable nearby properties include Valley Presbyterian Hospital, Vons grocery store, and Beverly Manor Convalescent Center.
	4 and 5	Commercial, Single-Family Residential, and Multi-Family Residential	
Van Nuys Metrolink Station	1, 3, 4, 5, and 6	Public Facilities and Commercial	Nearby land uses primarily include single-family residential, multi-family residential, commercial, public facilities, and industrial. Notable nearby properties include Plant Shopping Center, Valley Medical Center, and Panorama Mall.
Maintenance and Storage Facilities			
Base Design	All Alternatives	Manufacturing	Nearby land uses primarily include single-family residential, multi-family residential, commercial, public facilities, and general office land use. Notable nearby properties include Plant Shopping Center, Valley Medical Center, and Panorama Mall.
Design Option 1	1 and 3	Manufacturing	Nearby land uses primarily include single-family residential, multi-family residential, commercial, public facilities, and general office land use.
Electric Bus MSF	1	Public Facilities/Transit	Land uses designations near the Electric Bus MSF include commercial, general office, open space/recreation, single-family and multi-family residential, and public facilities.

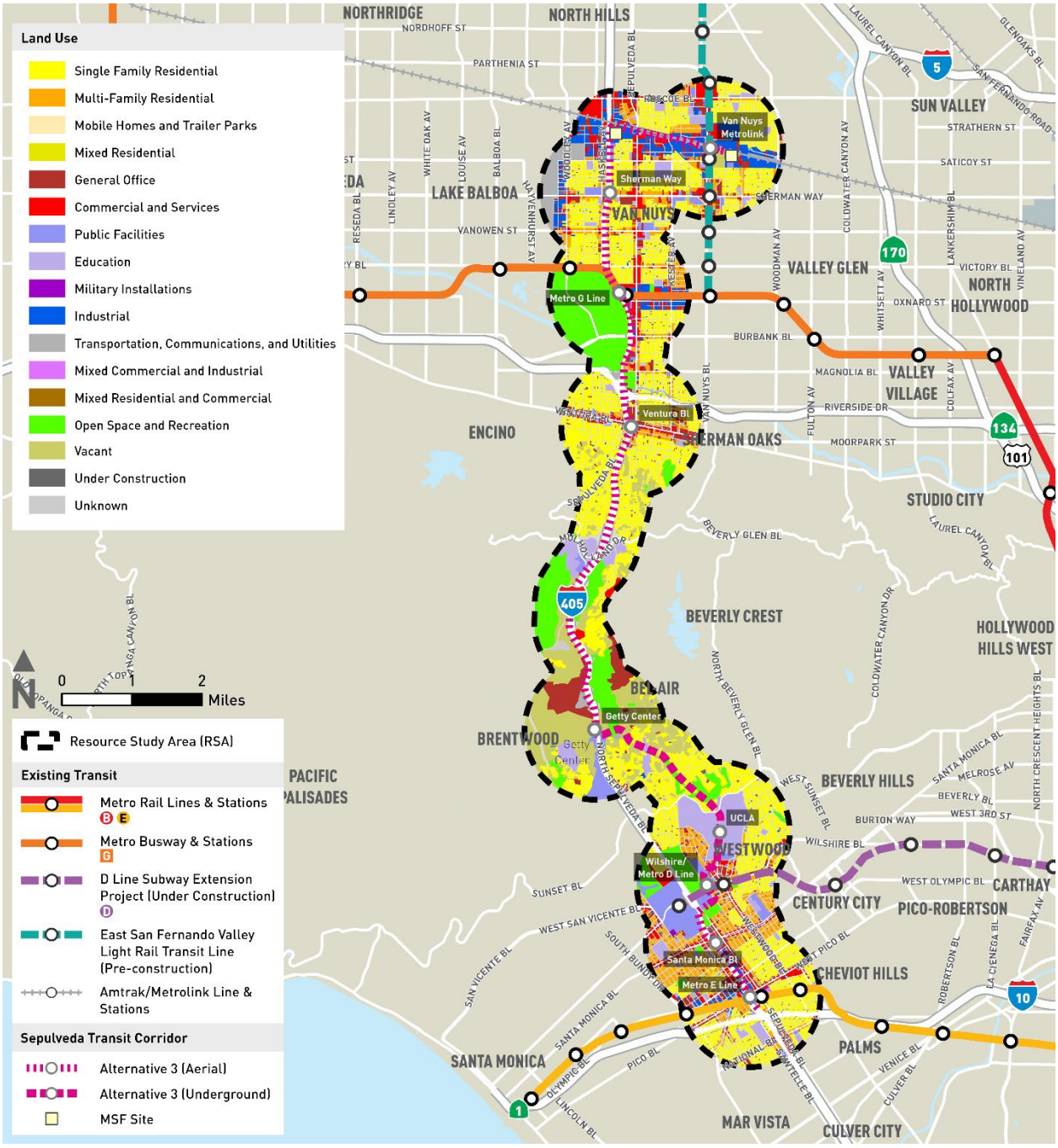
Source: SCAG, 2024

Figure 3-42. Alternative 1: Existing Land Uses



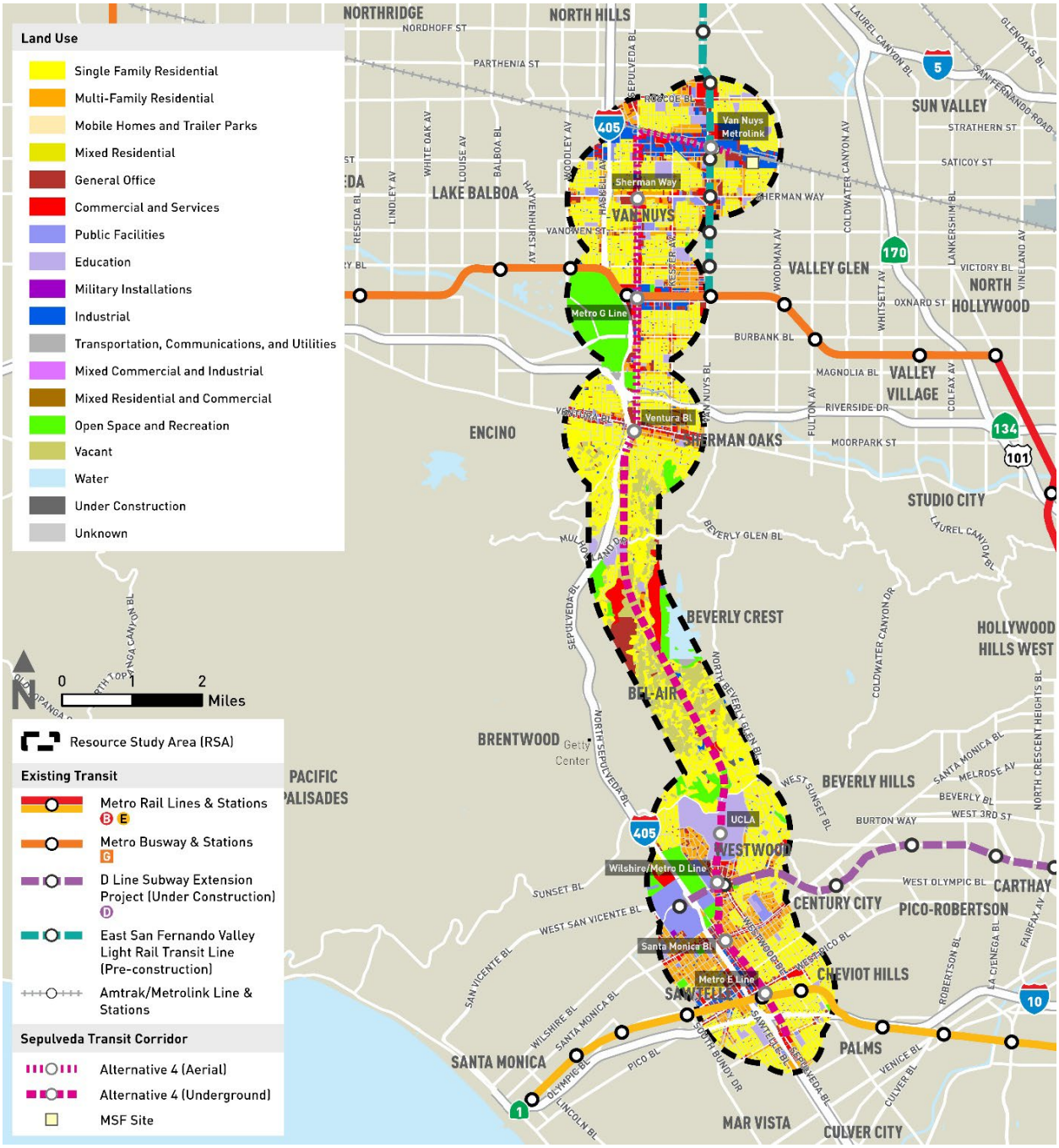
Source: SCAG, 2024

Figure 3-43. Alternative 3: Existing Land Uses



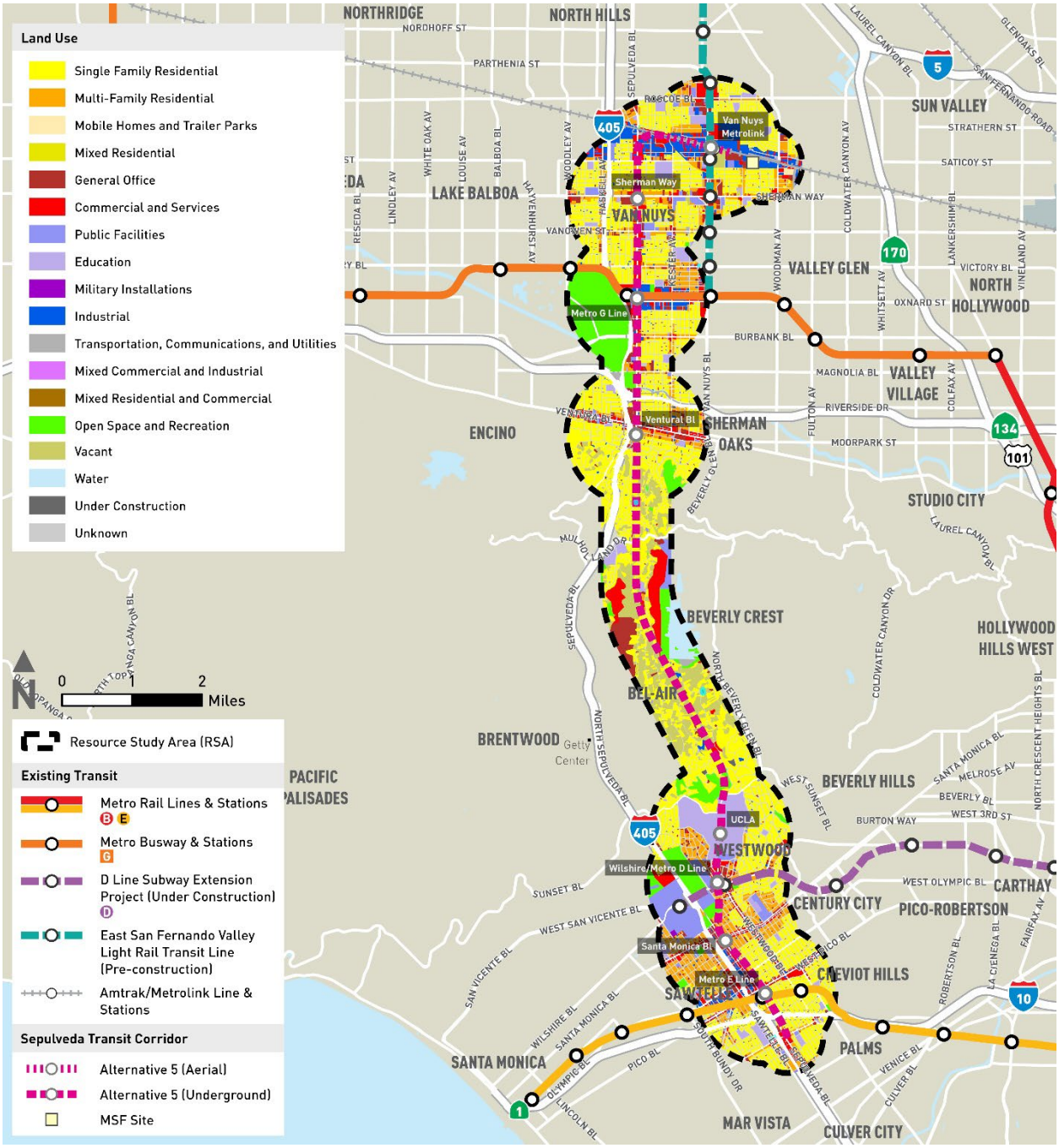
Source: SCAG, 2024

Figure 3-44. Alternative 4: Existing Land Uses



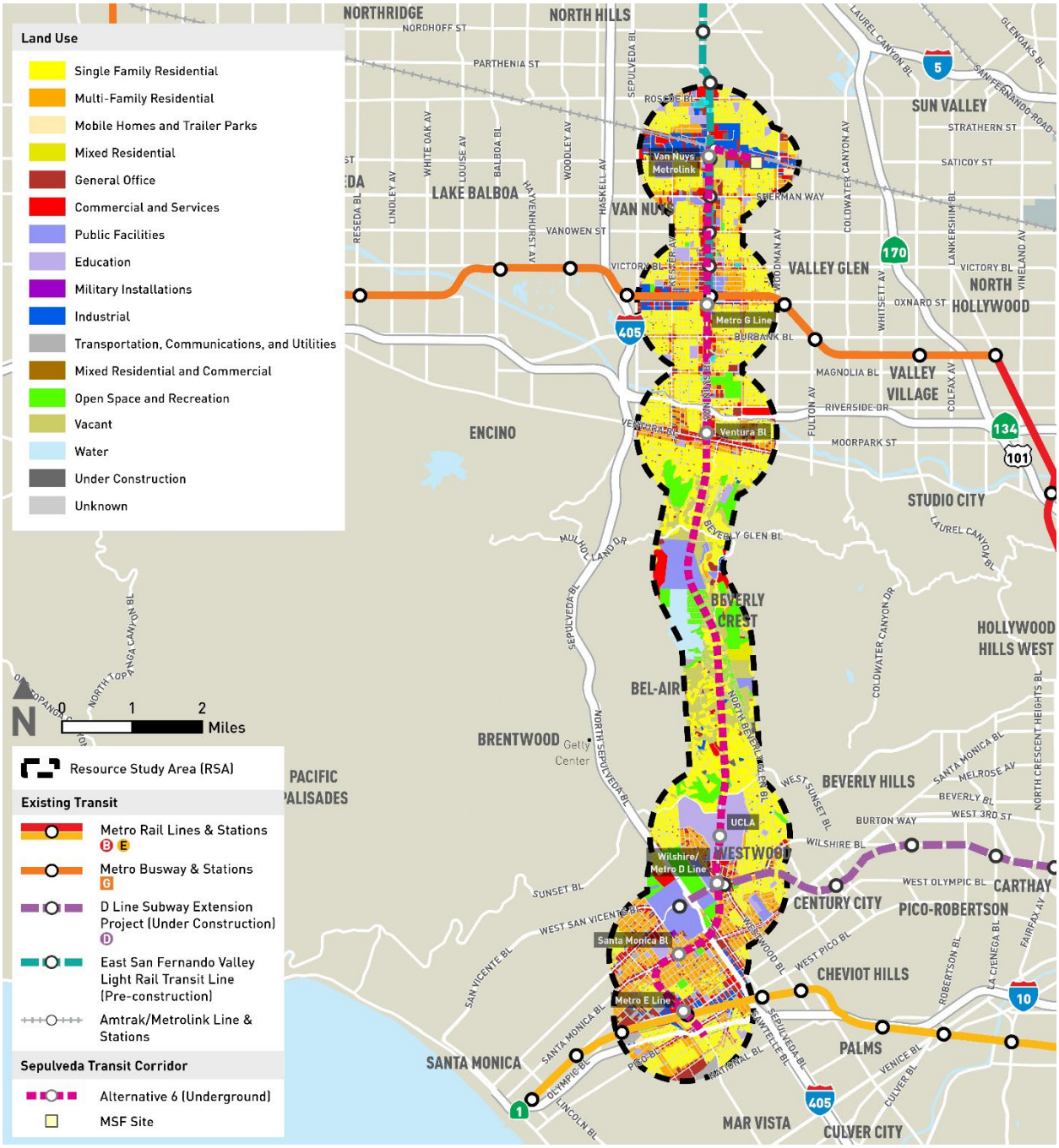
Source: SCAG, 2024

Figure 3-45. Alternative 5: Existing Land Uses



Source: SCAG, 2024

Figure 3-46. Alternative 6: Existing Land Uses



Source: SCAG, 2024

3.10 Noise and Vibration

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Noise and Vibration Technical Report* (Metro, 2025j).

The existing noise environment is dominated by traffic noise, including freeways such as I-405, I-10, and US-101, and arterial roads, including Sepulveda Boulevard, Santa Monica Boulevard, Wilshire Boulevard, and others. Aircraft flyovers are also contributors to the existing noise environment in most areas along the Project alignments. Existing transit lines also contribute to the existing noise environment. Land uses found along the alignment include single- and multi-family residential uses; lodging facilities; educational facilities; public facilities; public and commercial office buildings; various types of commercial uses; institutional uses; surface parking facilities; and parking structures.

The Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* uses categories to identify sensitive land uses. Category 1 are high-sensitivity land uses. This category is applicable to land where quiet is an essential element of its purpose. Examples include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category. Category 2 includes residential uses where people normally sleep, such as hotels and hospitals. Category 3 includes institutional uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category.

3.10.1 Noise

There are no Category 1 noise-sensitive land uses along the Alternative 1 alignment. Category 1 noise-sensitive land uses along the Alternatives 3 and 4 alignments include laboratories and medical facilities in the vicinity of UCLA campus along Westwood Boulevard. Category 1 noise-sensitive land uses along the Alternative 5 alignment include laboratories, medical facilities in the vicinity of UCLA along Westwood Boulevard, music and video production studios, television and radio stations, and two recording studios. Category 1 noise-sensitive land uses along the Alternative 6 alignment include existing television, broadcast, and film production studios along Bundy Drive, The Village Studios (recording studio) on Butler Avenue south of Santa Monica Boulevard, Stray Angel Films (a film production studio) on Santa Monica Boulevard, an animal hospital at the crossing of the alignment with Sepulveda Boulevard, Fox Sports studios on Sepulveda Boulevard, scientific/research laboratories and medical facilities in and near UCLA along Westwood Boulevard, music and video production studios on Glendon Avenue, and three production studios along Van Nuys Boulevard. The noise-sensitive land uses potentially affected by Modified Alternative 5 will be determined during the upcoming design process.

Category 2 noise-sensitive land uses include single- and multi-family residential and lodging land uses located throughout the alignments for each alternative. Category 2 noise-sensitive land uses are more sparsely located in the mountainous segment. Category 2 noise-sensitive land uses are more sparsely located in the mountainous segment of the Alternatives 1 and 3 alignments. Category 2 noise-sensitive also includes a convalescent home located along the Alternative 6 alignment.

Category 3 noise-sensitive land uses found along the Alternative 1 alignment include KT Rehearsal Studios, Los Angeles National Cemetery, Village Church, Leo Baeck Temple and its affiliated facilities, The Getty Center, Skirball Cultural Center, Milken Community School, Ivy Bound Academy, Emeck Hebrew

Academy, and the Church of Jesus Christ of Latter-Day Saints on Saticoy Street in Van Nuys. Category 3 noise-sensitive land uses along the Alternative 3 alignment include Westwood Park, KT Rehearsal Studios, Leo Baeck Temple and its affiliated facilities, The Getty Center, Skirball Cultural Center, Milken Community School, Ivy Bound Academy, Emeck Hebrew Academy, and the Church of Jesus Christ of Latter-Day Saints on Saticoy Street in Van Nuys. Category 3 noise-sensitive land uses along the Alternative 4 alignment include Kingdom Hall of Jehovah's Witnesses in Sherman Oaks, Contractors State License School, and US Census Library in Van Nuys. Category 3 noise-sensitive land uses along the Alternative 5 alignment include Kingdom Hall of Jehovah's Witnesses in Sherman Oaks, Contractors State License School, and US Census Library in Van Nuys. Some uses in the UCLA area include multiple noise-sensitive land use categories. Category 3 noise-sensitive land uses along the Alternative 6 alignment includes scattered religious facilities, schools of various types, and medical buildings.

The existing noise conditions along the project alternative alignments were documented through noise monitoring performed at representative noise-sensitive locations along the proposed alignments. Representative noise-sensitive locations were identified by using preliminary alignment maps, aerial photographs, visual surveys, and proximity to aboveground noise sources associated with each of the project alternatives. Long-term (24-hour) noise measurements were conducted at a total of 48 locations representing Category 2 land uses. Short-term noise measurements (two 1-hour measurements for each site) were obtained at 21 locations representing exterior areas of Category 3 land uses. Figure 3-47 and Figure 3-48 show the locations of 24-hour noise monitoring sites.

Table 3-28 lists a summary of long-term (24-hour) noise measurements taken at locations that are representative of the residential and lodging land uses along the Project alignments. The noise monitors were programmed to continuously collect data for a minimum of 24 hours. The microphones were generally placed on tripods about 5 feet above the ground at locations near the setback of habitable buildings, between the buildings and the proposed Project alignment.

Table 3-28. Summary of Existing 24-Hour Noise Measurements for Category 2 Land Uses

Site No.	Location	Primary Noise Source(s)	Measurement Start		Measured Existing Ldn (dBA)
			Date	Time	
1	2435 S. Sepulveda Boulevard	I-405 traffic	6/28/2023	11:00am	73.9
2	2203 S. Bentley Avenue	Local traffic	7/5/2023	10:00am	65.9
3	1726 S. Bentley Avenue	Local traffic	7/12/2023	10:00am	62.0
4	1521 Beloit Avenue	I-405 and Santa Monica Boulevard	7/12/2023	10:00am	66.7
5	Greater LA Fisher House	I-405 traffic	7/25/2023	10:00am	69.5
7	West LA VA Medical Center	I-405 traffic	7/25/2023	9:00am	67.3
10	UCLA Luskin Conference Center	Local traffic	5/25/2023	3:00pm	62.2
15	426 S. Sepulveda Boulevard	I-405 and Sepulveda Boulevard	6/6/2023	11:00am	71.0
16	11330 Denair Street	I-405 traffic	6/7/2023	3:00pm	75.9
18	353 Dalkeith Avenue	I-405, Sepulveda Boulevard	6/7/2023	11:00am	72.0
19	10615 Bellagio Road	Bellagio Road	6/2/2023	12:00pm	63.4
20	11420 Thurston Circle	I-405, Sepulveda Boulevard	6/27/2023	10:00am	73.1

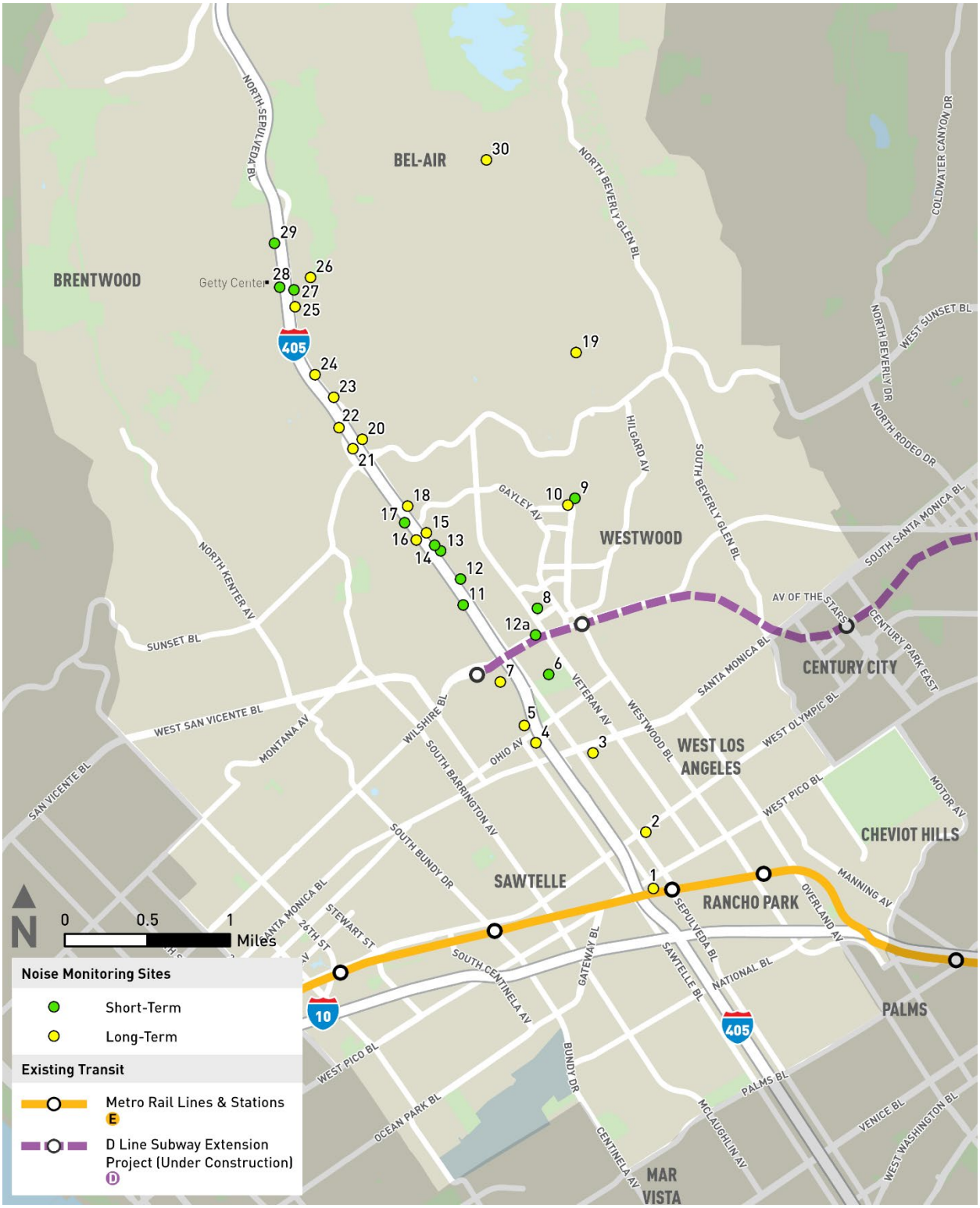
Site No.	Location	Primary Noise Source(s)	Measurement Start		Measured Existing Ldn (dBA)
			Date	Time	
21	Hotel Bellagio 170 N. Church Lane	I-405 traffic	6/8/2023	12:00pm	87.0
23	11720 Bellagio Road	I-405, Sepulveda Boulevard	6/21/2023	11:00am	71.3
24	11812 Bellagio Road	I-405, Sepulveda Boulevard	6/6/2023	11:00am	70.5
25	Leonard I. Beeman Early Childhood Center	I-405, Sepulveda Boulevard	6/14/2023	12:00pm	71.7
26	1399 Casiano Road	I-405 traffic	5/17/2023	3:00pm	76.0
30	10635 Levico Way	Distant aircraft	6/6/2023	1:00pm	55.4
31	2607 Basil Lane	Distant aircraft	6/7/2023	12:00pm	47.4
32	2341 Donella Circle	Roscomare Road	6/6/2023	2:00pm	63.4
37	3490 Vista Haven Road	Distant aircraft, local traffic	5/30/2023	4:00pm	54.3
38	15460 Briarwood Drive	I-405 traffic	6/20/2023	9:00am	74.1
39	15515 Woodcrest Drive	I-405 traffic	5/30/2023	1:00pm	63.3
41	15371 Del Gado Drive	I-405 traffic	6/29/2023	10:00am	72.5
42	15350 Sutton Street	I-405 traffic	6/8/2023	9:00am	72.4
43	4440 Sepulveda Boulevard	I-405, Sepulveda Boulevard	3/25/2024	12:00pm	76.5
44	4800 Sepulveda Boulevard	Sepulveda Boulevard	5/30/2023	11:00am	65.8
45	15233½ Valleyheart Drive	Sepulveda Boulevard	7/25/2023	7:00am	63.7
47	14520 Magnolia Boulevard	Van Nuys Boulevard, Shell car wash	4/3/2024	7:00am	64.0
48	15231 Magnolia Boulevard	Sepulveda Boulevard	7/13/2023	12:00pm	66.9
49	5329 Sepulveda Boulevard	Sepulveda Boulevard	6/15/2023	8:00am	67.7
50	15353 Weddington Street	I-405 traffic	7/18/2023	9:00am	67.2
51	5450 Sepulveda Boulevard	Sepulveda Boulevard	6/13/2023	12:00pm	69.9
52	6200 Blucher Avenue	I-405, G Line, local traffic	3/25/2024	1:00pm	62.9
53	6201 Blucher Avenue	I-405, G Line, local traffic	3/25/2024	1:00pm	62.9
55	6224 Peach Avenue	Sepulveda Boulevard	5/24/2023	2:00pm	57.3
56	6561 Sepulveda Boulevard	Sepulveda Boulevard	6/15/2023	8:00am	66.5
57	6546 Aqueduct Avenue	I-405 traffic	5/24/2023	12:00pm	69.1
58	14419 Vanowen Street	Sepulveda Boulevard, Vanowen Street	3/25/2024	2:00pm	59.6
59	6920 Sepulveda Boulevard	Sepulveda Boulevard	6/13/2023	11:00am	65.6
60	6841 Firmament Avenue	I-405 traffic	6/6/2023	9:00am	65.3
61	13917 Cohasset Street	LOSSAN Corridor, distant traffic	6/13/2023	10:00am	52.8
62	7467 Sylmar Avenue	Van Nuys Boulevard	6/14/2023	9:00am	55.1
63	15235 Wyandotte Street	Sepulveda Boulevard	7/18/2023	9:00am	60.0

Site No.	Location	Primary Noise Source(s)	Measurement Start		Measured Existing Ldn (dBA)
			Date	Time	
64	15550 Wyandotte Street	I-405 traffic	5/30/203	11:00am	66.5
65	15559 Covello Street	I-405 traffic	6/27/2023	9:00am	66.7
66	15018 Marson Street	LOSSAN Corridor	5/24/2023	11:00am	60.5
67	7824 Zombar Avenue	Local traffic, distant aircraft	6/20/2023	9:00am	58.0

Source: HTA, 2024

dBA = A-weighted decibel
Ldn = day-night noise level

Figure 3-47. Noise Monitoring Sites – Project Study Area - South



Source: HTA, 2024

Figure 3-48. Noise Monitoring Sites – Project Study Area - North



Source: HTA, 2024

Short-term noise measurements for two 1-hour periods at each site were also taken at Category 3 (institutional) land uses, including schools, religious facilities, museums, and amphitheaters, along the Project alignment segments with aboveground noise sources. The general locations of the short-term measurement sites are shown on Figure 3-47 and Figure 3-48. Table 3-29 lists the results of each individual short-term measurement.

Table 3-29. Summary of Existing Short-Term (1-Hour) Noise Measurements for Category 3 Land Uses

Site No.	Location	Primary Noise Source(s)	Measurement Start		Measured Existing L_{eq} (dBA)
			Date	Time	
6	Westwood Park, north of soccer field on lawn near parking lot	I-405 traffic, local traffic	4/12/2023	9:17am	54.2
			4/13/2023	10:23am	59.0
8	UCLA Williams Institute, southwest corner of building	Local traffic, fire station activities	5/26/2023	9:29am	63.9
			5/30/2023	1:41pm	61.3
9	UCLA Computer Science/ Engineering IV building	Local traffic, students' chatter	5/25/2023	1:04pm	57.9
			5/26/2023	3:36pm	58.8
11	Los Angeles National Cemetery Columbarium, near east wall	I-405 traffic	7/25/2023	1:21pm	59.7
			7/26/2023	9:26am	62.7
12a	Los Angeles National Cemetery north of Wilshire Boulevard	Wilshire Boulevard and I-405 traffic	7/25/2023	11:48am	65.4
			7/26/2023	10:48am	65.0
12	Los Angeles National Cemetery east of I-405, no freeway soundwall	I-405 and Sepulveda Boulevard traffic	7/25/2023	10:10am	72.4
			7/26/2023	12:04pm	71.8
13	Los Angeles National Cemetery east of I-405, with freeway soundwall	I-405 and Sepulveda Boulevard traffic	7/25/2023	10:10am	67.3
			7/26/2023	12:04pm	67.0
14	Los Angeles National Cemetery north fence, with freeway soundwall	I-405 and Sepulveda Boulevard traffic	4/12/2023	11:55am	69.0
			4/13/2023	9:03am	69.5
17	Village Church, 343 S. Church Lane, sidewalk next to front lawn	I-405 traffic	4/12/2023	1:32pm	63.6
			4/13/2023	8:55am	65.5
22	Getty South Building, near buildings setback west of I-405	I-405 traffic	5/17/2023	3:00pm	74.3
			5/18/2023	7:00am	78.0
27	Leo Baeck Temple, west of building, facing I-405	I-405 and Sepulveda Boulevard Traffic	6/14/2023	12:19pm	67.1
			6/15/2023	10:40am	67.4
28	The Getty Tram Station, in lawn area north of the Station	I-405 traffic	5/17/2023	11:54am	59.4
			5/18/2023	11:25am	60.9
29	Future Oak parking lot at The Getty, in currently unpaved lot	I-405 traffic	5/17/2023	11:54am	66.9
			5/18/2023	11:25am	68.2
33	Skirball Cultural Center, Ziegler Amphitheater, east façade	I-405 and Sepulveda Boulevard Traffic	5/17/2023	7:53am	60.9
			5/18/2023	7:45am	61.7
34	Skirball Cultural Center, Ziegler Amphitheater, at bleachers	I-405 and Sepulveda Boulevard Traffic	5/17/2023	7:53am	56.6
			5/18/2023	7:45am	57.1
35	Milken Community School, first floor facing I-405	I-405 traffic, student chatter	5/17/2023	9:40am	70.9
			5/18/2023	9:20am	72.2
36	Milken Community School, second floor facing I-405	I-405 traffic, student chatter	5/17/2023	9:40am	70.6
			5/18/2023	9:20am	71.3
40	15347 Del Gado Drive, at south end of vacant lot[a]	I-405 traffic	6/30/2023	8:42am	57.8
46	Ivy Bound Academy, basketball courts near I-101 to I-405 ramp	I-405 mainline and ramp traffic	5/25/2023	7:10am	67.9
			5/26/2023	6:57am	68.8

Site No.	Location	Primary Noise Source(s)	Measurement Start		Measured Existing L_{eq} (dBA)
			Date	Time	
54	Contractors State License School, 6222 Sepulveda Boulevard	Sepulveda Boulevard traffic	4/13/2023	1:07pm	73.6
			5/11/2023	11:36am	72.4
68	La Iglesia de Jesucristo de los Santos de los Últimos Días	I-405 traffic, distant aircraft	4/13/2023	1:27pm	62.5
			5/11/2023	10:17am	64.5

Source: HTA, 2024

[a.] This short-term measurement location was used to estimate noise levels at residential locations farther east of I-405 than the 24-hour site located at 15371 Del Gado Drive.

dBA = A-weighted decibel
L_{eq} = equivalent noise level

3.10.2 Vibration

Existing sources of groundborne vibration include trucks traveling along roadways, construction sites using heavy equipment, and existing transit lines. According to the FTA guidance, the background vibration levels are expected to range from 50 to 65. These vibration levels are typically not perceptible to humans. Sensitive land uses are classified as one of the following three FTA vibration-sensitive land use categories.

- Category 1 – Buildings where vibration would interfere with interior operations.
- Category 2 – Residences and buildings where people normally sleep.
- Category 3 – Institutional land uses with primarily daytime use.

There are no Category 1 vibration-sensitive land uses identified along the Alternative 1 alignment. Category 1 vibration-sensitive land uses identified along the Alternative 3 alignment include buildings along Westwood Boulevard, including medical facilities and scientific/research laboratories on the UCLA campus. Category 1 vibration-sensitive land uses identified along the Alternative 4 alignment include two animal hospitals located on Sepulveda Boulevard between the Metro E Line Expo/Sepulveda Station and Santa Monica Boulevard Station; video and music production outfits on Glendon Avenue, between Lindbrook Drive and Weyburn Avenue; medical facilities along Westwood Boulevard; and scientific/research laboratories related to UCLA along Westwood Boulevard. Category 1 vibration-sensitive land uses identified along the Alternative 5 alignment include two animal hospitals located on Sepulveda Boulevard, between Metro E Line Expo/Sepulveda Station and Santa Monica Boulevard Station; video and music production outfits on Glendon Avenue, between Lindbrook Drive and Weyburn Avenue; medical facilities along Westwood Boulevard; scientific/research laboratories related to UCLA; a radio station and a television station in Sherman Oaks; and three recording studios in Van Nuys. Category 1 vibration-sensitive land uses identified along the Alternative 6 alignment include existing television, broadcast, and film production studios along Bundy Drive; The Village Studios (recording studio) on Butler Avenue, south of Santa Monica Boulevard; Stray Angel Films (a film production studio) on Santa Monica Boulevard; an animal hospital at the crossing of the alignment with Sepulveda Boulevard; Fox Sports studios on Sepulveda Boulevard; scientific/research laboratories and medical facilities in and near the UCLA campus along Westwood Boulevard; music and video production outfits on Glendon Avenue; and three film or music production studios along Van Nuys Boulevard. The vibration-sensitive land uses potentially affected by Modified Alternative 5 will be determined during the upcoming design process.

Category 2 vibration-sensitive land uses include single- and multi-family residences and hotels/motels which are located throughout the Alternatives 1 and 3 alignments. Category 2 vibration-sensitive land uses are more sparsely located in the mountainous segment of the Alternatives 1 and 3 alignments. Category 2 vibration-sensitive land uses include single- and multi-family residences and hotels/motels, which are located throughout the Alternatives 4, 5, and 6 alignments.

Category 3 vibration-sensitive land uses identified along the alignment for each alternative include the same educational facilities, religious facilities, museum buildings, and cultural centers identified as Category 3 noise-sensitive land uses.

3.11 Parks and Recreational Facilities

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Parklands Technical Report* (Metro, 2025k). The Resource Study Area for parks and recreational facilities includes approximately 72 park and recreational facilities and open space areas, totaling approximately 5,091 acres. The 72 park and recreational facilities in the Project Study Area include 44 parks; 22 nature/wildlife preserves and regional open spaces; 4 public golf courses; 1 botanical garden; and 1 amusement park. Of the identified facilities, 54 are located in the City of Los Angeles, 9 are in the City of Santa Monica, 1 is in the City of Beverly Hills, and the botanical garden is located at UCLA. Several agencies own and manage the park and recreational facilities identified, including the U.S. Army Corps of Engineers (USACE), Los Angeles County, City of Los Angeles, SMMC, NPS, Los Angeles Neighborhood Land Trust, and UCLA. Table 3-30 lists the parks and recreational facilities within the Project Study Area. Several recreational hiking trails identified in the parklands and open space areas are located within the Project Study Area near each of the Alternative alignments. Table 3-31 lists parks and recreational facilities within the RSA. The parks and recreational facilities potentially affected by Modified Alternative 5 will be determined during the upcoming design process.

Table 3-30. Parks and Recreational Facilities

Name	Address	Agency	Facility Type	Amenities	Size (acres)[a]	Distance from Alt. (feet)[b]
Alternatives 1 and 3						
Getty View Park & Trailhead	1399 Casiano Road, Los Angeles	SMMC	Regional Open Space	Open space	180.1	Alt. 1: 278 Alt. 3: 0
Mission Canyon Open Space	8260 Mulholland Drive	County of Los Angeles	Natural Areas	Open space	479.9	Alt. 1: 95 Alt. 3: 95
Alternatives 1, 3, 4, and 5						
Delano Park	15100 Erwin Street, Van Nuys	City of Los Angeles	Local Park	Baseball field, soccer field, playground, community center	6.1	Alt. 1: 1,916 Alt. 3: 1,916 Alt. 4: 990 Alt. 5: 990 Alt 4 & 5 N3 Staging Area: 1,269
Los Angeles Riverfront Greenway	Sherman Oaks	City of Los Angeles	Regional Open Space	Open space	6.2	Alt. 1: 995 Alt. 3: 995 Alt. 4: 66 Alt. 5: 66

Name	Address	Agency	Facility Type	Amenities	Size (acres)[a]	Distance from Alt. (feet)[b]
Marson Park	15262 Marson Street, Panorama City	Los Angeles Neighborhood Land Trust	Local Park	Playground	0.3	Alt. 1: 327 Alt. 3: 327 Alt. 4: 436 Alt. 5: 436
Sepulveda Basin Wildlife Reserve	17017 Burbank Boulevard, Encino	USACE	Regional Open Space	Open space	327.3	Alt. 1: 319 Alt. 3: 319 Alt. 4: 678 Alt. 5: 678 Alt 4 & 5 N2 and N3 Staging Area: 915
Sepulveda Pass Open Space	457 N Fairfax Avenue, Los Angeles	SMMC	Regional Open Space	Open space	155.0	Alt. 1: 307 Alt. 3: 307 Alt. 4: 127 Alt. 5: 127
Sherman Oaks Castle Park	4989 Sepulveda Boulevard, Sherman Oaks	City of Los Angeles	Amusement Park	Amusement Park	5.0	Alt. 1: 0 Alt. 3: 0 Alt. 4: 51 Alt. 5: 51
Teichman Family Magnolia Park	15365 Magnolia Boulevard, Sherman Oaks	City of Los Angeles	Local Park	Basketball court	3.9	Alt. 1: 0 Alt. 3: 0 Alt. 4: 569 Alt. 5: 569
Woodley Avenue Park	6350 Woodley Avenue, Encino	USACE	Regional Recreation Park	Fitness zone, picnic shelter, playgrounds	119.8	Alt. 1: 179 Alt. 3: 179 Alt. 4: 1,185 Alt. 5: 1,185 Alt 4 & 5 N3 Staging Area: 550
Alternatives 1, 3, 4, 5, and 6						
Andres and Maria Cardenas Recreation Center	14740 Blythe Street, Panorama City	City of Los Angeles	Local Park	Skate park, splash pad, community center	0.7	Alt. 1: 702 Alt. 3:702 Alt. 4: 695 Alt. 5: 695 Alt. 6: 2,280
Felicia Mahood Multipurpose Center	11338 Santa Monica Boulevard, Los Angeles	City of Los Angeles	Local Park	Senior Center	4.3	Alt. 1: 791 Alt. 3: 791 Alt. 4: 1,733 Alt. 5: 1,733 Alt. 6: 140
Mildred E. Mathia Botanical Garden	707 Tiverton Drive, Los Angeles	University of California, Los Angeles	Botanical Garden	Botanical garden	8.2	Alt. 1: 979 Alt. 3: 979 Alt. 4: 1,042 Alt. 5: 1,042 Alt 4 & 5 S3 Staging Area: 197 Alt. 6: 1,049

Name	Address	Agency	Facility Type	Amenities	Size (acres)[a]	Distance from Alt. (feet)[b]
Westwood Gardens Park	1246 Glendon Avenue, Los Angeles	City of Los Angeles	Local Park	Open space	0.3	Alt. 1: 781 Alt. 3: 1,456 Alt. 4: 1,053 Alt. 5: 1,053 Alt. 6: 1,074
Westwood Park	1350 Sepulveda Boulevard, Los Angeles	City of Los Angeles	Local Park	Tennis court, basketball court, baseball field, soccer field, multi-purpose field, playground, pool, gym	26.7	Alt. 1: 260 Alt. 3: 54 Alt. 4: 0 Alt. 5: 0 Alt. 6: 0
Alternative 4 and 5						
Airport Park	3201 Airport Avenue, Santa Monica	City of Santa Monica	Local Park	Soccer field, playground, dog park	8.3	Alt. 4 & 5 S1 Staging Area: 1,294
Balboa Sports Center	17015 Burbank Boulevard, Encino	USACE	Local Park	Tennis court, basketball court, baseball field, soccer field, playgrounds, gym	81.9	Alt. 4 & 5 N2 Staging Area: 563
Sepulveda Basin Recreation Area	17017 Burbank Boulevard, Encino	USACE	Regional Open Space	Baseball field, soccer field, multi-purpose field, fitness zone, skate park, dog park, senior center	268.4	Alt. 4 & 5 N1, N2 Staging Area: 0
Alternative 6						
Beverly Glen East Open Space	Los Angeles	MRCA	Natural Areas	Open space	0.4	Alt. 6: 214
Beverly Glen Park	2448 Angelo Drive, Los Angeles	MRCA	Natural Areas	Open space	95.5	Alt. 6: 453
Deervale-Stone Canyon Park	14700 Deervale Place, Sherman Oaks	City of Los Angeles	Regional Open Space	Open space	79.4	Alt. 6: 802
Fossil Ridge Park	Sherman Oaks	SMMC	Regional Open Space	Open space	57.7	Alt. 6: 1,249
Ishihara Park	2909 Exposition Boulevard, Santa Monica	City of Santa Monica	Local Park	Picnic shelter, playground	2.4	Alt. 6: 2,230
Mountains Restoration Trust Parkland	3815 Old Topanga Canyon Road, Topanga	Mountains Restoration Trust	Regional Open Space	Open space	18.1	Alt. 6: 682

Name	Address	Agency	Facility Type	Amenities	Size (acres)[a]	Distance from Alt. (feet)[b]
Multi-Purpose Senior Citizens Center	6514 Sylmar Avenue, Van Nuys	City of Los Angeles	Local Park	Senior center	1.4	Alt. 6: 695
Oak Forest Canyon Natural Area	Sherman Oaks	MRCA	Regional Open Space	Open space	1.1	Alt. 6: 1,256
Oak Forest West	Sherman Oaks	SMMC	Regional Open Space	Open space	9.7	Alt. 6: 997
Ohio and Bundy Triangle	Santa Monica Boulevard; South Bundy Drive; and Ohio Avenue, Los Angeles	City of Los Angeles	Regional Open Space	Open space	0.2	Alt. 6: 547
Stoner Recreation Center	1835 Stoner Avenue, Los Angeles	City of Los Angeles	Local Park	Tennis court, basketball court, baseball field, multi-purpose field, skate park, playground, pool, gym, community center	8.7	Alt. 6: 1,027
Van Nuys Recreation Center	14201 Huston Street, Sherman Oaks	City of Los Angeles	Local Park	Tennis court, basketball court, baseball field, soccer field, fitness zone, picnic shelter, playground, pool, community center, senior center	65.5	Alt. 6: 1,018
Van Nuys Sherman Oaks Recreation Center	14301 Vanowen Street, Van Nuys	City of Los Angeles	Local Park	Tennis court, basketball court, baseball field, playground, community center	3.9	Alt. 6: 44

Source: LA County Planning, 2024; DCP, 2023b

a. Size (acres) refers to the full size of the resource, not the acreage within the RSA.

b. A distance of "0 feet" from the alternative indicates that the alternative would either cross over the resource or be underground through the resource.

Alt. = Alternative

MRCA = Mountains Recreation and Conservation Authority
SMMC = Santa Monica Mountains Conservancy
USACE = U.S. Army Corps of Engineers
Note: The Resource Study Area for parks and recreational facilities is defined as the area 0.25-miles on both sides of the alignments, a 0.5-mile radius from stations, and 0.25-miles from MSF site boundaries.

Table 3-31. Parks and Recreational Facilities Within 0.5-Mile Radius of Stations

Stations	Parks and Recreational Facilities
Alternatives 1 and 3	
Metro E Line Expo/Sepulveda	Exposition Corridor Bike Path
Santa Monica Boulevard	• Felicia Mahood Multipurpose Center • Westwood Park • Westwood Park Bike Path
Wilshire Boulevard/Metro D Line	• Westwood Park • Westwood Park Bike Path
Wilshire Boulevard/VA Medical Center Bus Stop	• Westwood Park • Westwood Park Bike Path
Westwood Village Bus Stop	Mildred E. Mathias Botanical Garden
UCLA Bus Stop	• Mildred E. Mathias Botanical Garden • Various UCLA bike lanes/routes
Getty Center	• Getty View Park and Trailhead • Casiano Fire Road • Getty View Trail • Mount Saint Mary's Fire Road • Getty Center Access
Ventura Boulevard/Sepulveda Boulevard	None
Metro G Line Sepulveda	• Delano Park • Sepulveda Basin Wildlife Reserve • Woodley Avenue Park • Metro G Line Bike Path
Sherman Way	None
Van Nuys Metrolink	Andres and Maria Cardenas Recreation Center
Alternative 3	
Metro E Line Expo/Sepulveda	Exposition Corridor Bike Path
Santa Monica Boulevard	• Felicia Mahood Multipurpose Center • Westwood Park • Westwood Park Bike Path
Wilshire Boulevard/Metro D Line	• Westwood Park • Westwood Park Bike Path
UCLA Gateway Plaza	• Mildred E. Mathias Botanical Garden • Various UCLA bike lanes/routes
Getty Center	• Getty View Park and Trailhead • Casiano Fire Road • Getty View Trail • Mount Saint Mary's Fire Road • Getty Center Access
Ventura Boulevard/Sepulveda Boulevard	None

Stations	Parks and Recreational Facilities
Metro G Line Sepulveda	• Delano Park • Sepulveda Basin Wildlife Reserve • Woodley Avenue Park • Metro G Line Bike Path
Sherman Way	None
Van Nuys Metrolink	Andres and Maria Cardenas Recreation Center
Alternative 4	
Metro E Line Expo/Sepulveda	Exposition Corridor Bike Path
Santa Monica Boulevard Station	• Felicia Mahood Multipurpose Center • Westwood Park • Westwood Park Bike Path
Wilshire Boulevard/Metro D Line	• Mildred E. Mathias Botanical Garden • Westwood Park • Westwood Gardens Park • Westwood Park Bike Path
UCLA Gateway Plaza	• Mildred E. Mathias Botanical Garden • Various UCLA bike lanes/routes
Ventura Boulevard/Sepulveda Boulevard	None
Metro G Line Sepulveda	• Delano Park • Sepulveda Basin Wildlife Reserve • Woodley Avenue Park • Metro G Line Bike Path
Sherman Way	None
Van Nuys Metrolink	Andres and Maria Cardenas Recreation Center
Alternative 5	
Metro E Line Expo/Sepulveda	Exposition Corridor Bike Path
Santa Monica Boulevard	• Felicia Mahood Multipurpose Center • Westwood Park • Westwood Park Bike Path
Wilshire Boulevard/Metro D Line	• Mildred E. Mathias Botanical Garden • Westwood Park • Westwood Gardens Park • Westwood Park Bike Path
UCLA Gateway Plaza	• Mildred E. Mathias Botanical Garden • Various UCLA bike lanes/routes
Ventura Boulevard/Sepulveda Boulevard	None
Metro G Line Sepulveda	• Delano Park • Sepulveda Basin Wildlife Reserve • Woodley Avenue Park • Metro G Line Bike Path
Sherman Way	None
Van Nuys Metrolink	Andres and Maria Cardenas Recreation Center
Alternative 6	
Metro E Line Expo/Bundy	• Ishihara Park • Stoner Recreation Center • Exposition Corridor Bike Path

Stations	Parks and Recreational Facilities
Santa Monica Boulevard	• Felicia Mahood Multipurpose Center • Ohio Bundy Triangle • Stoner Recreation Center
Wilshire Boulevard/Metro D Line	• Mildred E. Mathias Botanical Garden • Westwood Park • Westwood Gardens Park • Westwood Park Bike Path
UCLA Gateway Plaza	• Mildred E. Mathias Botanical Garden • Various UCLA bike lanes/routes
Ventura Boulevard/Van Nuys Boulevard	None
Metro G Line Van Nuys	Metro G Line Bike Path
Van Nuys Metrolink	Andres and Maria Cardenas Recreation Center

Source: LA County Planning, 2024; SCAG, 2020a; U.S. Department of Homeland Security Geospatial Management Office, 2020

Note:

1. Only Class I Bike Paths and "Various UCLA bike lanes/routes" are included in this table. Class II Bike Lanes and Class III Bike Routes are not included in this table.
2. The Resource Study Area for parks and recreational facilities is defined as the area 0.25-miles on both sides of the alignments, a 0.5-mile radius from stations, and 0.25-miles from MSF site boundaries.

3.12 Safety and Security

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Safety and Security Technical Report* (Metro, 2025l). The summary addresses existing emergency services in the Project Study Area. There is little difference between the existing setting for emergency services as it relates to the project alternatives.

3.12.1 Fire Services

The Los Angeles Fire Department (LAFD) is the Authority Having Jurisdiction and has primary responsibility for fire and emergency services response within the City of Los Angeles. The Los Angeles County Fire Department (LACFD) is the Authority Having Jurisdiction within the VA property.

3.12.1.1 City of Los Angeles Fire Department

The majority of the Project Study Area is served by the LAFD. Figure 3-49 shows LAFD fire station locations relative to the proposed alignments. The LAFD services include fire prevention, firefighting, emergency medical care, technical rescue, hazardous materials mitigation, disaster response, public education, and community service. The adequacy of fire protection for a given area is based on required fire water flow, response time from existing fire stations, and the LAFD judgment of assessment of the needs in a given area. Fire water flows are supplied by the same water mains as the domestic water system, including the lines located in local streets and major roadways. Fire hydrants and building fire water service systems connect directly to local water mains.

More than 85 percent of the LAFD's daily emergency responses are related to emergency medical services (EMS). The average LAFD operation response times for stations near the project alternatives are listed in Table 3-32. The average operational response time for EMS for LAFD was 7.16 minutes in 2022 (LAFD, 2022). Critical Advanced Life Support (ALS) incidents include the most critical types of incidents.

The average LAFD operational response time for critical ALS was 6.14 minutes in 2022 (LAFD, 2022). Structure fire incidents are incident types indicating that a building or structure is reported to be actively burning (LAFD, 2023c). The average LAFD operational response time for structure fire incidents was 5.25 minutes in 2022 (LAFD, 2023b). The average LAFD operational response time for non-emergency medical services (Non-EMS) was 6.58 minutes in 2022 (LAFD, 2022).

Table 3-32. Average Operational Response Time Per Station

Fire Station	EMS	Non-EMS	Critical ALS	Structure Fire
Station 19 (LAFD)	8 min 48 sec	8 min 22 sec	7 min 14 sec	7 min 0 sec
Station 37 (LACFD)	7 min 14 sec	6 min 32 sec	6 min 4 sec	5 min 24 sec
Station 39 (LAFD)	7 min 17 sec	7 min 0 sec	6 min 10 sec	5 min 14 sec
Station 58 (LAFD)	7 min 16 sec	7 min 7 sec	6 min 5 sec	5 min 17 sec
Station 59 (LACFD)	7 min 5 sec	6 min 31 sec	6 min 7 sec	5 min 29 sec
Station 62 (LAFD)	7 min 26 sec	7 min 20 sec	6 min 17 sec	6 min 25 sec
Station 71 (LAFD)	7 min 27 sec	8 min 4 sec	6 min 26 sec	8 min 4 sec
Station 78 (LAFD)	7 min 11 sec	7 min 16 sec	6 min 8 sec	6 min 29 sec
Station 81 (LAFD)	7 min 30 sec	7 min 17 sec	6 min 22 sec	5 min 29 sec
Station 83 (LAFD)	7 min 2 sec	7 min 1 sec	6 min 1 sec	5 min 7 sec
Station 88 (LAFD)	6 min 32 sec	6 min 28 sec	6 min 8 sec	5 min 17 sec
Station 90 (LAFD)	7 min 26 sec	7 min 13 sec	6 min 28 sec	6 min 16 sec
Station 92 (LAFD)	8 min 2 sec	7 min 2 sec	6 min 31 sec	5 min 9 sec
Station 99 (LAFD)	7 min 24 sec	8 min 4 sec	6 min 32 sec	6 min 35 sec
Station 100 (LAFD)	6 min 35 sec	6 min 20 sec	6 min 2 sec	5 min 29 sec
Station 102 (LAFD)	6 min 30 sec	6 min 26 sec	5 min 31 sec	5 min 4 sec
Station 108 (LAFD)	9 min 24 sec	9 min 10 sec	8 min 35 sec	11 min 6 sec
Station 109 (LAFD)	9 min 14 sec	9 min 10 sec	8 min 4 sec	9 min 4 sec

Sources: LAFD, 2023d, 2023e, 2023f, 2023g, 2023h, 2023i, 2023j, 2023k, 2023l, 2023m, 2023n, 2023o, 2023p, 2023q, 2023r, 2023s, 2023t, 2023u, 2023v

ALS = Advanced Life Support
EMS = emergency medical services
LACFD = Los Angeles County Fire Department
LAFD = City of Los Angeles Fire Department
min = minutes
Non-EMS = non-emergency medical services
sec = seconds

3.12.1.2 County of Los Angeles Fire Department

The LACFD provides fire protection services to contract cities and unincorporated areas of Los Angeles County, which includes the VA property. The LACFD provides essential services with 177 fire stations, 5,028 personnel, 228 engine companies, 33 truck companies, and 112 paramedic units (LACFD, 2021). There are two LACFD stations within 1 mile of the Project Study Area, which are identified as Stations 37 and 59 on Figure 3-49.

3.12.2 Police Services

Police services would be provided by the Los Angeles Police Department (LAPD) and Los Angeles County Sheriff's Department (LASD) under Metro's existing contract service agreements with these agencies. Metro has contracted the LASD and LAPD Transit Services Division to provide policing services on the

Metro within the City of Los Angeles. While the City of Santa Monica is within the Project Study Area, the Project would be located within the City of Los Angeles where the LAPD and LASD provide essential emergency and non-emergency services. The UCLA Police Department (UCLA PD), Veterans Affairs Police Department (VAPD), California Highway Patrol (CHP), and Federal Protective Services would patrol and provide services in their respective jurisdictions or properties.

3.12.2.1 Los Angeles County Sheriff's Department

The LASD is a law enforcement agency that serves Los Angeles County. The LASD West Hollywood Station patrols the unincorporated areas of Los Angeles County including the VA complex west of I-405. The LASD is part of a three-department law enforcement provider team, with LAPD and Long Beach Police Department. Metro contracts with the LASD to provide law enforcement for all Metro transit systems and property outside the City of Los Angeles and City of Long Beach. LASD security personnel and deputies patrol the transit system routes and stations. LASD is responsible for general law enforcement for the passengers and property of the Metro rail lines and buses operated by Metro. LASD is responsible for all crimes or incidents occurring on originating, or continuing from trains, passenger stations, facilities, property, or Metro owned and operated vehicle parking areas of the Metro transit system.

3.12.2.2 Los Angeles Police Department

The LAPD provides police protection services within the City of Los Angeles. The LAPD's Van Nuys Community Police Station and the West Los Angeles Community Police Station provide law enforcement services in the Project Study Area, which are shown on Figure 3-49. The LAPD traditionally has used crime trends, per-capita approach, minimum-manning levels, authorized/budgeted levels, and, least commonly, workload-based models to make staffing decisions.

Figure 3-49. Existing Fire and Police Station Locations in the Project Study Area



Source: LAFD, 2023a; LAPD, 2021, 2023b; HTA, 2024

In 2022, the LAPD received 828,411 calls for service, a decrease of 7.5 percent compared to 2021, which had a total of 895,757 calls. In addition, in 2022, the LAPD made 331,139 stops, a decrease of 22.9 percent compared to 2021 of 429,348 stops (LAPD, 2023a). In addition to crime rates, the LAPD's operational statistics are also analyzed in terms of response time. Table 3-33 lists the LAPD's response time for emergency to non-emergency calls.

Table 3-33. Los Angeles Police Department Response Time

Name	Emergency	Urgent	Non-Emergency
Station Response Time			
Van Nuys Community Station	5 min 30 sec	19 min 54 sec	53 min 0 sec
West Los Angeles Community Station	7 min 36 sec	23 min 36 sec	51 min 36 sec
Bureau Response Time			
Valley Bureau	6 min 36 sec	21 min 42 sec	50 min 42 sec
West Bureau	6 min 6 sec	23 min 6 sec	56 min 18 sec
City Response Time			
City of Los Angeles	6 min 30 sec	24 min 12 sec	57 min 12 sec

Source: LAPD, 2023b

min = minutes
sec = seconds

Metro has contracted the LAPD Transit Services Division to provide policing services on the Metro within the City of Los Angeles. If the LAPD continues to hold the contract after the implementation of the Project, an exploratory committee would be established to assess and evaluate potential future deployments and threat assessments (LAPD, 2023b). In addition, the Santa Monica Police Department's Professional Services Division is also available to provide police services for special events and activities, such as at the Getty Museum and at the Skirball Cultural Center (Santa Monica Police Department, 2023).

3.12.2.3 UCLA Police Department

The UCLA PD is dedicated to providing a safe and secure environment for teaching, research, and public service. With 66 sworn officers, 41 professional staff, 15 security services, and 5 public-safety aids, the UCLA PD is linked to city, state, and federal criminal justice agencies to prevent and apprehend criminal suspects. The UCLA PD patrols, responds to calls for services, and investigates, educates, and implements preventive strategies. The Police Community Services Division with the UCLA PD consists of EMS that is staffed by employees who respond to life support medical emergencies and provide medical services. This Police Community Services Division also has the responsibilities of public information, media relations, and campus/external relations.

3.12.2.4 California Highway Patrol

The Project Study Area is within the CHP West Los Angeles Area. The CHP provides road and highway traffic law enforcement throughout the state. The CHP West Los Angeles Area Station in concert with agency partners to provide traffic law enforcement and address traffic safety concerns, while promoting educational programs along I-405, I-10, and US-101. The West Valley Area office patrol area includes portions of the City of Los Angeles and San Fernando Valley. CHP operations are primarily pertinent to Alternatives 1, and 3 due to portions of the alignment being located on the I-405 freeway (CHP, 2023).

3.12.2.5 VA Police Department

The VAPD oversees the West Los Angeles Medical Center, Downtown Los Angeles Outpatient Patient Clinic, Sepulveda Medical Center, and outer Community-Based Outpatient Clinics. VAPD officers have the authority to enforce federal laws on department properties and make arrests on warrants.

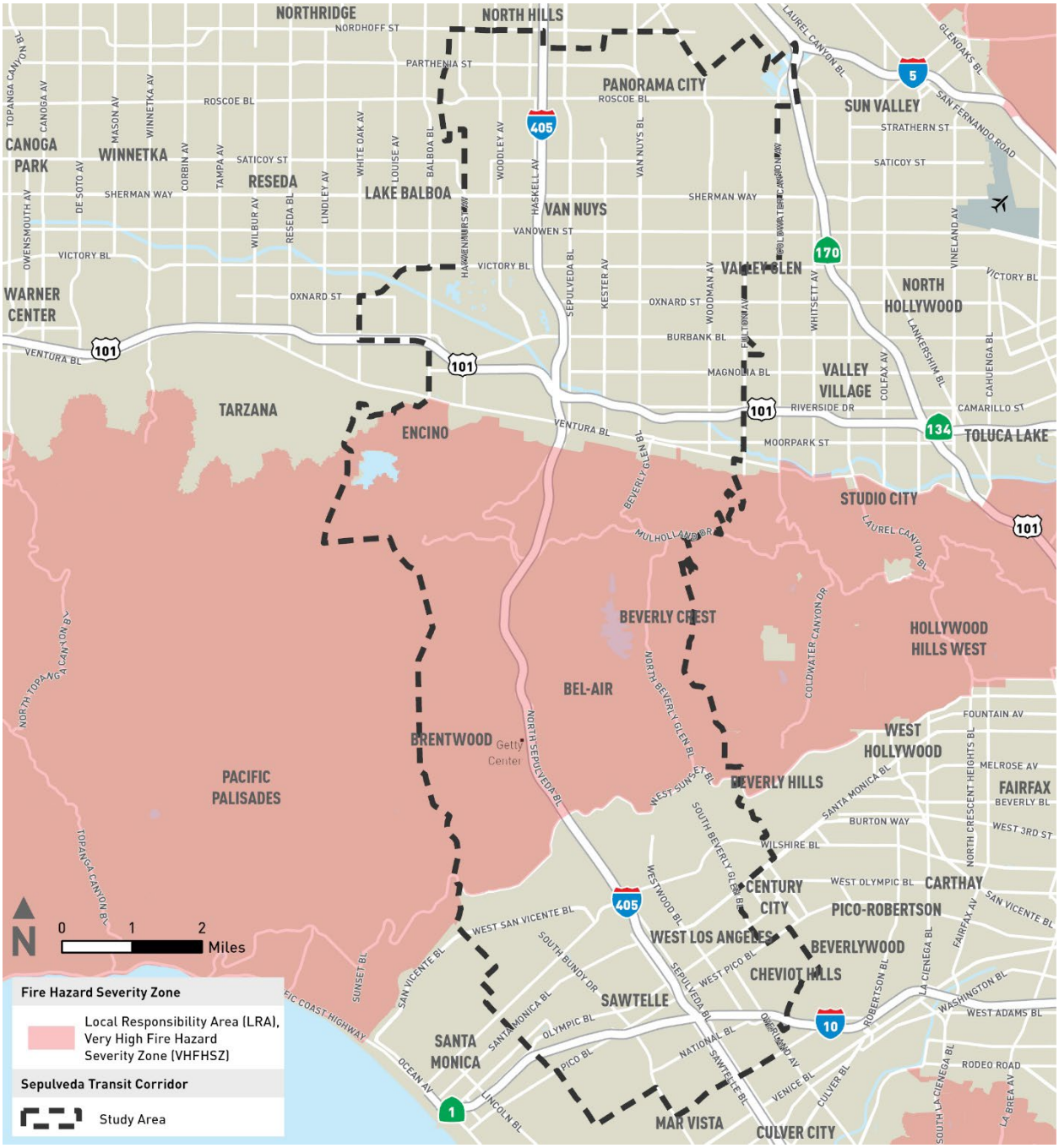
3.12.2.6 Federal Protective Services

The Federal Protective Services is a federal law enforcement agency that provides security and law enforcement to federally owned and leased facilities. The Federal Building located at 11000 Wilshire Boulevard, Los Angeles, CA 90024, houses the Los Angeles Federal Bureau of Investigations (FBI) field office. The FBI field offices investigate domestic terrorism, cyber-crime, civil rights, organized crime and drugs, violent crimes, and major offenders by working collaboratively with other federal, state, local law enforcement and intelligence agencies.

3.12.3 Wildfire

Wildfire is any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property, or resources. Wildfire sparked by combustible vegetation could result in unplanned, uncontrolled, and unpredictable wildfire. Wildfire behavior is based on three primary factors: topography, weather, and fuels. As shown on Figure 3-50, the Project Study Area contains an area (within the Santa Monica Mountains) recommended by the California Department of Forestry and Fire Protection and designated by the Local Responsibility Area as a Very High Fire Hazard Severity Zone. Mapping of the areas are based on data and models of potential fuels over a 30- to 50-year time horizon and their associated expected fire behavior, and expected burn probabilities to quantify the risk and nature of vegetation fire exposure (including firebrands) to buildings (CAL FIRE, 2011).

Figure 3-50. Wildfire Hazard Zones in the Project Study Area



Source: CAL FIRE, 2011; HTA, 2024

3.13 Real Estate and Acquisitions

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Real Estate and Acquisitions Technical Report* (Metro, 2025m). The summary describes the typical types of property acquisitions and displacements. The acquisitions and displacements required by each of the project alternatives are not directly addressed in this report, which only describes the existing setting.

3.13.1 Typical Types of Property Acquisitions and Displacements

The Project would require full property acquisitions, partial property acquisitions, and temporary construction easements. Table 3-34 lists typical causes of property acquisitions and displacement.

Table 3-34. Typical Causes of Property Acquisition and Displacement

Source of Acquisition	Type of Acquisition	Cause/Process
Horizontal Alignment	Full/Partial Fee Simple	Insufficient existing ROW for construction and operation.
Subsurface/At-Grade/Aerial Alignment	Permanent Easement	A condition for a non-exclusive access agreement or easement (either permanent or temporary) for underground, at-grade, or aerial alignments to allow access to a property or facility.
Vertical Circulation (e.g., stairs)	Partial Fee Simple	Area needed to bring passengers from the ground level to a station platform at an aerial (elevated) structure or to an underground station.
Property Encroachment	Full/Partial Fee Simple	Unauthorized use of public or private property. Resolution through boundary survey and potential relocation of use.
Access to a Residential or Non-Residential Use (driveway or road)	Full Fee Simple/Permanent Easement	Permanent easement would be needed to provide residential units or non-residential uses access to a road; full acquisition may be required if reduced or restricted access would disrupt residences or non-residential uses.
Street/Intersection Improvements; Grade Crossing/Separation; Drainage and Utility Improvements	Partial/Full Fee Simple	Additional area/lanes required to maintain traffic volumes, turn lanes and sidewalk widths; additional area required to upgrade drainage facilities or to improve utility.
Station Entrance	Full Fee Simple/Partial Fee Simple/Permanent Easement	Area needed to provide passenger access to a subsurface, at-grade, or aerial station.
At-Grade Station Construction and Operation	Full Fee Simple	Area required for station amenities, such as platforms, ticketing areas, and transit stops.
Parking Facility	Partial/Full Fee Simple	Area required for station parking.
Operations Maintenance and Storage Facility	Partial/Full Fee Simple	Area required to perform maintenance activities.
Ancillary and TPSS Facilities	Partial/Full Fee Simple	Area required for ancillary facilities and TPSS.
Construction Activities	Temporary Construction Easements	Area used for staging materials and equipment, as well as cut-and-cover and tunneling activities, during the construction period; property would be returned at the end of construction.

Source of Acquisition	Type of Acquisition	Cause/Process
Construction Access, Staging and Laydown	Partial/Full Fee Simple	Area required for staging materials and equipment, as well as cut-and-cover and tunneling activities, during the construction period; may be used for station parking or other permanent use after construction has been completed.

Source: HTA, 2023

ROW = right-of-way
TPSS = traction power substation

3.13.2 Full Acquisition

Full acquisition would require the use of an entire property. Full property acquisition would result in the purchase of an entire property by Metro for the Project. Metro would purchase a "fee simple interest" of the property and become the owner of the property. Full acquisition would occur in instances where the Project would require the use of a significant portion of the property, including the physical structure or structures identified as the property's principal dwelling or business facility, permanently or for an extended period during construction. Full acquisition would also occur in cases where a property's physical structure or structures were not affected but another component critical to a property's intended use would be affected (such as a severe loss of parking or access that would reduce the useful operation of the property).

3.13.3 Partial Acquisition

Partial acquisition would occur if a portion of a given property would be used by a project but would not require the entirety of the property. Partial property acquisition means that only a portion of the property would be acquired, and the owner would retain the remaining portion of the property. Types of partial acquisition include partial "fee simple" acquisitions and various types of permanent and temporary easements. For a "fee simple" acquisition, Metro would purchase a "fee simple interest" for the portion of the property and would become owner for that portion of the property. A partial acquisition is also considered if the area required for the Project is not critical to the property's primary function as a residence or business, or if the remaining portion of the property could be reconfigured to continue serving its purpose without significant disruption to occupants.

3.13.4 Easement

An easement provides one party the right to use another party's property for a stated purpose. That property may be owned by a private person, business entity, or a group of owners and can involve a general or specific portion of the property. An easement can be at the surface, underground/subsurface (beneath a property), or aboveground (aerial) level and can be characterized as temporary (typically during construction) or permanent. Temporary construction easements (TCE) may be necessary if temporary rights may be required from property owners for material storage, construction activities, or access. Depending on the size and location of the TCEs, they may or may not require the demolition of existing structures. If TCEs do not require demolition of existing structures, TCEs typically would not affect the primary function of the property. In these circumstances, the area may revert to its former use after construction activities have been completed. If TCEs require demolition of existing structures, the primary function of the property could be affected or may cause undue disruption to the occupants.

Underground/subsurface easements would be required during construction for tunneling and all underground facilities, including underground utilities and TPSS. The easement would be permanent

since it would be required for the operations of an underground transit line once construction is completed. Permanent aerial easements would be used for the operation of an elevated transit line. An easement is considered a partial property acquisition from the property owner. The purchase of an easement is accomplished through a one-time payment and the recording of an easement deed

3.14 Section 4(f) Effects

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Section 4(f) Impacts Technical Report* (Metro, 2025n). Section 4(f) of the USDOT Act of 1966 provides special protection of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the officials having jurisdiction over the park, area, refuge, or site). USDOT agencies, including the FTA, may not approve the use of Section 4(f) property unless the administration determines that (1) there is no prudent or feasible alternative, and (2) the project includes all possible planning to minimize harm to these resources resulting from such use (23 CFR Part 774.3), or the FTA determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a de minimis impact, as defined in Section 774.17, on the property. As defined in the Section 4(f) regulations (23 CFR Section 774.17), Section 4(f) offers protection to historic sites, including archaeological sites, listed or eligible for listing in the NRHP; and public parks, recreation areas, and wildlife and waterfowl refuges that are publicly owned and are used by the public for park, recreation, or refuge purposes and are significant or important properties. An impact or occupancy of a Section 4(f) property is defined as a “use” in the context of Section 4(f) regulation. As defined in 23 CFR Section 774.17, the “use” of a protected Section 4(f) property may occur through the following conditions: permanent incorporation, temporary occupancy, or constructive use (substantially impairing a property with “proximity impacts”).

Historic and archival research was undertaken to determine the presence of previously identified historic, archaeological, and tribal cultural resources properties eligible for listing in the NRHP. Resources identified for the purposes of CEQA analysis, as well as resource’s potential Section 4(f) protection status, are listed in Table 3-35. The NHRP properties potentially affected by Modified Alternative 5 will be determined during the upcoming design process.

Table 3-35. Identified Historic Sites in the Built Environment Resource Study Areas

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
1	13812 Saticoy Street	1, 3, 4, 5, 6	13812 Saticoy Street	The industrial building located at 13812 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
2	13914 Saticoy Street	1, 3, 4, 5, 6	13914 Saticoy Street	The industrial building located at 13914 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
3	13938 Saticoy Street	1, 3, 4, 5, 6	13938 Saticoy Street	The industrial building located at 13938 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
4	13942 Saticoy Street	1, 3, 4, 5, 6	13942 Saticoy Street	The industrial building located at 13942 Saticoy Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
5	SPRR Warehouse	1, 3, 4, 5, 6	7766 Van Nuys Boulevard	The SPRR Warehouse located at 7766 Van Nuys Boulevard is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the post-World War II railroad development and the SPRR's transition to diesel locomotive engines.	Yes
6	14704 Raymer Street	1, 3, 4, 5	14704 Raymer Street	The industrial property located at 14704 Raymer Street is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 for its Modern design.	Yes
7	14746 Raymer Street	1, 3, 4, 5	14746 Raymer Street	The industrial property located at 14746 Raymer Street is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 for its Modern design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
8	The Performing Arts Center	4, 5	7735 Sepulveda Boulevard	The Performing Arts Center located at 7735 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Googie design.	Yes
9	Valley Animal Hospital	4, 5	7721 Sepulveda Boulevard	The Valley Animal Hospital building located at 7721 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
10	Lancer Lion II Apartments	4, 5	7657 Sepulveda Boulevard	The Lancer Lion II Apartments located at 7657 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the Live Better Electrically and Medallion Homes program and the electrical history of the City of Los Angeles.	Yes
11	Air Raid Siren No. 110	4, 5	Northeast corner of Covello Street and Sepulveda Boulevard	The Air Raid Siren No. 110 is eligible for listing in the NRHP and CRHR and is significant under Criterion A for its association with World War II and Cold War military infrastructure.	Yes
12	Sherman Way Street Trees	1, 3, 4, 5	Along either side of Sherman Way between Woodley Avenue and Sherman Circle	The Sherman Way Street Trees are eligible for listing in the local register. They are significant as representing the street planting plan for Sherman Way (paved between 1911 and 1913), a major streetcar and automobile route that was the main corridor from central Los Angeles to the Van Nuys community.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
13	6833 Sepulveda Boulevard	4, 5	6833 Sepulveda Boulevard	The multiple-family building located at 6833 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
14	Van Nuys Boulevard Street Trees	1, 3, 4, 5, 6	Between Sherman Way, along Sherman Circle and Hamlin Street, on Van Nuys Boulevard	The Van Nuys Boulevard Street Trees are eligible for listing in the local register. They are significant as representing the street planting plan for Sherman Way (paved between 1911 and 1913, and parts of which were renamed Van Nuys Boulevard and Chandler Boulevard), which was the main automobile and streetcar corridor from central Los Angeles to the Van Nuys community.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
17	6160 Sepulveda Boulevard	4, 5	6160 Sepulveda Boulevard	The industrial property located at 6160 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with the postwar industrial development of Van Nuys.	Yes
18	Air Raid Siren No. 117	3, 4, 5	South side of Oxnard Street, west of Sepulveda Boulevard	The Air Raid Siren No. 117 is eligible for listing in the NRHP and CRHR and is significant under Criterion A for its association with World War II and Cold War military infrastructure.	Yes
19	Cabana Motel	3, 4, 5	5764 Sepulveda Boulevard	The Cabana Motel located at 5764 Sepulveda Boulevard is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion A/1 for its association with Los Angeles's postwar car culture and Criterion C/3 for its Modern design.	Yes
20	El Cortez Motel	3, 4, 5	5746 Sepulveda Boulevard	The El Cortez Motel located at 5746 Sepulveda Boulevard is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion A/1 for its association with Los Angeles's postwar car culture and Criterion C/3 for its Modern design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
21	5724 Sepulveda Boulevard	3, 4, 5	5724 Sepulveda Boulevard	The multiple-family building located at 5724 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes
22	Kauai Surf	3, 4, 5	15232 Martha Street	The Kauai Surf apartments building located at 15232 Martha Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
23	5450 Sepulveda Boulevard	3, 4, 5	5450 Sepulveda Boulevard	The residential building located at 5450 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Monterey design.	Yes
24	Cathedral of St. Mary Church	3, 4, 5	5335 N Sepulveda Boulevard	The Cathedral of St. Mary Church located at 5335 N Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Byzantine Revival design.	Yes
25	Lt. Patrick H. Daniels United States Army Reserve Center	3, 4, 5	5161 Sepulveda Boulevard	The Lt. Patrick H. Daniels United States Army Reserve Center building located at 5161 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the Army Reserves in Los Angeles during the Vietnam War and under Criterion C/3 for its Modern design.	Yes
27	4700 Sepulveda Boulevard	3, 4, 5	4700 Sepulveda Boulevard	The multiple-family building located at 4700 Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Eclectic Streamline Moderne design.	Yes
28	4737 Orion Avenue	1, 3, 4	4737 Orion Avenue	The residential building located at 4737 Orion Avenue is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
29	4714 Orion Avenue	1, 3, 4	4714 Orion Avenue	The residential building located at 4714 Orion Avenue is eligible for listing in the NRHP, CRHR, and the local register at the local level. It is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes
30	15233 Ventura Boulevard	1, 3, 4	15233 Ventura Boulevard	The commercial property located at 15233 Ventura Boulevard is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 for its International-style design.	Yes
31/33	15300 Ventura Boulevard	1, 3, 4, 5	15300 Ventura Boulevard	The building is individually eligible for listing in the NRHP and is significant under Criterion C for its International-style design.	Yes
32	Sherman Oaks Circle Historic District	1, 3	Between Firmament Avenue and I-405	The Sherman Oaks Circle Historic District is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 as a residential subdivision that reflects both pre- and post-World War II residential development and architectural styles.	Yes
34	15250 Ventura Boulevard	1, 3, 4, 5	15250 Ventura Boulevard	The commercial property located at 15250 Ventura Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its International-style design.	Yes
35	Da Siani Ristorante (Sherwood Coiffeurs)	1, 3, 4, 5	4511 Sepulveda Boulevard	The building is eligible under NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
36	4506 Saugus Avenue	3, 5	4506 Saugus Avenue	The multiple-family building located at 4506 Saugus Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Contemporary design.	Yes
37	15224 Dickens Street	1, 3, 4, 5	15224 Dickens Street	The multiple-family residential building located at 15224 Dickens Street is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
38	15564 Briarwood Drive	3, 4	15564 Briarwood Drive	The residential building located at 15564 Briarwood Drive is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern Post and Beam design.	Yes
39	15573 Briarwood Drive	4	15573 Briarwood Drive	The residential building located at 15573 Briarwood Drive is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern Post and Beam design.	Yes
40	3754 N Scadlock Lane	1, 3, 4	3754 N Scadlock Lane	The residential building located at 3754 N Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
41	3700 N Scadlock Lane	1, 3, 4	3700 N Scadlock Lane	The residential building located at 3700 N Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
42	3666 N Scadlock Lane	1, 3, 4	3666 N Scadlock Lane	The residential building located at 3666 N Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
43	3601 Scadlock Lane	1, 3	3601 Scadlock Lane	The residential building located at 3601 Scadlock Lane is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
44	Bill's Valley Car Wash	6	7530 Van Nuys Boulevard	The Bill's Valley Car Wash located at 7530 Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its role in the commercial and industrial development of Van Nuys and under Criterion C/3 for its Googie design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
45	Tacos Mexico	6	7140 Van Nuys Boulevard	The Tacos Mexico building located at 7140 Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 as a late, and rare example of Mimetic architecture in the City of Los Angeles; it originally was designed as an Arby's restaurant and resembled a covered wagon.	Yes
46	Bank of America	6	6551 N Van Nuys Boulevard	The Bank of America building located at 6551 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its New Formalist design.	Yes
47	Van Nuys Utilities Center	6	6550 N Van Nuys Boulevard	The Van Nuys Utilities Center located at 6550 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 as an unusual example of a Department of Water and Power office building that included an auditorium for demonstrating new electrical appliances, professionals who offered advice and assistance for remodeling homes, displays of the latest home appliances, and a customer service center; and under Criterion C/3 for its Modern design.	Yes
48	Firestone	6	6530 N Van Nuys Boulevard	The Firestone building located at 6530 N Van Nuys Boulevard is eligible for local register listing and is significant as reflecting the corporate architecture created for Firestone, which has been in continuous operation at this location since 1946.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
49	Hart's Pawn Shop	6	6362 N Van Nuys Boulevard	The commercial building located at 6362 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its commercial block design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
50	Owl-Rexall Drug Co.	6	6353 N Van Nuys Boulevard	The Owl-Rexall Drug Co. building located at 6353 N Van Nuys Boulevard is eligible for local register listing and is significant as a rare example of a 1930s variety store in Van Nuys that illustrates the rapid commercial development of Van Nuys Boulevard during the prewar period.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
51	Chase Bank	6	6300 N Van Nuys Boulevard	The Chase Bank building located at 6300 N Van Nuys Boulevard is eligible for local register listing and is significant as an example of Mid-Century Modern commercial architecture with New Formalist elements, designed by notable local architect Peter J. Holdstock.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
52	Happy Dogs	6	6235 N Van Nuys Boulevard	The Happy Dogs restaurant is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Googie design.	Yes
53	6203 N Van Nuys Boulevard	6	6203 N Van Nuys Boulevard	The commercial building located at 6203 N Van Nuys Boulevard is eligible for local register listing and is significant as an example of a 1920s mixed-use building located on a prominent corner on a historic streetcar route.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
54	San Fernando Valley Administrative Center Historic District (Van Nuys State Office Building, Van Nuys State Building)	6	6162 N Van Nuys Boulevard	The Van Nuys State Office Building is a contributing resource to the San Fernando Valley Administrative Center Historic District, which is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 as the City of Los Angeles's government administrative center for the San Fernando Valley; it was developed primarily during the postwar period.	Yes
55	5958 Van Nuys Boulevard	6	5958 Van Nuys Boulevard	The commercial building located at 5958 Van Nuys Boulevard is eligible for listing in the NRHP, CRHR, and the local register at the local level and is significant under Criterion C/3 for its One-Part Commercial Block design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
56	Rob's Car Wash	6	5328 N Van Nuys Boulevard	The Rob's Car Wash located at 5328 N Van Nuys Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Googie design.	Yes
57	Stanley Burke's/Corky's Restaurant and Sign; The Lamplighter	6	5037-5053 N Van Nuys Boulevard	The local register-listed Stanley Burke's/Corky's Restaurant and Sign (LAHCM No. 1215) is significant under local register criteria as a purpose-built 1950s diner on a major commercial corridor in Sherman Oaks.	No. This property is listed in the LAHCM only.
58	Sherman Oaks Plaza Building	6	4955 N Van Nuys Boulevard	The Sherman Oaks Plaza Building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 as late example of a Corporate International-style office building designed by notable local architect Maxwell Starkman.	Yes
59	4449 Van Nuys Boulevard	6	4449 Van Nuys Boulevard	The commercial building located at 4449 Van Nuys Boulevard is eligible for local register listing and is significant for its Two-Part Commercial Block design.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
60	Deauville House	4, 5	2212 N Linda Flora Drive	The Deauville House is eligible for local register listing and is significant for its Storybook Ranch design and as a work of a master architect, Earl C. Rahn.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
61	1711 N Stone Canyon Road	4, 5	1711 N Stone Canyon Road	The residential building located at 1711 N Stone Canyon Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
62	1780 N Stone Canyon Road	4, 5	1780 N Stone Canyon Road	The residential building located at 1780 N Stone Canyon Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Ranch design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
63	661 N Stone Canyon Road	4, 5	661 N Stone Canyon Road	The residential building located at 661 N Stone Canyon Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	Yes
64	Miller Residence	4, 5	10615 W Bellagio Road	The Miller Residence located at 10615 W Bellagio Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival commercial design and as the work of a master architect, Wallace Neff. The resource was identified through the Los Angeles Historic Resources Inventory. The resource is not visible from the public ROW. For the Project, this resource is considered a historical resource for the purposes of CEQA.	Yes
65	Ethel Guiberson/Hannah Carter Japanese Garden	4, 5	10619 West Bellagio Road	The local register-listed Ethel Guiberson/Hannah Carter Japanese Garden (LAHCM No. 1141) is significant under local register criteria for its landscape architecture.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
66	The John Thomas Dye School	3	11414 Chalon Road	The John Thomas Dye School is eligible for the listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with educational development in Bel-Air, and Criterion B/2 for its association with the professional lives and careers of Cathryn Robberts Dye and John Thomas Dye II.	Yes
67	10940 Weyburn Avenue	3	619 Sarbonne Road	The residential building located at 619 Sarbonne Road is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Streamline Moderne design.	Yes
68	10811 Ambazac Way	3	10811 Ambazac Way	The residential building located at 10811 Ambazac Way is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Monterey Revival design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
69	121 N Udine Way	4, 5, 6	121 N Udine Way	The residential property located at 121 N Udine Way was identified through the Los Angeles Historic Resources Inventory. The resource is not visible from the public ROW. For the Project, this resource is considered a historical resource for the purposes of CEQA.	No. Not eligible for the NRHP. This property has not been evaluated for potential eligibility for listing in the NRHP.
70	120 N Udine Way	4, 5, 6	120 N Udine Way	The residential property located at 120 N Udine Way was identified through the Los Angeles Historic Resources Inventory. The resource is not visible from the public ROW. For the Project, this resource is considered a historical resource for the purposes of CEQA.	No. This property has not been evaluated for potential eligibility for listing in the NRHP.
71	Marymount High School (Main Administration Building, including Chapel and Auditorium	3, 4, 5,6	10643-10685 Sunset Boulevard and 101-121 Marymount Place	The local register-listed Marymount High School (Main Administration Building, including Chapel and Auditorium) (LAHCM No. 254) is significant under local register criteria for its design and local significance.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
72	UCLA Historic District	1, 3, 4, 5, 6	Encompasses the east-west axis of the UCLA campus and is bounded by Westwood Boulevard and Circle Drive.	The district includes 15 contributing resources and landscape features, and two non-contributing resources. The district is significant under NRHP Criterion A as the first public institution of higher education in Southern California, and under NRHP Criterion C for its design.	Yes
73	UCLA Ackerman Hall	1, 3, 4, 5, 6	308 Westwood Plaza	The building is individually eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the history of UCLA and under Criterion C/3 for its Modern design.	Yes
74	11752 Bellagio Road	1	11752 Bellagio Road	The multiple-family residential building located at 11752 Bellagio Road is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
75	11734 Bellagio Road	1	11734 Bellagio Road	The multiple-family residential building located at 11734 Bellagio Road is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes
76	11728 Bellagio Road	1	11728 Bellagio Road	The multiple-family residential building located at 11728 Bellagio Road is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes
77	650 N Sepulveda Boulevard	1	650 N Sepulveda Boulevard	The commercial building located at 650 N Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	Yes
78	Acanto Street Historic District	1	Acanto Street	The Acanto Street Historic District is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern Stucco Box/Dingbat designs.	Yes
79	11371 Ovada Place	1	11371 Ovada Place	The residential building located at 11371 Ovada Place is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Ranch design.	Yes
80	11378 Ovada Place	1	11378 Ovada Place	The commercial property located at 11378 Ovada Place is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Classical Revival design.	Yes
81	11398 Thurston Circle	1	11398 Thurston Circle	The residential building located at 11398 Thurston Circle is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Cape Cod/Ranch design.	Yes
82	Holiday Inn (Hotel Angeleno)	1	170 Church Lane	The building is eligible under NRHP and CRHR Criterion C/3 and is significant for its Modern design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
83	University Crest Historic District	1	Bounded by Sunset Boulevard to the north, Veteran Avenue to the east, Montana Avenue to the south, and Sepulveda Boulevard to the west.	The University Crest Residential Historic District is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 as an excellent example of residential suburban planning and development from the early automobile era in Westwood, and under Criterion C/3 for its cohesive collection of Period Revival residential architecture.	Yes
84	11284 Montana Avenue	1	11284 Montana Avenue	The multiple-family residential building located at 11284 Montana Avenue is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis, and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes
85	522 S Sepulveda Boulevard	1, 3	522 S Sepulveda Boulevard	The residential building located at 522 S Sepulveda Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Contemporary design.	Yes
86	West Los Angeles Veterans Affairs Historic District	1, 3	11301 Wilshire Boulevard	The historic district is listed in the NRHP under Criteria A and C for its association with the government's development of veterans health care and for its distinctive architecture. The district includes 66 contributing resources and 44 non-contributing resources. The Wadsworth Chapel (Building 20) and Trolley Building (Building 66), which are both outside the Cultural Resources Study Area for Alternatives 1 and 3, are contributing resources to the district and are also individually eligible for the NRHP.	Yes
87	UCLA Veterans Rehabilitation Services	1, 3, 4, 5, 6	1000 Veteran Avenue	The UCLA Veterans Rehabilitation Services building is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 for its Contemporary design and as a work of a master architect, Welton Beckett and Associates.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
88	Engine Company #37	1, 3	1090 Veteran Avenue	The building is eligible under NRHP and CRHR Criteria A/1 and C/3 and is significant for its association with the Veterans Service Administration during World War II and its design.	Yes
89	Campbell's Book Store	1, 4, 5,6	10918 Le Conte Avenue	The commercial building located at 10918 Le Conte Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Streamline Moderne design.	Yes
90	Holmby Building	5, 6	921 Westwood Boulevard	The building (LAHCM No. 1223) is significant under local register criteria as an excellent example of Mediterranean Revival commercial architecture in Westwood Village and as the work of master architect Gordon B. Kaufmann.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
91	924 Westwood Boulevard	1, 3, 4, 5,6	924 Westwood Boulevard	The commercial building located at 924 Westwood Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its international design.	Yes
92	California Pizza Kitchen	1, 3	1001 Broxton Avenue	The commercial building at 1001 Broxton Avenue is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the original development of Westwood by the Janss Corporation and under Criterion C/3 for its Spanish Colonial Revival commercial architecture.	Yes
93	10930 Weyburn Avenue	1, 3, 4, 5, 6	10940 Weyburn Avenue	The commercial building located at 10940 Weyburn Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Spanish Colonial Revival design.	Yes
94	Chatam Restaurant	1, 3, 4, 5, 6	10930 Weyburn Avenue	The Chatam Restaurant building located at 10930 Weyburn Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its One-Part Commercial Block design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
95	Desmond's	1, 5, 6	1001 Westwood Boulevard	The commercial building at 1001 Westwood Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival commercial design.	Yes
96	Bullock's Department Store	1, 3, 4, 5, 6	1000 S Westwood Boulevard	The Bullock's Department Store is eligible for local register listing. It is significant as an individual building that represents a very early phase of commercial development in a neighborhood, and as a rare example of its type.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
97	Kelly Music Building/Alice's Restaurant	1, 4, 5, 6	1041 Westwood Boulevard	The Kelly Music Building/Alice's Restaurant (LAHCM No. 1201) is significant under local register criteria for its association with the early development of Westwood Village and as one of the earliest works by master architect Paul Revere Williams.	No. Not eligible for the NRHP. This property is listed in the LAHCM only.
98	Penney's	1, 4, 5, 6	1056 Westwood Boulevard	The Penney's building at 1056 Westwood Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Spanish Colonial Revival commercial architecture.	Yes
99	Janss Investment Company Building	1, 4, 5, 6	1081 Westwood Boulevard	The Janss Investment Company Building (LAHCM No. 364) is significant under local register criteria for its Mediterranean Revival design.	No. Not eligible for the NRHP. This property is listed in the LAHCM only.
100	Glendale Federal Savings and Loan Association	1, 4, 5, 6	1090 Westwood Boulevard	The Glendale Federal Savings and Loan Association building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
101	Westwood Village Streetlight	1, 4, 5, 6	Westwood and Kinross, northwest corner, adjacent to Janss Investment Company Building	The Westwood Village Streetlight is eligible for local register listing and is significant as one of the last remaining ornamental streetlights that were installed throughout Westwood Village.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
102	Bratskeller Egyptian Theater (Ralphs Grocery Store)	1, 4, 5, 6	1142 Westwood Boulevard	The Bratskeller Egyptian Theater (Ralphs Grocery Store) building (LAHCM No. 360) is significant for its Mediterranean Revival design and as one of the first buildings constructed in the Westwood area.	No. Not eligible for the NRHP. This property is listed in the LAHCM only.
103	Gayley Center	1, 3, 4, 5, 6	1101 Gayley Avenue	The Gayley Center is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 for its Late Modern commercial architecture and as work of noted architects Krisel-Shapiro & Associates.	Yes
104/105	Linde Medical Building	1, 3, 4, 5, 6	10921 Wilshire Boulevard	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its International-style design.	Yes
106	Tishman Building	1, 3, 4, 5, 6	10950 W Wilshire Boulevard	The Tishman Building is eligible for listing in the NRHP and CRHR. It is significant under Criterion C/3 for its Corporate Modern high-rise architecture and as the work of master architect Welton Becket.	Yes
107	1220 Veteran Avenue	1, 3, 6	1220 Veteran Avenue	The building is individually eligible for listing in the NRHP and is significant under Criterion C for its design and as a work of a master architect, George J. Fosdyke.	Yes
108	Westwood Federal Building	1, 3	11000 Wilshire Boulevard	The building is eligible under NRHP and CRHR Criterion C/3. It is significant for its New Formalist design and association with master architects of Welton Becket and Associates with Paul R. Williams and A. C. Martin and Associates.	Yes
109	LADWP Westwood Distribution Headquarters	1, 3, 6	1400 S Sepulveda Boulevard	The LADWP Westwood Distribution Headquarters located at 1400 S Sepulveda Boulevard was previously identified through the SCCIC records search. The resource is not visible from the public ROW. For the Project, this resource is considered a historical resource for the purposes of CEQA.	This property has not been evaluated for potential eligibility for listing in the NRHP. Presumed to be Section 4(f) protected.

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
110	1400 Greenfield Avenue	1, 3, 4, 5, 6	1400 Greenfield Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
111	1410 S Bentley Avenue	1, 6	1410 S Bentley Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
112	1410 Camden Avenue	1, 6	1410 Camden Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Colonial Revival design.	Yes
113	1418 S Bentley Avenue	1, 6	1418 S Bentley Avenue	The building is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
115	1511 S Bentley Avenue	6	1511 S Bentley Avenue	The multiple-family building located at 1511 S Bentley Avenue is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis and Criterion C/3 for its Contemporary and Stucco Box/Dingbat design.	Yes
116	1516 Pontius Avenue	6	1516 Pontius Avenue	The commercial building located at 1516 Pontius Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
117	1527 Pontius Avenue	6	1527 Pontius Avenue	The commercial building located at 1527 Pontius Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
120	Louise Green Millinery Co. Building	1, 3	1616 Cotner Avenue	The building is eligible under NRHP and CRHR Criterion C/3 and is significant for its Modern design.	Yes
121	Western Electric Supply Co. Building	1, 3	1620 Cotner Avenue	The building is eligible under NRHP and CRHR Criterion C/3 and is significant for its Modern design.	Yes
122	Photo Electronics Corp. Building	1, 3	1944 Cotner Avenue	The building is eligible under NRHP and CRHR Criterion C/3 and is significant for its Modern design.	Yes
123/124	Dual Ultimate Pharmacy	1, 3	2020 Cotner Avenue	The building is eligible under NRHP and CRHR Criterion C/3 and is significant for its Modern design.	Yes

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
125	2114 Cotner Avenue	1, 3	2114 Cotner Avenue	The industrial building located at 2114 Cotner Avenue is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Modern design.	Yes
126/127	Big Tommy's	1, 3	11285 and 11289 W Pico Boulevard	The Big Tommy's restaurant building is eligible for listing in the NRHP and CRHR and is significant under Criterion A/1 for its association with City of Los Angeles commerce and car culture.	Yes
128	2467 Sawtelle Boulevard	1, 3	2467 Sawtelle Boulevard	The multiple-family residential building located at 2467 Sawtelle Boulevard is eligible for listing in the NRHP and CRHR. It is significant under Criterion A/1 for its association with the postwar housing crisis and Criterion C/3 for its Modern and Stucco Box/Dingbat design.	Yes
129	2435 Military Avenue	3, 4, 5	2435 Military Avenue	The commercial building located at 2435 Military Avenue is eligible for listing in the local register for its Modern and Contemporary design.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
130	West End Hotel	6	1538 S Sawtelle Boulevard	The West End Hotel located at 1538 Sawtelle Boulevard is eligible for listing in the local register and is significant for its rare and intact projecting blade signage.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.
131	11271 W Massachusetts Avenue	6	11271 W Massachusetts Avenue	The 11271 W Massachusetts Avenue building is eligible for local register listing and is significant as a rare surviving example of a late 1920s commercial building in West Los Angeles.	No. Not eligible for the NRHP. This property is eligible for listing in the local register only.

Map Reference #	Resource Name	Alternative	Location	Eligibility/Significance Statement	Presumed Section 4(f) Protection
132	Laemmle Theater	6	11521 Santa Monica Boulevard	The Laemmle Theater located at 11521 Santa Monica Boulevard is eligible for listing in the NRHP and CRHR and is significant under Criterion C/3 for its Italian Renaissance design.	Yes
133	313 S Church Lane	3	313 S Church Lane	The building is eligible for listing in the NRHP and CRHR under Criterion C/3 at the local level, and the local register, as an excellent example of Modern architecture.	Yes
Not shown	P-19-003803	1, 3, 4, 5, 6	Confidential	Santa Monica Air Line Railroad Segment. Appears eligible for NRHP as an individual property through survey evaluation	Yes; however, 4(f) protection would be confirmed as part of the Section 106 process.

Source: HTA, 2024

CRHR = California Register of Historical Resources
LAHCM = Los Angeles Historic-Cultural Monument
NRHP = National Register of Historic Places
SCCIC = South Central Coastal Information Center
SPRR = Southern Pacific Railroad

With regard to Section 4(f) requirements, historic sites identified in Table 3-35 that are listed in or eligible for listing in the NRHP were evaluated for potential use. The locations of these resources are depicted in the maps provided in Appendix A of the Technical Report. Map reference numbers in the tables and text correspond to those listed in Appendix A.

To date, a Section 106 consultation process has not occurred; thus, key Section 4(f) consultation with the officials with jurisdiction over historic sites (i.e., the State Historic Preservation Officer) also has not occurred. Therefore, the identification of historic sites would be revisited when there is federal involvement.

Public parks and recreational areas are listed in Table 3-36. While schools with recreational facilities available for public use through a joint use agreement or other similar contract are protected under Section 4(f), research up to this time has not revealed any public school facilities with such agreements and, therefore, no public school recreation facilities are included in this assessment. Future federal coordination efforts will include consultation with the Los Angeles Unified School District to confirm that no such agreements are in place at any of their facilities.

Table 3-36. Park and Recreation Facilities for the Section 4(f) Assessment

Alternative	Name	Address	Official with Jurisdiction	Facility Type	Amenities	Size (acres)
1, 3, 4, 5, 6	Andres and Maria Cardenas Recreation Center	14740 Blythe Street, Panorama City	City of Los Angeles Department of Recreation and Parks	Local Park	Recreational features, including skate park, splash pad, community center	0.7
6	Beverly Glen East Open Space	City of Los Angeles	MRCA	Natural Areas	Open space reserve with no public access. This resource is not Section 4(f) protected	0.4
6	Beverly Glen Park	2448 Angelo Drive, Los Angeles	MRCA	Natural Areas	Open space reserve with no public access. This resource is not Section 4(f) protected	95.5
6	Ohio and Bundy Triangle	Santa Monica Boulevard; South Bundy Drive; and Ohio Avenue, Los Angeles	City of Los Angeles	Regional Open Space	Park features, including landscaped urban space	0.2
6	Deervale-Stone Canyon Park	14700 Deervale Place, Sherman Oaks	City of Los Angeles	Regional Open Space	Park features, including hiking areas and views	79.4
1, 3, 4, 5, 6	Felicia Mahood Multipurpose Center	11338 Santa Monica Boulevard, Los Angeles	City of Los Angeles Department of Recreation and Parks	Local Park	Park features, including multi-purpose senior center	4.3
1, 3	Getty View Park & Trailhead	1399 Casiano Road, Los Angeles	Santa Monica Mountain Conservancy	Regional Open Space	Recreational features, including hiking trails and open space providing views of the Santa Monica Mountains	180.1
4, 5	Delano Park	15100 Erwin Street, Van Nuys	City of Los Angeles	Local Park	Park features, including baseball field, soccer field, playground, community center	6.1
1, 3, 4, 5	Los Angeles Riverfront Greenway	Sherman Oaks	City of Los Angeles Department of Recreation and Parks	Regional Open Space	Recreational features, including the multi-purpose Los Angeles River Bike Path	6.2
1, 3, 4, 5	Marson Park	15262 Marson Street, Panorama City	Los Angeles Neighborhood Land Trust	Local Park	Recreational features, including the multi-purpose Los Angeles River Bike Path playground	0.3

Alternative	Name	Address	Official with Jurisdiction	Facility Type	Amenities	Size (acres)
1, 3, 4, 5, 6	Mildred E. Mathia Botanical Garden	707 Tiverton Drive, Los Angeles	University of California, Los Angeles	Botanical Garden	Park features, including free public botanical garden and gathering space. Primary purpose of the facility is educational and the resource is likely not Section 4(f) protected, though additional coordination with the officials with jurisdiction is required to confirm.	8.2
1, 3	Mission Canyon Open Space	8260 Mulholland Drive	County of Los Angeles	Natural Areas	Planned Park features including open space preserved for development of a regional park	479.9
1, 3, 4, 5	Sepulveda Basin Wildlife Reserve	17017 Burbank Boulevard, Encino	USACE	Regional Open Space	Refuge features including wildlife reserve areas within the Sepulveda Basin	327.3
1, 3, 4, 5	Sepulveda Pass Open Space	457 N Fairfax Avenue, Los Angeles	Santa Monica Mountain Conservancy	Regional Open Space	Conservation features. including open space conservation easements preserving land in the Santa Monica Mountains	155.0
1, 3, 4, 5	Sherman Oaks Castle Park	4989 Sepulveda Boulevard, Sherman Oaks	City of Los Angeles Department of Recreation and Parks	Amusement Park	Recreational features including an amusement Park and batting cages	5.0
1, 3, 4, 5	Teichman Family Magnolia Park	15365 Magnolia Boulevard, Sherman Oaks	City of Los Angeles Department of Recreation and Parks	Local Park	Park features. including basketball courts, volleyball/tennis courts, tetherball courts, playground, and controlled access	3.9
1, 3, 4, 5, 6	Westwood Gardens Park	1246 Glendon Avenue, Los Angeles	City of Los Angeles Department of Recreation and Parks	Local Park	Park features. including playground and picnic areas	0.3

Alternative	Name	Address	Official with Jurisdiction	Facility Type	Amenities	Size (acres)
1, 3, 4, 5, 6	Westwood Recreation Center	1350 Sepulveda Boulevard, Los Angeles	City of Los Angeles Department of Recreation and Parks	Local Park	Park features, including Bad News Bears field, tennis court, basketball court, baseball field, soccer field, multi-purpose field, playground, pool, gym	26.7
1, 3	Woodley Avenue Park	6350 Woodley Avenue, Encino	USACE	Regional Recreation Park	Park features, including fitness zone, picnic shelter, playgrounds	119.8
6	Fossil Ridge Park	Sherman Oaks	SMMC	Regional Open Space	Park features, including hiking areas and views	57.7
6	Ishihara Park	2909 Exposition Boulevard, Santa Monica	City of Santa Monica	Local Park	Park features, including picnic shelter, playground	2.4
6	Mountains Restoration Trust Parkland	3815 Old Topanga Canyon Rd., Topanga	Mountains Restoration Trust	Regional Open Space	Park features, including protected open space	18.1
6	Mildred E. Mathia Botanical Garden	707 Tiverton Drive, Los Angeles	University of California, Los Angeles	Botanical Garden	Park features, including free public botanical garden and gathering space. Primary purpose of the facility is educational and the resource is likely not Section 4(f) protected, though additional coordination with the officials with jurisdiction is required to confirm.	8.2
6	Multi-Purpose Senior Citizens Center	6514 Sylmar Avenue, Van Nuys	City of Los Angeles	Local Park	Park features, including multi-purpose senior center	1.4
6	Oak Forest Canyon Natural Area	Sherman Oaks	MRCA	Regional Open Space	Park features, including multi-purpose senior center	1.1
6	Oak Forest West	Sherman Oaks	SMMC	Regional Open Space	Park features, including protected open space	9.7

Alternative	Name	Address	Official with Jurisdiction	Facility Type	Amenities	Size (acres)
6	Stoner Recreation Center	1835 Stoner Avenue, Los Angeles	City of Los Angeles	Local Park	Park features, including protected open space tennis court, basketball court, baseball field, multi-purpose field, skate park, playground, pool, gym, community center	8.7
6	Van Nuys Recreation Center	14301 Vanowen Street, Van Nuys	City of Los Angeles	Local Park	Park features, including protected open space tennis court, basketball court, baseball field, playground, community center	3.9
6	Van Nuys Sherman Oaks Recreation Center	14201 Huston Street, Sherman Oaks	City of Los Angeles	Local Park	Park features, including protected open space tennis court, basketball court, baseball field, soccer field, fitness zone, picnic shelter, playground, pool, community center, senior center	65.5
6	Westwood Gardens Park	1246 Glendon Avenue, Los Angeles	City of Los Angeles	Local Park	Park features, including playground and picnic areas	0.3
6	Westwood Park	1350 Sepulveda Boulevard, Los Angeles	City of Los Angeles	Local Park	Park features, including Bad News Bears field, tennis court, basketball court, baseball field, soccer field, multi-purpose field, playground, pool, gym	26.7

Source: HTA, 2024

MRCA = Mountains Recreation and Conservation Authority
SMMC = Santa Monica Mountains Conservancy
USACE = U.S. Army Corps of Engineers

3.15 Visual Quality and Aesthetics

The following summary of the affected environment was obtained from the *Sepulveda Transit Corridor Project Visual Quality and Aesthetics Technical Report* (Metro, 2025o). The summary addresses the existing visual setting, scenic vistas, and scenic resources. The regional visual setting is the same for all project alternatives, although subterranean Project components and alignments would not change the existing visual setting.

3.15.1 Visual Setting

The regional visual setting generally exhibits an urbanized character, with nearly all land already developed, except for portions of the Santa Monica Mountains National Recreation Area and Santa Monica Mountains. The urban landscape varies, and includes low-lying residential, industrial, and commercial buildings along with high-density, high-rise residential and commercial buildings in downtown areas. Higher-density development with a mix of low-rise, mid-rise, and high-rise structures are generally found between the I-10 freeway and the UCLA campus, and lower-density development consisting of primarily low-rise structures and a few mid-rise structures are located north of the UCLA campus. The Santa Monica Mountains provide aesthetic, environmental, and recreational benefits to residents. The ridgelines or mountain edges within the Santa Monica Mountains provide dramatic views and are protected and preserved by individual communities. Lower-density development within the Santa Monica Mountains consists primarily of low-rise structures and a few mid-rise structures, which are located south of US-101 within the community of Bel-Air. North of the Santa Monica Mountains, within the Valley, higher-density development with a mix of low-rise, mid-rise, and high-rise structures are generally found north of Ventura Boulevard.

The major visual feature of the Project Study Area is the built environment, which consists of a variety of commercial, industrial, public facility, institutional, and residential uses, in addition to transportation corridors. The transportation corridors within the Project Study Area include roadways, freeways, and railroad ROWs, including the Metro E Line ROW and the LOSSAN rail corridor ROW. The Metro E Line ROW generally passes through the southern portion of the Project Study Area in an east-west direction adjacent to I-10. The LOSSAN rail corridor ROW generally passes through the northern portion of the Project Study Area in an east–west direction. Major freeways (i.e., US-101, I-10, and I-405) create well-defined visual boundaries and edges because the facilities are several hundred feet wide. Within the Project Study Area, I-10, US-101, and I-405 are elevated on columns or engineered fill.

Flood control facilities also create visual boundaries within the Project Study Area, which includes the concrete-banked channels of the Los Angeles River at the northern portion of the Project Study Area. The river channels are visually distinct due to the width and limited number of crossing points.

The topography is varied, with relatively flat urbanized areas at the northern and southern portions of the Project Study Area, with major changes in elevation through the central portion of the Project Study Area. The southern portion of the Project Study Area slopes downward in a south-southwesterly direction toward the Pacific Ocean. Elevations range from approximately 780 feet above mean sea level around the Van Nuys Metro Station, 650 feet above mean sea level around US-101, 1,300 feet above mean sea level at the Stone Canyon Overlook along Mulholland Drive, 375 feet above mean sea level around the UCLA campus, to 120 feet above mean sea level south of National Boulevard (DCP, 2021).

Within the Santa Monica Mountains, the Project Study Area provides elevated vantage or vista points along Mulholland Drive. These vista points provide long-range views of the Santa Monica Mountains. In contrast, the northern and southern portions of the Project Study Area lack elevated vantage or vista

points due to the relatively flat topography. As a result, views in the Project Study Area, except Mulholland Drive in the Santa Monica Mountains, are generally limited to the foreground and middle ground. Although background views of mountains are available along some public ROWs within the Project Study Area, portions of these background views are blocked by urban features, such as utility poles, urban landscaping, and intervening buildings.

3.15.2 Scenic Vistas

The term "scenic vista" generally refers to visual access to, or the visibility of, a particular sight from a given vantage point or corridor. The subjects of valued or recognized views may be focal (meaning of specific individual resources), or panoramic (meaning broad geographic area). Panoramic views are typically associated with scenic vistas that provide a sweeping geographic orientation. Examples of panoramic views include urban skylines, valleys, mountain ranges, or large bodies of water. Examples of focal views include public art/signs and notable buildings and structures.

The Conservation Element of the *City of Los Angeles General Plan* defines scenic views or vistas as the panoramic public view access to natural features, including views of the ocean, striking or unusual natural terrain, or unique urban or historic features. Scenic views from within the Project Study Area include the Santa Monica Mountains, hillsides, and the Los Angeles River. The Los Angeles River and its associated tributaries and floodplains, and the Santa Monica Mountains are listed as scenic vistas in the Conservation Element of the *City of Los Angeles General Plan*. Sweeping views of the Santa Monica Mountains, and hillsides are considered panoramic and can be seen from designated vantage points, public hiking trails, and public ROWs.

The Santa Monica Mountains rise to an elevation of approximately 3,100 feet from the base of the hills to their highest point at Sandstone Peak. According to the Conservation Element, the Santa Monica Mountains and hillsides are the most visible scenic feature from many areas of the city, including the Project Study Area.

Within the Project Study Area, panoramic views from the "flatlands" are not readily available, due to the existing street grid pattern and built environment. Rather, panoramic vantage points are primarily located within hilly areas. The Stone Canyon Overlook is located on the south side of Mulholland Drive and provides panoramic south-facing views of the Santa Monica Mountains and the Stone Canyon Reservoir. In addition, the Johnson Overlook is located north of the Stone Canyon Reservoir on the north side of Mulholland Drive. Visitors can take in north-facing views of the San Fernando Valley, and the Santa Susana and San Gabriel Mountains. These views represent the scenic views available from various publicly accessible locations in the Santa Monica Mountains, and other hilly areas within the Project Study Area. However, the perspective and visibility may change depending on various factors, such as the viewer location, elevation, bad air days, or weather.

In addition, limited focal views of the Santa Monica Mountains and the hillsides within the lower areas of the Project Study Area are available along various north-south streets and I-405. However, intervening buildings, street trees and, on some streets, overhead utility lines block most of the views to the Santa Monica Mountains and the hillsides. In summary, public panoramic and focal scenic views are currently available in the Project Study Area, but the quality of the views can vary significantly.

3.15.3 Scenic Resources

Scenic resources refer to natural or human-made features of high aesthetic quality. Scenic resources identified in the *City of Los Angeles General Plan* include striking or unusual natural features, the Pacific Ocean, Santa Monica Mountains, and San Gabriel Mountains, and unique urban or historic features as

seen from designated scenic highways. The Study Area is not characterized by striking or unusual natural features and is not visible from the ocean. The Study Area is located within a canyon at the base of the Santa Monica Mountains, surrounded by dense tree cover. Glimpses of the Santa Susana and San Gabriel Mountains are available from intermittent viewpoints within the Project Study Area between the trees within the canyon.

No California-designated scenic highways or scenic parkways (or proposed state scenic highways or parkways) are located within the Project Study Area. Additionally, no state-designated scenic highways in proximity to the Project Study Area provide views of the Project Study Area. The closest eligible state scenic highway is SR-1 (the Pacific Coast Highway in Southern California), approximately 2 miles west of the alignments. The closest officially designated state scenic highway is SR-27 (Topanga Canyon Boulevard), which is approximately 6 miles west of the alignments.

Six City of Los Angeles-designated scenic highways are within the Project Study Area. City of Los Angeles-designated scenic highways are either:

1. Arterial streets or state highways that traverse areas of natural scenic quality in undeveloped or sparsely developed areas of the city; or
2. Arterial streets that traverse urban areas of cultural, historical, or aesthetic value which merit protection and enhancement.

Table 3-37 lists and describes the City of Los Angeles-designated scenic highways that are within or along the boundaries of the Project Study Area.

Table 3-37. Scenic Highways in the Project Study Area

Scenic Highway	Location	Scenic Features, Resources, or City Comment
Beverly Glen Boulevard	Ventura Boulevard to Sunset Boulevard	Winding cross mountain road; valley views
Mulholland Drive	1. US-101 westerly to Mulholland Highway 2. Mulholland Highway to Valley Circle Boulevard	(Specific Plan Ordinance No. 167,943) Panoramic views, “ribbon of park”
Santa Monica Boulevard	Sepulveda Boulevard to City of Beverly Hills boundary	Not Available
Sepulveda Boulevard	I-405 to Sunset Boulevard	Old cross mountain road with tunnel, views of mountains and Valley
Sherman Way	Variel Avenue to Kester Avenue	Wide street, landscaped median
Sunset Boulevard	Pacific Coast Highway to City Boundary with Beverly Hills	Views of mountains, estates, UCLA campus

Source: DCP, 2016

The City of Los Angeles *Mobility Plan 2035* designates Mulholland Drive as a scenic highway. Mulholland Drive provides opportunities for multiple scenic vistas as it winds up and through the Santa Monica Mountains (DCP, 2016). Development near Mulholland Drive is subject to design review guidelines pursuant to the *Mulholland Scenic Parkway Specific Plan* (MSPSP) (DCP, 1992).

The MSPSP has designated 14 major vista points along Mulholland Drive that the Bureau of Street Maintenance of the City of Los Angeles Department of Public Works maintains. The Inner Corridor of the MSPSP area is designated as part of the Santa Monica Mountains National Recreation Area, and the

Mountains Recreation & Conservation Authority also maintains seven scenic overlooks along Mulholland Drive. The nearest major vista point (also the nearest overlook) is the Stone Canyon Overlook, which is located approximately 1.3 miles east of I-405. The nearest scenic overlook maintained by the Mountains Recreation & Conservation Authority is The Groves Overlook, which is located 0.9 miles west of I-405.

The alignments travel through the Inner Corridor and Outer Corridor of the MSPSP area. The MSPSP contains density requirements, building standards and grading restrictions that are applicable to the Inner Corridor. In addition, the alignments are subject to the MSPSP's accompanying design guidelines and review by the Mulholland Scenic Parkway Design Review Board. The viewshed protection provisions of the MSPSP are directed at preserving, complementing, and/or enhancing the public views from Mulholland Drive. Therefore, although impacts on surrounding homes and land uses are discussed, the focus of this analysis is the impact on public views, particularly those from Mulholland Drive.

3.15.4 Light and Glare

North of US-101, the Project Study Area is generally located within the Sherman Oaks and Van Nuys neighborhoods of the City of Los Angeles, and encompasses commercial, industrial, and residential development with ambient nighttime lighting typical of urbanized settings. Common light sources include the streetlights, vehicle lights, building entrance lighting, parking structure lighting, illuminated signage/billboards, and general illumination from lights shining through windows of structures lining the corridor.

South of US-101, nighttime lighting is more limited in the Santa Monica Mountains. In the developed portions of the Santa Monica Mountains, lighting sources include pedestrian-scaled streetlights, security and decorative wall lighting at residential homes, vehicle headlights, and interior building illumination. By contrast, the undeveloped portions of the Santa Monica Mountains have little to no light or glare sources, other than vehicle headlights.

South of Sunset Boulevard, the Project Study Area is generally located within Westwood and West Los Angeles neighborhoods of the City of Los Angeles, as well as within the City of Santa Monica. The adjacent commercial, industrial, and residential development, as well as cultural and institutional facilities, such as the UCLA campus, contribute to ambient nighttime lighting typical of urbanized settings. As previously mentioned, light sources include the streetlights, vehicle lights, building entrance lighting, parking structure lighting, illuminated signage/billboards, and general illumination from lights shining through windows of structures lining the corridor.

3.16 Water Resources

The following summarizes existing conditions relevant to water resources. Refer to the *Sepulveda Transit Corridor Project Water Resources Technical Report* for additional existing condition information relevant to the project alternatives (Metro, 2025p). The summary includes jurisdictional resources, water quality, drainage, flooding, and groundwater. The Project Study Area is located within the Los Angeles Watershed in the Upper Los Angeles River Watershed and the Santa Monica Bay Watershed in the Ballona Creek Watershed and the Garapito Creek-Frontal Santa Monica Bay Watershed (Figure 3-51). The receiving waters include the Los Angeles River with its respective tributaries. The Los Angeles River crosses the Project Study Area roughly parallel to US-101.

Figure 3-51. Watersheds in the Project Study Area



Source: USGS, 2023b

3.16.1 Jurisdictional Resources

An online review of the National Hydrography Dataset (USGS, 2023c) and National Wetlands Inventory (USFWS, 2023) indicates the presence of mapped aquatic features. This includes a variety of creeks, rivers, human-made reservoirs, and concrete channels exist within the Project Study Area. Named aquatic resources within the Project Study Area include the Los Angeles River, Pacoima Wash and Encino Creek. Ballona Creek, Centinela Creek Channel, and the Sepulveda Channel are located outside and south of the Project Study Area

Riparian habitats may be present along many of the jurisdictional features identified in the National Wetlands Inventory database. Such habitats provide valuable buffers around aquatic features and provide specific habitat requirements for many plant and wildlife species.

The Study Areas for Alternatives 1, 3, and 4 traverse the Los Angeles River north of US-101. They include an aerial alignment that crosses 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 Project Study Area traverses the river. The Los Angeles River is a Traditional Navigable Water from the confluence of Arroyo Calabasas and Bell Creek and northwest of the Project Study Area to the river's outlet in San Pedro Bay south of the Project Study Area (USACE, 2023). However, the portion of the river that has been determined to be navigable is limited to the river's outlet into San Pedro Highway Bridge and not in the Project Study Area. Because Alternatives 1,3, and 4 propose traversing above the river (via aerial tramway) supported by structures outside of the jurisdictional area, impacts to the Los Angeles River are not expected.

Ephemeral drainages under the jurisdiction of the USACE, California Department of Fish and Wildlife, and Regional Water Quality Control Boards were observed adjacent to I-405 within the 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.

No potential wetlands or riparian areas were observed in the Project Study Area. Therefore, no wetland delineation forms were required.

Non-wetland jurisdictional features mapped within the Project Study Area are summarized as follows:

- 0.11 acre (4,943 square feet) of non-wetland Waters of the United States, California Department of Fish and Wildlife streambed, and Regional Water Quality Control Board Waters of the State within Los Angeles River for Alternatives 1 and 3
- 0.02 acre (837 square feet) of non-wetland Regional Water Quality Control Board Waters of the State adjacent to I-405 within the Ground-Disturbance Area for Alternatives 1 and 3
- 0.03 acre (1,183 square feet) of non-wetland California Department of Fish and Wildlife streambed adjacent to I-405 within the Ground-Disturbance Area for Alternatives 1 and 3
- 0.13 acre (5,681 square feet) of non-wetland Waters of the United States, California Department of Fish and Wildlife streambed, and Regional Water Quality Control Board Waters of the State within Los Angeles River for Alternative 4.
- 0.06 acre (2,745 square feet) of non-wetland Waters of the United States, California Department of Fish and Wildlife streambed, and Regional Water Quality Control Board Waters of the State within Los Angeles River for Alternative 5.

- 0.07 acre (3,092 square feet) of non-wetland Waters of the United States, California Department of Fish and Wildlife streambed and Regional Water Quality Control Board Waters of the State within Los Angeles River.
- 0.11 acre (4,698 square feet) Regional Water Quality Control Board Waters of the State within the mid-mountain ventilation shaft Project Study Area in Stone Canyon Reservoir open space preserve for Alternative 6.
- 0.22 acre (9,415 square feet) of non-wetland California Department of Fish and Wildlife streambed mid-mountain shaft Project Study Area in Stone Canyon Reservoir open space preserve for Alternative 6.

The non-wetland jurisdictional features potentially affected by Modified Alternative 5 will be determined during the upcoming design process.

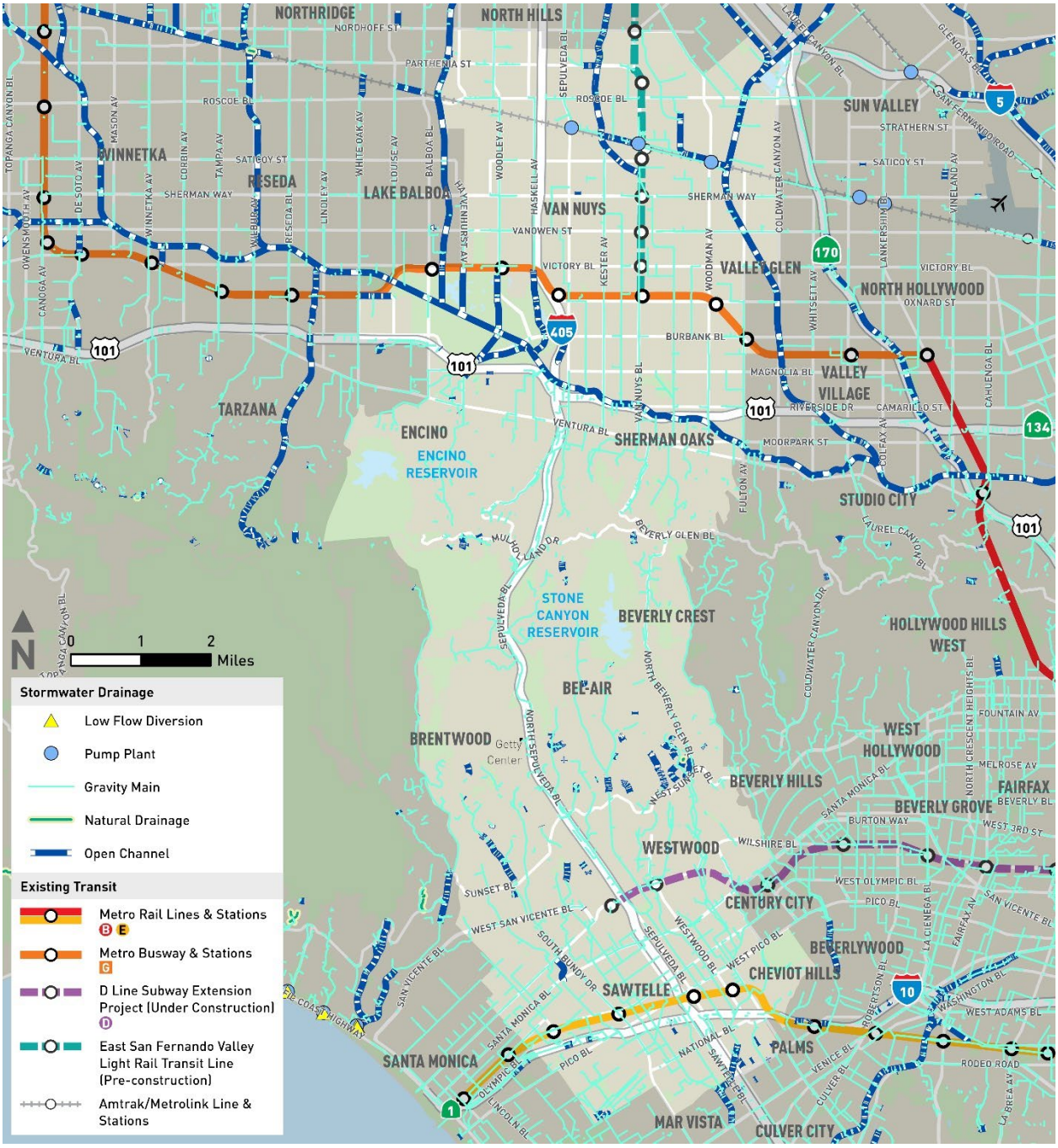
3.16.2 Water Quality

Section 303(d) of the Clean Water Act (CWA) requires states, territories, and authorized tribes to develop a list of water quality-impaired segments of waterways. The Section 303(d) list includes waterbodies that do not meet water quality standards for the specified beneficial uses of that waterway, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for waterbodies on their 303(d) lists and implement a process to meet water quality standards. The Los Angeles River is included on the CWA Section 303(d) list of impaired waterbodies due to ammonia, benthic community effect, copper, lead, nutrients (algae), oil, toxicity, and trash. Ballona Creek and Ballona Creek Estuary are on the CWA Section 303(d) list of impaired waterbodies for copper, lead, zinc, silver, cyanide, indicator bacteria, toxicity, trash, cadmium, chlordane, Dichlorodiphenyltrichloroethane, polychlorinated biphenyl, polycyclic aromatic hydrocarbons and toxicity. Sepulveda Canyon Channel is included on the 303(d) list for copper, lead, zinc, selenium, and indicator bacteria (SWRCB, 2022). The Section 303(d) list in the Project Study Area is the same for all project alternatives.

3.16.3 Drainage

Land in the county and cities within the Project Study Area is urbanized and largely covered with impervious surfaces associated with areas of asphalt, concrete, buildings, and other land uses that concentrate storm runoff. Stormwater and other surface water runoff are conveyed to municipal storm drains and culverts (Figure 3-52). Most local drainage networks are controlled by structural flood control measures. There is a large portion of the Project Study Area that is undeveloped, pervious lands in the open space area of the Santa Monica Mountains.

Figure 3-52. Existing Stormwater Drainage Infrastructure

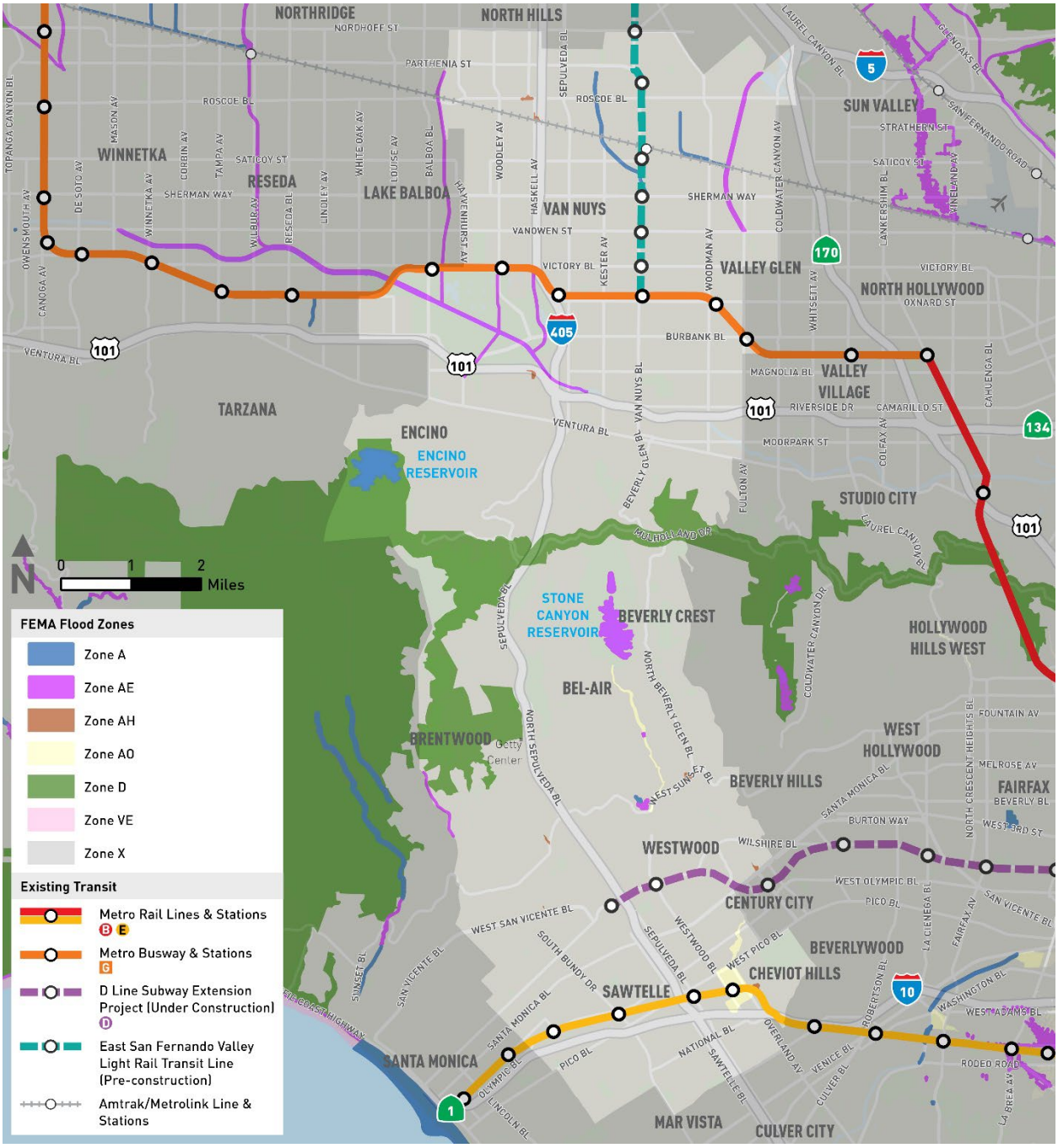


Source: LACPW, 2024

3.16.4 Flooding

The Federal Emergency Management Agency (FEMA) Flood Map Service Center was used to identify flood hazard zones within the Project Study Area. Portions of the Project Study Area are subjected to a risk of flooding under FEMA's categorizations. The ridgetop of Santa Monica Mountains, located at Mulholland Drive, and open space areas owned by Los Angeles County is located in Zone D. Zone D indicates that there is a risk of flooding, with unknown levels of risk. The Encino and Stone Canyon Reservoirs located in the Santa Monica Mountains are subject to Zones A and AE, respectively, and experience a risk of inundation with a 1-percent-annual-chance of flooding, alternatively known as a 100-year floodplain, since they each retain a significant amount of water. Other small portions within the Project Study Area near Overland Avenue are within Zone AO and AH and are subject to inundation by 1-percent-annual-chance of shallow flooding. Approximately 1.61 percent of the Project Study Area is within the 100-year floodplain. Figure 3-53 shows all flood hazard zones within the Project Study Area.

Figure 3-53. FEMA Flood Zones in the Project Study Area

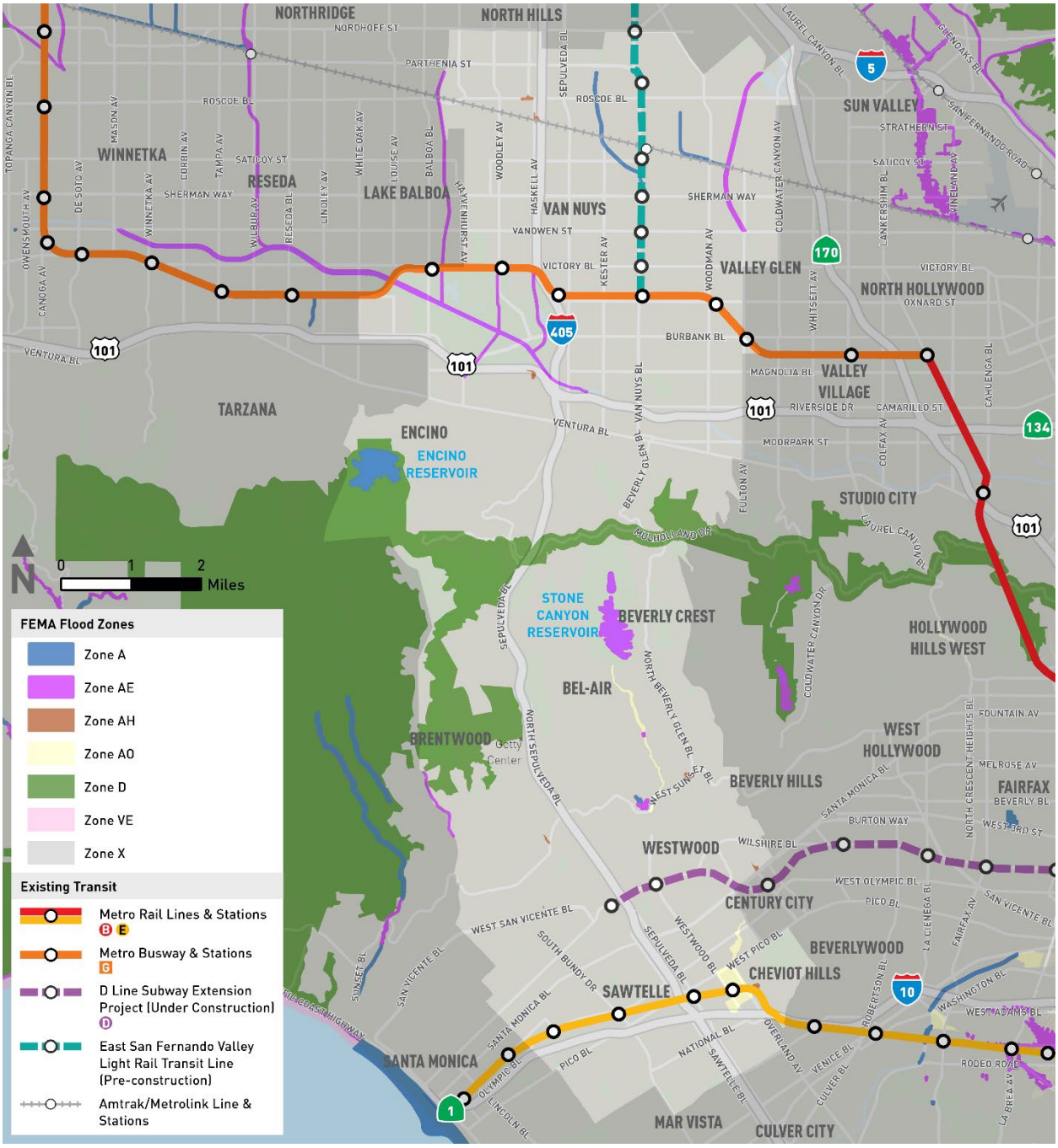


Source: FEMA, 2023; HTA, 2024

3.16.5 Groundwater

The Project Study Area is within the San Fernando Valley Groundwater Basin and Santa Monica Subbasin within the Coastal Plain of Los Angeles as shown on Figure 3-54. The Sustainable Groundwater Management Act designated the Santa Monica Subbasin as medium priority, and the San Fernando Valley Groundwater Basin as very low priority based on the basin prioritization (DWR, 2021). The Santa Monica Subbasin spans 32,100 acres (50.2 square miles). Replenishment is mainly by percolation of precipitation and surface runoff onto the subbasin from the Santa Monica Mountains. Total storage capacity of the subbasin is estimated to be about 1,100,000 acres-feet (DWR, 2020a). The San Fernando Valley Groundwater Basin surface area covers over 145,000 acres (226 square miles) (DWR, 2020b). Hydrographs show variations in water levels of 5 feet to 40 feet in the western part of the basin, a variation of about 40 feet in the southern and northern parts of the basin, and a variation of about 80 feet in the eastern part of the basin. The total storage capacity of the San Fernando Valley Groundwater Basin is 3,670,000 acres-feet.

Figure 3-54. Groundwater Basins Underlying the Project Study Area



Source: LA County Planning, 2020

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Appendix B. Sepulveda Transit Corridor Project PEL Study Affected Environment Technical Report

SEPULVEDA TRANSIT CORRIDOR PROJECT

Contract No. AE67085000

Planning and Environmental Linkages Study Affected Environment Technical Report

Task 5.01.01.07

Prepared for:

Metro

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Table of Contents

ABBREVIATIONS AND ACRONYMS VII

1 INTRODUCTION 1-1

1.1 Project Background 1-1
1.2 Project Alternatives 1-2
1.3 Project Study Area 1-3
1.4 Purpose of this Report and Structure 1-3

2 ALTERNATIVES 2-1

2.1 No Build Alternative 2-1
2.2 Alternative 1: Monorail with Aerial Alignment in I-405 Corridor and Electric Bus Connection to UCLA 2-1
2.3 Alternative 3: Monorail with Aerial Alignment in I-405 Corridor and Underground Alignment between the Getty Center and Wilshire Boulevard 2-4
2.4 Alternative 4: Heavy Rail with Underground Alignment South of Ventura Boulevard and Aerial Alignment generally along Sepulveda Boulevard in the San Fernando Valley 2-6
2.5 Alternative 5: Heavy Rail with Underground Alignment, including along Sepulveda Boulevard in the San Fernando Valley 2-8
2.6 Alternative 6: Heavy Rail with Entirely Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley, and Southern Terminus Station on Bundy Drive 2-10
2.7 Modified Alternative 5: Heavy Rail with Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station 2-12

3 ENVIRONMENTAL SCAN 3-1

3.1 Transportation 3-1
3.1.1 Regional Vehicle Miles Traveled 3-1
3.1.2 Transit Facilities 3-2
3.1.3 Parking Facilities 3-6
3.1.4 Roadway Facilities 3-7
3.1.5 Bicycle and Pedestrian Facilities 3-10
3.2 Air Quality 3-11
3.2.1 Transportation Conformity 3-12
3.2.2 Regional Conformity 3-12
3.2.3 Project-Level Conformity 3-12
3.2.4 Criteria Pollutant and Ozone Precursor Emissions 3-13
3.2.5 Localized Exposure to Pollutant Concentrations 3-17
3.2.6 Odors 3-19
3.3 Noise and Vibration 3-20
3.3.1 Noise 3-20

3.3.2 Vibration 3-26
3.4 Ecosystems and Biological Resources 3-40
3.4.1 Wildlife and Plant Species 3-40
3.4.2 U.S. Fish and Wildlife Service Critical Habitat 3-69
3.4.3 Wetlands 3-70
3.4.4 Tree Removal 3-70
3.5 Water Resources 3-75
3.5.1 Water Quality and Drainage 3-75
3.5.2 Floodplains 3-81
3.5.3 Groundwater 3-83
3.6 Visual Resources 3-86
3.6.1 Scenic Vista 3-86
3.6.2 Scenic Resources 3-87
3.6.3 Visual Character and Quality 3-88
3.6.4 Light and Glare 3-98
3.7 Land Use 3-99
3.8 Parks and Recreational Facilities 3-105
3.9 Communities and Neighborhoods Impacts 3-107
3.10 Cultural Resources and Tribal Cultural Resources 3-111
3.10.1 Built Historic Resources 3-111
3.10.2 Archaeological Resources 3-138
3.10.3 Human Remains 3-142
3.10.4 Tribal Cultural Resources 3-143
3.11 Geotechnical Considerations 3-146
3.11.1 Seismicity 3-146
3.11.2 Liquefaction 3-148
3.11.3 Soil Stability 3-149
3.12 Hazards and Hazardous Materials 3-150
3.12.1 Hazardous Materials Transport, Use, or Disposal 3-150
3.12.2 Hazardous Sites 3-155
3.12.3 Methane Zones 3-160
3.12.4 Airport Hazards 3-167
3.13 Safety and Security 3-173
3.13.1 Fire Protection 3-173
3.13.2 Police Protection 3-177
3.13.3 Emergency Evacuations 3-178
3.13.4 Wildfire Risk 3-180
3.14 Real Estate and Acquisitions 3-184

3.15 Economic and Fiscal Considerations....3-188
3.15.1 Operational Output, Earnings, and Employment....3-189
3.15.2 Fiscal Effects....3-189
3.15.3 Construction Output, Earnings, and Employment....3-190
3.16 Growth Inducing Impacts....3-192
3.17 Cumulative and Indirect Effects....3-193
3.17.1 Transportation and Traffic....3-204
3.17.2 Air Quality....3-205
3.17.3 Noise and Vibration....3-205
3.17.4 Ecosystems and Biological Resources....3-206
3.17.5 Water Resources....3-207
3.17.6 Visual Considerations....3-208
3.17.7 Land Use....3-208
3.17.8 Parks and Recreational Facilities....3-209
3.17.9 Cultural Resources....3-209
3.17.10 Geotechnical Considerations....3-210
3.17.11 Hazards and Hazardous Materials....3-210
3.17.12 Safety and Security....3-211
3.17.13 Real Estate and Acquisitions....3-212
3.17.14 Growth Inducing Effects in Communities and Neighborhoods....3-212
3.18 Section 4(f) Effects....3-212
3.18.1 Historic Sites....3-214
3.18.2 Public Parks and Recreational Areas....3-219
4 PREPARERS OF THE TECHNICAL REPORT....4-1
5 REFERENCES....5-1

Tables

Table 3-1. Changes in Daily Vehicle Miles Traveled by Alternative....3-1
Table 3-2. Peak Daily Regional Operational Emissions (Horizon Year 2045)....3-14
Table 3-3. Unmitigated Peak Daily Regional Construction Criteria Pollutant Emissions....3-16
Table 3-4. Unmitigated Peak Daily Localized Operational Criteria Pollutant Emissions....3-18
Table 3-5. Unmitigated Localized Construction Criteria Pollutant Emissions....3-19
Table 3-6. Levels of Impact....3-20
Table 3-7. Summary of Unmitigated Noise Impacts Associated with Rail Operations and Ancillary Facilities....3-21
Table 3-8. Alternative 1: MM NOI-1.1 – Soundwalls Locations....3-24
Table 3-9. Alternative 3: MM NOI-3.1 – Soundwalls Locations....3-24

Table 3-10. Alternative 4: MM NOI-4.1 – Soundwalls Locations 3-25
Table 3-11. Summary of Vibration Impacts Associated with Rail Operations 3-27
Table 3-12. Alternative 4: MM VIB-4.1 – Trackwork Isolation Methods Locations 3-37
Table 3-13. Alternative 5: MM VIB-5.1 – Trackwork Isolation Methods Locations 3-38
Table 3-14. Details of Jurisdiction, Mitigation Ratios, and Maintenance Period for Landowners with Potential for Impacts to Trees 3-70
Table 3-15. Ordinance-Protected Trees and Shrubs within Ground Disturbance Area 3-73
Table 3-16. New Impervious Surface Area 3-76
Table 3-17. Landscape Unit Visual Character 3-89
Table 3-18. Summary of Potential Impacts to Built Historic Resources 3-113
Table 3-19. Typical Causes of Property Acquisition and Displacement for the Project 3-185
Table 3-20. Summary of Potential Displacement Units by Alternative 3-187
Table 3-21. Parcels to be Used as During Construction for the Project Alternatives 3-188
Table 3-22. Potential Income Tax Generated Earnings (2023 $M) 3-189
Table 3-23. Potential Sales Tax Revenues (2023 $M) 3-189
Table 3-24. Summary of Capital Costs (2023 $M) 3-190
Table 3-25. Alternative 1: Net Effects of Capital Expenditure 3-191
Table 3-26. Alternative 3: Net Effects of Capital Expenditure 3-191
Table 3-27. Alternative 4: Net Effects of Capital Expenditure 3-191
Table 3-28. Alternative 5: Net Effects of Capital Expenditure 3-192
Table 3-29. Alternative 6: Net Effects of Capital Expenditure 3-192
Table 3-30. Cumulative Projects List 3-195

Figures

Figure 1-1. Sepulveda Transit Corridor Project Study Area 1-4
Figure 2-1. Alternative 1: Alignment 2-3
Figure 2-2. Alternative 3: Alignment 2-5
Figure 2-3. Alternative 4: Alignment 2-7
Figure 2-4. Alternative 5: Alignment 2-9
Figure 2-5. Alternative 6: Alignment 2-11
Figure 2-6. Modified Alternative 5: Conceptual Alignment 2-13
Figure 3-1. Watersheds in the Project Study Area 3-77
Figure 3-2. FEMA Flood Zones 3-82
Figure 3-3. Groundwater Basins Underlying the Project Study Area 3-84
Figure 3-4. Visual Areas of Analysis 3-91
Figure 3-5. Before and After Simulation View, View Looking South Toward I-405 and the Skirball Center on the Right 3-93

Figure 3-6. Before and After Simulation View, View Looking Southeast Toward the Primary Station Entrance of the UCLA Gateway Plaza Station 3-95
Figure 3-7. Before and After Simulation View, View Looking South Toward the Vent Shaft and Stone Canyon Reservoir 3-97
Figure 3-8. Existing Land Use within the Project Study Area 3-100
Figure 3-9. Open Space Acquired for Getty Center Station for Alternatives 1 and 3 3-102
Figure 3-10. Alternative 1: Methane Hazard Zones 3-162
Figure 3-11. Alternative 3: Methane Hazard Zones 3-163
Figure 3-12. Alternative 4: Methane Hazard Zones 3-164
Figure 3-13. Alternative 5: Methane Hazard Zones 3-165
Figure 3-14. Alternative 6: Methane Hazard Zones 3-166
Figure 3-15. Alternative 1: Airport Influence Area 3-168
Figure 3-16. Alternative 3: Airport Influence Area 3-169
Figure 3-17. Alternative 4: Airport Influence Area 3-170
Figure 3-18. Alternative 5: Airport Influence Area 3-171
Figure 3-19. Alternative 6: Airport Influence Area 3-172
Figure 3-20. Existing Fire and Police Station Locations Within or Serving the Project Study Area by Project Alternative 3-175
Figure 3-21. Wildfire Hazard Zones in the Project Study Area 3-181
Figure 3-22. Historical Wildfires in the Project Study Area 3-182
Figure 3-23. Cumulative Projects Identified in the Project Study Area – North 3-202
Figure 3-24. Cumulative Projects Identified in the Project Study Area – South 3-203
Figure 3-25. Alternative 1: Property Acquisition – Mission Canyon Open Space 3-221
Figure 3-26. Alternative 1: Property Acquisition – Teichman Family Magnolia Park 3-222

Abbreviations and Acronyms

ADA	Americans with Disabilities Act
BHMMP	Bat Habitat Mitigation and Monitoring Plan
BMP	best management practice
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CO	carbon monoxide
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CWA	Clean Water Act
dBA	A-weighted decibels
DPM	diesel particulate matter
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESFV	East San Fernando Valley
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Programs
g/bhp-hr	gram(s) per brake horsepower hour
GBV	groundborne vibration
HOV	high-occupancy vehicle
HRDF	High Resilience Direct Fixation Rail Fasteners
HRT	heavy rail transit
HTA	HTA Partners
HVAC	heating, ventilation, and air conditioning

I-10	Interstate 10
I-405	Interstate 405
in/sec	inch(es) per second
IOS	Initial Operating Segment
LADOT	Los Angeles Department of Transportation
LADWP	City of Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
LASD	Los Angeles County Sheriff's Department
lbs/day	pounds per day
LEED	Leadership in Energy and Environmental Design
LID	low impact development
LOSSAN	Los Angeles-San Diego-San Luis Obispo
LPA	Locally Preferred Alternative
LRT	light rail transit
LWCFA	Land and Water Conservation Fund Act of 1965
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
MM	Mitigation Measure
MRDC	Metro Rail Design Criteria
MRT	monorail transit
MS4	Municipal Separate Storm Sewer Systems
MSF	maintenance and storage facility
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PEL	Planning and Environmental Linkages
PM	Project Measure
PM_{10}	respirable particulate matter (particles with diameters less than 10 microns)
$PM_{2.5}$	fine particulate matter (particles with diameters less than 2.5 microns)

POAQC	Projects of Air Quality Concern
PPV	peak particle velocity
Project	Sepulveda Transit Corridor Project
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SHPO	State Historic Preservation Officer
SOI	Secretary of the Interior
sq. ft.	square feet
STCP	Sepulveda Transit Corridor Partners
SWPPP	Stormwater Pollution Prevention Plan
TBD	to be determined
TBM	tunnel boring machine
TCE	temporary construction easement
TCR	tribal cultural resource
TMP	Transportation Management Plan
TOC	transit-oriented communities
TOD	transit-oriented development
TPSS	traction power substation
UCLA	University of California, Los Angeles
U.S.	United States
US-101	U.S. Highway 101
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VA	U.S. Department of Veterans Affairs
Valley	San Fernando Valley
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Plan
Westside	Westside of Los Angeles

1 INTRODUCTION

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 (Westside). 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.

The scope of the Planning and Environmental Linkages (PEL) Study is to bridge the gap between project planning and environmental phases of the corridor by compiling and integrating the current California Environmental Quality Act (CEQA) work into the anticipated subsequent National Environmental Policy Act (NEPA) process. The PEL statute refers to 23 U.S.C. 168, which outlines the integration of transportation planning and environmental review through the PEL process. 23 U.S.C.168 (c)(1) and (2) apply to planning decisions and planning analyses, including those listed in the statute. This statute allows for the use of planning products developed during transportation planning to inform and streamline the NEPA process. The PEL process helps agencies consider environmental and community goals early in transportation planning, using that information to inform and potentially expedite the subsequent NEPA review. The PEL Study identifies and supplements data needs to support the future NEPA process and engages federal agencies and other partners in a facilitated form to solicit comments on the Project. The planning products produced in this planning process may be adopted during a subsequent environmental review process completed for the Project.

This *Draft Affected Environment Technical Report* supports the PEL Study process.

1.1 Project Background

The Sepulveda Corridor provides a crucial transportation link across the Santa Monica Mountains and through the Westside of the City of Los Angeles, connecting the heavy concentration of households in the Valley with major employment and activity centers on the Westside, including such major travel destinations as Westwood, the University of California, Los Angeles (UCLA), and Century City. The Sepulveda Corridor serves trips throughout western Los Angeles County and beyond. With increasing population, employment, and travel, congestion on Interstate 405 (I-405) and other Project Study Area roadways is likely to worsen and spread over longer periods of the day unless substantial new system capacity is added. As congestion gets worse, Valley residents will see their access to Westside travel destinations deteriorate.

The 2019 *Sepulveda Transit Corridor Project Final Feasibility Report* 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 (Metro, 2019). 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 Report 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 or monorail transit, 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 CEQA, for the Project that included six alternatives. 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 I-405 corridor and an electric bus connection to 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

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, 2024). Detailed descriptions of the five remaining “build” alternatives are presented in Section 2.

The DEIR, which evaluated the five remaining alternatives, was released on June 2, 2025 for a 90-day public review and comment period (Metro, 2025). In January 2026, the Metro Board of Directors selected a Modified Alternative 5 as the Locally Preferred Alternative (LPA). Modified Alternative 5 is heavy rail with an underground alignment along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station. The LPA is the alternative determined to best meet the Project’s goals, objectives, and community needs based on technical analysis and public input. Identifying an LPA does not constitute project approval. Hence, all alternatives are assessed in the PEL Study.

In addition, Metro is studying phase implementation inclusive of an Initial Operating Segment (IOS), for the Project with priority given to connecting the San Fernando Valley at the Metro G Line to the Westside at the Metro D Line. This IOS would be an incremental investment so that benefits can be married with identified funds, thereby allowing the majority of the Project’s mobility benefits to be realized sooner. The IOS has not yet been fully defined by Metro, including the maintenance and storage facility (MSF) location. The IOS will be studied in an upcoming further NEPA and CEQA analyses.

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

The purpose of this environmental assessment is to present a high-level environmental scan of the Project. The assessment addresses NEPA resources that either overlap with CEQA resources (e.g., air quality) or are specific to federal documents (e.g., Section 4(f)). The environmental scans herein are based on environmental studies prepared to support CEQA. The introductions provided for each topic cite the specific supporting study that was used to obtain baseline conditions. In addition, the topical environmental scans summarize the methodologies used in the assessments (e.g., ridership modeling, pollutant emissions modeling, and noise/vibration predictions). These evaluations support the PEL process by providing stakeholders, including federal agencies and the public, an opportunity to comment on the five alternatives prior to a Locally Preferred Alternative is identified by the Metro Board of Directors.

The report is organized according to the following sections:

- Section 1 Introduction
- Section 2 Alternatives
- Section 3 Environmental Scan
- Section 4 Preparers of the Technical Report
- Section 5 References

Figure 1-1. Sepulveda Transit Corridor Project Study Area



Source: HTA, 2024

2 ALTERNATIVES

The Project would construct a fixed guideway public transportation line across the Santa Monica Mountains in the vicinity of the Sepulveda Pass. Metro staff is initiating environmental review of five project alternatives informed by both the *Sepulveda Transit Corridor Final Feasibility Report* and concepts developed by Pre-Development Agreement contractors. All of the project alternatives described in this section would have a northern terminus station near the Van Nuys Metrolink/Amtrak Station and a southern terminus station near the Metro E Line and include stations that provide connections to the Metro E, Metro D, and Metro G Lines, the East San Fernando Valley (ESFV) Light Rail Transit (LRT) Line, and the Metrolink Ventura County Line. The environmental documentation will also include consideration of a "No Build" Alternative that does not include the construction of a fixed guideway line.

2.1 No Build Alternative

The No Build Alternative would not construct any fixed guideway transit line between the Van Nuys Metrolink/Amtrak Station and the Metro E Line. This includes improving service on Metro Line 761, which is the primary transit option through the Sepulveda Pass. Metro Line 761 would operate between the Metro E Line Expo/Sepulveda Station and the Van Nuys Metrolink/Amtrak Station, rather than its current northern terminus at the Sylmar Metrolink Station, in coordination with the opening of the ESVF LRT Line.

2.2 Alternative 1: Monorail with Aerial Alignment in I-405 Corridor and Electric Bus Connection to UCLA

Alternative 1 is an entirely aerial monorail alignment that would run along the I-405 corridor and would include eight aerial monorail transit (MRT) stations and a new electric bus route from the Metro D Line Westwood/VA Hospital Station to the 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 ESFV LRT 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:

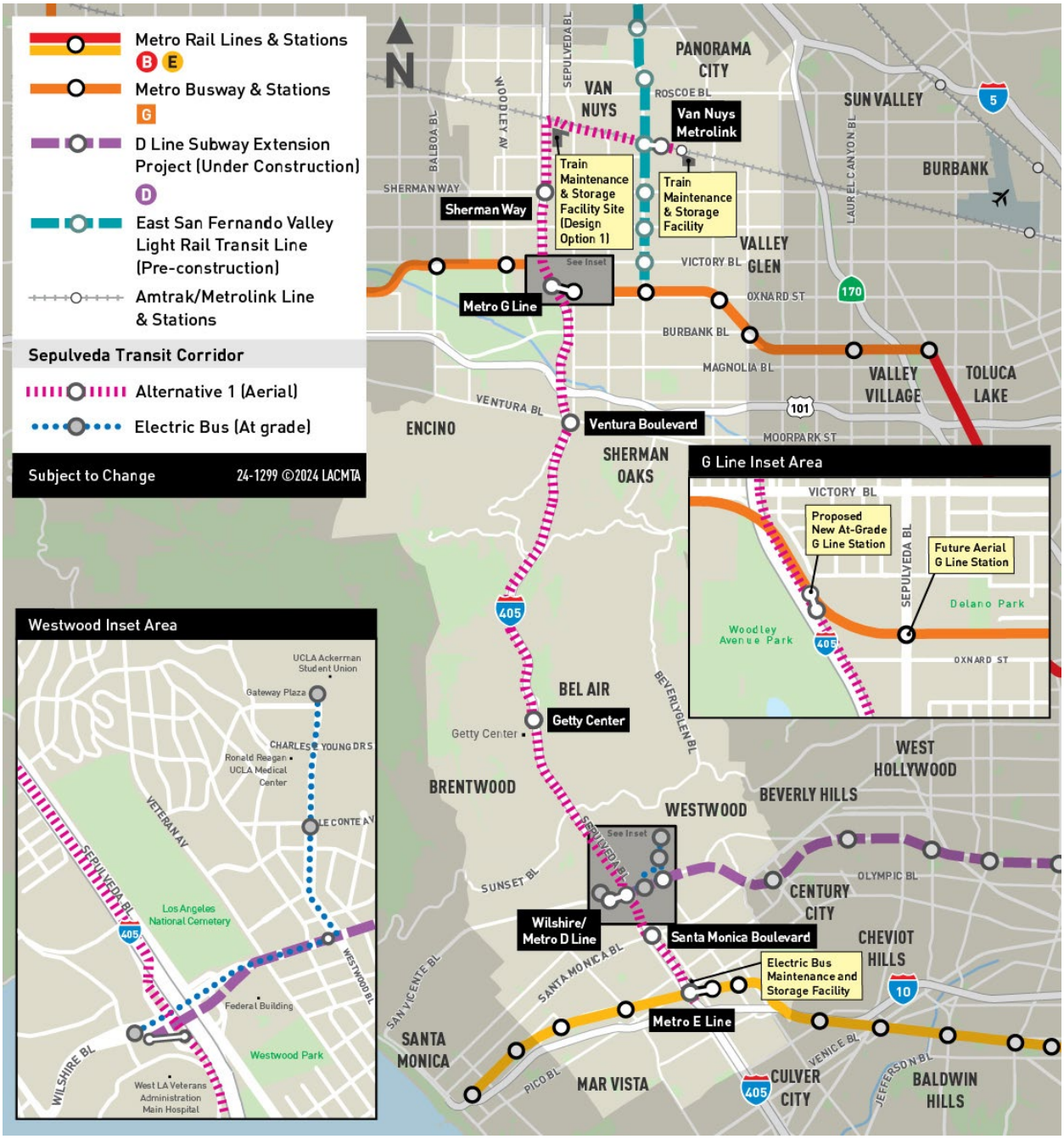
1. Metro E Line Expo/Sepulveda Station (aerial)
2. Santa Monica Boulevard Station (aerial)
3. Wilshire Boulevard/Metro D Line Station (aerial)
    a. Wilshire Boulevard/VA Medical Center bus stop
    b. Westwood Village bus stop
    c. UCLA Gateway Plaza bus stop
4. Getty Center Station (aerial)
5. Ventura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

In the 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 site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. In the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor. The MSF site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. 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.

Figure 2-1 shows the Alternative 1 alignment, stations, and the potential locations for the maintenance and storage facility (MSF).

Under the 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. This MSF site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. Under the MSF Design Option 1, the MSF would be located on industrial property, abutting Orion Avenue, south of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor. The MSF site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. 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.

Figure 2-1. Alternative 1: Alignment



Source: LASRE, 2024; HTA, 2024

2.3 Alternative 3: Monorail with Aerial Alignment in I-405 Corridor and Underground Alignment between the Getty Center and Wilshire Boulevard

Alternative 3 is an aerial monorail alignment that would run along the I-405 corridor and would include seven aerial 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 Metro E, Metro D, and Metro G Lines, the ESFV LRT 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.

Alternative 3 includes a tunnel alignment to provide a direct connection to the UCLA campus. The alignment would enter an underground tunnel south of the Federal Building parking lot, proceed to an underground UCLA Gateway Plaza Station, and then continue north under the UCLA campus until Sunset Boulevard where the tunnel would curve northwest for approximately 2 miles to rejoin the I-405 corridor.

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)

Figure 2-2 shows the Alternative 3 alignment, stations, and MSF.

The MSF Base Design and MSF Design Option 1 for Alternative 3 are identical to Alternative 1. The MSF would be located on LADWP property east of the Van Nuys Metrolink Station. The MSF site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. 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 site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles.

Figure 2-2. Alternative 3: Alignment



Source: LASRE, 2024; HTA, 2024

2.4 Alternative 4: Heavy Rail with Underground Alignment South of Ventura Boulevard and Aerial Alignment generally along Sepulveda Boulevard in the San Fernando Valley

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. 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 and the Santa Monica Mountains to a tunnel portal south of Ventura Boulevard in the Valley. 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. 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.

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 ESFV LRT 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)

Figure 2-3 shows the Alternative 4 alignment, stations, and MSF.

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.

Figure 2-3. Alternative 4: Alignment



Source: STCP, 2024; HTA, 2024

2.5 Alternative 5: Heavy Rail with Underground Alignment, including along Sepulveda Boulevard in the San Fernando Valley

Alternative 5 consists of an HRT system with a primarily underground guideway track configuration, including seven underground stations and one aerial station. Alternative 5 follows the same horizontal alignment as Alternative 4 but with different vertical profiles and station configurations in the Valley. This alternative would include five transfers to high-frequency fixed guideway transit and commuter rail lines, including the Metro E, Metro D, and Metro G Lines, the ESFV LRT 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 miles 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)

Figure 2-4 shows the Alternative 5 alignment, stations, and MSF.

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.

Figure 2-4. Alternative 5: Alignment



Source: STCP, 2024; HTA, 2024

2.6 Alternative 6: Heavy Rail with Entirely Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley, and Southern Terminus Station on Bundy Drive

Alternative 6 is an 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 Metro E, Metro D, and Metro G Lines, the ESFV LRT Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.9 miles. Alternative 6 would be designed consistent with the typical HRT technology seen throughout the current Metro transit system.

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)

Figure 2-5 shows the Alternative 6 alignment, stations, and MSF.

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 right-of-way to the north, Woodman Avenue to the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west.

Figure 2-5. Alternative 6: Alignment



Source: HTA, 2024

2.7 Modified Alternative 5: Heavy Rail with Underground Alignment, including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at the Metro E Line Expo/Sepulveda Station

Modified Alternative 5 is an entirely underground HRT alignment that incorporates key elements of Alternative 5, including automated vehicles in a single-bore tunnel and a terminus at the E Line Expo/Sepulveda Station. On the Westside, the alignment would be identical to Alternative 5 and provide connections to the Metro E and Metro D Lines. In the Valley, the alignment would follow a similar path as Alternative 6 to continue underneath Van Nuys Boulevard instead of Sepulveda Boulevard, providing connections to the Metro G Line, ESFV LRT Line, and the Metrolink Ventura County Line. The length of the alignment between the terminus stations would be approximately 12.2 miles, which may be developed in phases.

The seven underground 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/Van Nuys Boulevard Station (underground)
6. Metro G Line Van Nuys Station (underground)
7. Van Nuys Metrolink Station (underground)

Error! Not a valid bookmark self-reference. shows the conceptual alignment and station locations for Modified Alternative 5. An MSF location has not yet been identified for this alternative.

Figure 2-6. Modified Alternative 5: Conceptual Alignment



Source: HTA, 2026

3 ENVIRONMENTAL SCAN

The following summarizes the affected environment associated with the project alternatives for topics pertinent to NEPA.

3.1 Transportation

The following analysis addresses regional vehicle miles traveled (VMT), transit facilities, roadway facilities, pedestrian/bicycle facilities, and emergency access. Refer to the *Sepulveda Transit Corridor Project Transportation Technical Report* and *Sepulveda Transit Corridor Project Transportation Assessment Report (Non-CEQA Topics)* for information related to existing conditions and the applicable regulatory environment (Metro, 2025a, 2025b).

3.1.1 Regional Vehicle Miles Traveled

VMT forecasts for the No Build Alternative and the project alternatives are extracted from Metro's Transportation Analysis Model. The six-county Southern California Association of Governments (SCAG) region (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial Counties) were used as the basis for the geographic evaluation of VMT. The model uses demographic data and projections and assumptions regarding regional socioeconomic and transportation network characteristics to develop trip estimates occurring between different locations in the region, the market share of each transportation mode, and the routing of these trips over the highway and transit networks. To calculate the No Build Alternative VMT, the length of each roadway segment in the Project Study Area was multiplied by the forecast daily volume on that segment. VMT reduction for each project alternative was calculated by multiplying the number of trips by the length of each trip.

Operational Effects

Table 3-1 lists daily VMT forecasts for all alternatives in the 2045 Horizon Year. In addition, it is anticipated that Modified Alternative 5 would result in a similar total VMT and associated change from 2045 without Project conditions as Alternatives 5 and 6. Under each project alternative, reductions in VMT are forecast relative to existing conditions. The table also compares the project alternatives to the No Build Alternative, which is pertinent to the future NEPA analysis.

Table 3-1. Changes in Daily Vehicle Miles Traveled by Alternative

Project Alternative	Total Vehicle Miles Traveled	Project Change from No Build Alternative
Existing Conditions (2019 Base Year)	456,869,300	Not Applicable
No Build Alternative (2045 Horizon Year)	568,557,200	Not Applicable
Alternative 1 (2045 Horizon Year)	568,215,400	-341,800
Alternative 3 (2045 Horizon Year)	568,106,100	-451,100
Alternative 4 (2045 Horizon Year)	567,789,400	-767,800
Alternative 5 (2045 Horizon Year)	567,782,100	-775,100
Alternative 6 (2045 Horizon Year)	567,861,800	-695,400

Source: Metro, 2025a.

Construction Effects

Construction of the project alternatives would temporarily generate similar amount of additional VMT related to construction work activities, construction labor trips, and the transport of excavated materials, construction equipment and supplies. This additional VMT would terminate upon completion

of construction and would not be in effect during operations, when there would be an overall reduction in VMT compared to the No Build Alternative.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.1.2 Transit Facilities

The Project Study Area is served by several local and regional transit agencies, including Metro, Los Angeles Department of Transportation (LADOT), Amtrak, Metrolink commuter rail, Santa Monica Big Blue Bus, Culver CityBus, Santa Clarita Transit, Antelope Valley Transit Authority, Long Beach Transit, and UCLA BruinBus. Transit service types include rapid bus, express/commuter bus, commuter rail, LRT, BRT, shuttles and circulators, and local bus lines. The Project Study Area is served by Amtrak's Pacific Surfliner and Coast Starlight services, the Metrolink Ventura County Line, the Metro E and Metro G Lines, and 55 rapid, express, and local bus lines.

Operational Effects

Under the No Build Alternative, there are forecast to be 1,716,293 regional daily transit trips in the 2045 Horizon Year. Implementation of each of the project alternatives would result in increases in regional transit trips of between 20,051 and 42,043 daily trips in the 2045 Horizon Year. It is anticipated that Modified Alternative 5 would result in an increase near or above the high end of this range. Total daily bus trips would decrease with Project implementation, although the ridership on some individual bus lines would increase primarily within the Project Study Area. It is anticipated that the operators of these bus routes would be able to adjust service levels to accommodate additional forecast ridership.

The capacities of heavy rail (Metro D Line) and light rail modes (Metro E Line and East San Fernando Valley) are approximately 12,000 and 4,800 passengers per hour, respectively, based on design headways and vehicle capacity. Capacity on the Metrolink Ventura County Line is approximately 2,240 passengers per hour, assuming 8-car trains at 30-minute headways. Metro G Line capacity is approximately 960 passengers per hour at 5-minute headways. While all project alternatives would increase peak loads on the Metro E Line and East San Fernando Valley Light Rail Transit Line, peak loads would remain under capacity. For the Metro G Line, peak loads would exceed capacity similar to the No Project Alternative. It is expected that Metro would accommodate the additional demand on the Metro G Line by implementing operational improvements and would also update its short- and long-range transit plans and increase service on parallel routes as needed, consistent with its usual service planning processes. Under all project alternatives, the volume of transfer passengers from the Project Van Nuys Metrolink station to the ESFV LRT Van Nuys Metrolink station is forecast to be high enough to generate queues at the ESFV station fare gates that would not safely fit within the ESFV LRT Van Nuys Metrolink Station, which would be located in the median of Van Nuys Boulevard. Queues may therefore extend into the street, resulting in a potential adverse effect to passenger safety. Implementation of Mitigation Measure (MM) TRA-1 would minimize potential impacts associated with all project alternatives by removing fare gates at all entrances to the ESFV LRT Van Nuys Metrolink Station. Implementation of MM TRA-10 would minimize potential impacts associated with Alternative 6 by requiring the redesign of the west entrance of the existing Metro E Line Expo/Bundy Station to allow for transfers from the Project station to the Metro E Line within a single fare-paid zone.

Construction Effects

Construction of the project alternatives would require temporary closures of some intersections, lanes, or sidewalks would be necessary during construction, which may result in disruptions to bus service. Temporary re-routing and relocation of bus stops may be needed for the following transit lines:

- Metro 4, 155, 162, 169, 233, 234, 240, and 761 (all project alternatives 6) and 162 (Alternatives 1, 3, 4, and 5) and 602 (Alternatives 1, 4, 5, 6, and likely Modified Alternative 5) and 20 (Alternatives 5,6, and likely Modified Alternative 5) and 158 (Alternative 6 and likely Modified Alternative 5)
- Antelope Valley Transit Authority 786 (Alternative 1)
- Santa Monica Big Blue Bus 1 (all project alternatives) and 7/7R, 17 (Alternatives 1, 3, 4, 5, and likely Modified Alternative 5) and 2, R12, 18 (Alternatives 1, 4, 5, 6, and likely Modified Alternative 5) and 5, R10, 14, 14 (Alternative 6)
- Culver CityBus 6/R6 (all project alternatives)
- LADOT 549 and DASH Panorama City/Van Nuys (all project alternatives) and 431, 534 (Alternatives 4, 5, 6, and likely Modified Alternative 5)
- Long Beach Transit 405 (Alternative 3)
- Amtrak Thruway (all project alternatives)
- BruinBus U1, U2, U3, U5 (all project alternatives)

In addition to impacts to on-street bus service, construction at existing fixed guideway stations would temporarily impact rail and bus rapid transit service operations. At the existing Metro E Line Expo/Sepulveda Station, the construction of tail tracks and a pedestrian bridge connecting to the project station would result in temporary nighttime and weekend service impacts on the Metro E Line. The construction of a pedestrian bridge connecting the Metro G Line project station with new Metro G Line platforms would result in temporary nighttime and weekend service impacts to the Metro G Line. In addition, construction of the guideway would require temporary nighttime Metro G Line Busway closures. Temporary impacts to Amtrak and Metrolink rail operations and passenger experience at the Van Nuys Metrolink/Amtrak Station would also occur as a result of the construction of a new pedestrian bridge crossing the LOSSAN rail corridor at the station. Construction activities would occur within the vicinity of the ESFV LRT Van Nuys Metrolink Station for the construction of the aerial alignment and Alternative 1 Van Nuys Metrolink Station which may temporarily affect passenger experience; however, disruptions to rail service or MSF operations are not anticipated.

Specific to Alternative 1, construction of a new entrance at the east end of the Metro D Line Westwood/VA Hospital Station and a new concourse over the Metro D Line tracks and platform within the station would result in temporary impacts to Metro D Line rail operations and passenger experience. Metro D Line trains would operate between Union Station and the Metro D Line Century City Station during this period of construction as there would be no crossovers on the Metro D Line that would allow for service to operate past that station.

Specific to Alternatives 4, 5 and 6, and likely Modified Alternative 5, construction of a mezzanine extension over the Metro D Line tracks and platform at the Metro D Line Westwood/UCLA Station would result in temporary impacts to Metro D Line rail operations and passenger experience. Metro D Line trains would operate between Union Station and the Metro D Line Century City Station while temporary falsework is constructed over the Metro D Line tracks. The Metro D Line Westwood/UCLA Station would

then be temporarily closed to passengers during the construction of the mezzanine extension. However, Metro D Line trains would be able to pass through the station to the Westwood/VA Hospital Station. Implementation of MM TRA-4 would minimize potential impacts associated with all project alternatives by requiring a Transportation Management Plan (TMP) during construction activities. Implementation of MM TRA-5 would minimize potential impacts associated with all project alternatives by requiring temporary bus service where construction results in the interruption of Metro rail operations.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6, except MM TRA-10, which applies to Alternative 6 only. These measures are included in the CEQA documentation and may be included in NEPA documentation.

MM TRA-1: *During final design, Metro shall complete a detailed pedestrian flow microsimulation analysis to evaluate passenger movements when transferring between the Project Van Nuys Metrolink Station and the East San Fernando Valley (ESFV) Van Nuys Metrolink Station. This analysis shall assess passenger flow into the ESFV Van Nuys Metrolink Station and potential areas of congestion at the fare gates during peak and off-peak hours. In addition to passengers transferring from the Project Van Nuys Metrolink Station, this analysis shall include passengers arriving at the ESFV Van Nuys Metrolink Station via Amtrak, Metrolink, bus, active transportation, park and ride, and kiss and ride. The results of this analysis shall inform design to determine necessary measures, such as removal of fare gates or installation of stand-alone validators (SAV) at the ESFV Van Nuys Metrolink Station, to eliminate the safety concern of passengers queueing into the street. Any necessary adjustments to station layouts, signage, pedestrian transfer paths, or fare gate configurations shall be incorporated into final design prior to commencement of operations.*

MM TRA-4: *The project contractor shall prepare a Transportation Management Plan to facilitate the flow of traffic and transit service in and around construction zones. The Transportation Management Plan shall include, at a minimum, the following measures:*

- *Where feasible, schedule construction-related travel (i.e., deliveries, hauling, and worker trips) during off-peak hours and maintain two-way traffic circulation along affected roadways during peak hours. Avoid the closure of two major adjacent streets where feasible.*
- *Designated routes for project haul trucks shall primarily utilize the I-405, I-10, and US-101 corridors. Throughout the construction process, these routes shall be coordinated with the City of Los Angeles and Veterans Affairs to ensure consistency with land use and mobility plans. Additionally, the routes shall be situated to minimize noise, vibration, and other possible impacts.*
- *Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through-traffic in adjacent residential areas.*
- *Where construction encroaches on the Los Angeles-San Diego-San Luis Obispo rail corridor right-of-way, coordinate construction activities with Union Pacific, Metrolink, and Amtrak to minimize disruptions to service and coordinate on*

outreach to inform passengers of service impacts. Provide temporary parking and drop-off facilities at the Van Nuys Metrolink/Amtrak Station to minimize passenger impacts.

- *Develop and implement an outreach program and public awareness campaign in coordination with Caltrans, the City of Los Angeles, the City of Santa Monica, and the County of Los Angeles to inform the general public about the construction process and planned roadway closures, potential impacts, and mitigation measures, including temporary bus stop relocation.*
- *Where feasible, temporarily restripe roadways to maximize the vehicular capacity at locations affected by construction closures.*
- *Provide wayfinding signage, lighting, and access to specify pedestrian safety amenities (such as handrails, fences, and alternative walkways) during construction.*
- *Where construction encroaches on pedestrian facilities, special pedestrian safety measures shall be used, such as detour routes and temporary pedestrian barricades.*
- *Where construction encroaches onto the University of California, Los Angeles campus, the project contractor shall ensure that access to campus buildings is maintained through temporary decking and the construction of temporary stairs and ramps.*
- *During final design, the project contractor shall coordinate with Metro Operations to minimize construction impacts on existing Metro rail operations in and around existing stations. Where construction results in the interruption of Metro rail operations, buses shall provide temporary service between rail stations.*
- *Provide on-street bicycle detour routes and signage to address temporary effects to bicycle circulation and minimize inconvenience (e.g., lengthy detours) as to minimize users potentially choosing less safe routes if substantially rerouted.*
- *During final design, the project contractor shall coordinate with first responders and emergency service providers to minimize impacts on emergency response. Coordination efforts shall include the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic movement. The nearest local first responders would be notified, as appropriate, of traffic control plans during construction to coordinate emergency response routing.*
- *Maintain customer and delivery access to all operating businesses near construction work areas. Access shall be maintained to allow for reasonable business operations, including clear signage for alternate routes, temporary driveways, or entry points as necessary. Coordination with businesses shall be conducted to address specific access needs and minimize disruptions, ensuring that any restrictions are communicated in advance and alternative arrangements are provided as appropriate.*

MM TRA-5: *Where construction results in the interruption of Metro rail operations, the Project shall provide temporary bus service at rail stations taken out of passenger service. Temporary bus service may consist of either dedicated bus shuttles or extensions of other Metro bus service. Temporary bus service during closures of the Metro D Line Westwood/UCLA Station and/or Metro D Line Westwood/VA Hospital Station shall operate on Bonsall Avenue, Wilshire Boulevard, Santa Monica Boulevard, Century Park East, Avenue of the Stars, Century Park West, and/or Constellation Drive.*

MM TRA-10 *The Project shall redesign the west entrance of the existing Metro E Line Expo/Bundy Station to allow for transfers from the Project station to the Metro E Line within a single fare-paid zone.*

3.1.3 Parking Facilities

A parking analysis was performed to assess potential effects to on- and off-street parking. The analysis also assessed potential spillover transit parking effects to on-street parking inventory on adjacent city streets near proposed transit stations. The analysis considered 0.25 miles around each station in the Project Study Area and within the Project footprint.

Operational Effects

Alternatives 1 and 3 would include the permanent removal of 104 on-street parking spaces on Cotner Avenue, Beloit Avenue, and Raymer Street and 47 off-street parking spaces near various stations. Alternative 4 would include the permanent removal of 773 on-street parking spaces on Del Gado Drive, Sepulveda Boulevard, and Raymer Street and 1,134 off-street parking spaces near various stations. Alternative 5 would include the permanent removal of 121 on-street parking spaces on Raymer Street and 1,134off-street parking spaces near various stations. Alternative 6 would include the permanent removal of 16 on-street parking spaces on Santa Monica Boulevard, Wilshire Boulevard, and Oxnard Street and 75 off-street parking spaces near the Ventura Boulevard/Van Nuys Boulevard station. It is not anticipated that Modified Alternative 5 would remove on-street parking on Raymer Street, but may remove off-street parking spaces near its stations. The potential for parking loss will be determined during the upcoming design process.

The ridership forecasts conducted for the Project Study Area constrains the parking demand to the available parking supply provided by Metro. The ridership model results do not indicate spillover parking directly due to being constrained to the parking supply and therefore there may be more demand for station parking than provided. However, the ridership model does not account for other parking in the station areas that is not owned by Metro. In locations where additional parking exists within the station areas, it is possible that transit patrons may attempt to use these spaces for parking, which would be considered spillover parking. The local jurisdiction should provide parking restrictions for on-street public parking in the areas surrounding all transit stations to avoid spillover parking.

For all project alternatives, there are existing park & ride facilities at the proposed Metro E Line Expo/Sepulveda Station and Metro G Line Sepulveda Station. For Alternatives 4 and 5 new parking facilities would be provided at the proposed Sherman Way and Ventura Boulevard/Sepulveda Boulevard Stations. Alternative 6 would add a new park & ride lot at the proposed Ventura Boulevard Station and the Metro E Line Station would be expanded to add additional spaces. Modified Alternative 5 may add a new park & ride lot at the proposed Ventura Boulevard/Van Nuys Boulevard Station, depending on design constraints.

It is recommended that Metro work with the City of Los Angeles to implement parking restrictions within the neighborhoods surrounding the stations to avoid spillover parking by transit patrons. With enforcement of restrictions, spillover parking effects would not be expected, and the parking demand from Alternative 6 riders would not appreciably shift area-wide parking patterns.

Construction Effects

For all project alternatives, it is expected that during construction, temporary parking restrictions would be implemented near some station locations, sections of aerial guideway, and construction staging sites.

Potential NEPA Avoidance, Minimization, and Control Measures

To avoid spillover parking by transit patrons, it is recommended that Metro work with the City of Los Angeles to implement parking restrictions within neighborhoods around stations. With enforcement of restrictions, spillover parking effects would not be expected and the parking demand from transit riders would not appreciably shift area-wide parking patterns.

3.1.4 Roadway Facilities

The roadway network within the Project Study Area includes a wide range of facilities, including three freeways (I-405, I-10, and US-101) that provide regional access throughout Los Angeles County and Southern California, as well as multiple arterials, local roads, and intersections. Major arterials within the Study Area include Centinela Avenue, Bundy Drive, Barrington Avenue, Haskell Avenue, Sawtelle Boulevard, Sepulveda Boulevard, Kester Avenue, Van Nuys Boulevard, Westwood Boulevard, Beverly Glen Boulevard, Hazeltine Avenue, Woodman Avenue, National Boulevard, Exposition Boulevard, Pico Boulevard, Olympic Boulevard, Santa Monica Boulevard, Wilshire Boulevard, Sunset Boulevard, Ventura Boulevard, Magnolia Boulevard, Burbank Boulevard, Oxnard Street, Victory Boulevard, Vanowen Street, Sherman Way, Saticoy Street, and Roscoe Boulevard.

Operational Effects

Roadway Modifications

Alternatives 1 and 3 would include various changes to roadway facilities, including widening of I-405 and realignment of some adjacent roadways. Roadway segments that would be removed are not included in the City of Los Angeles *Mobility Plan 2035 - An Element of the General Plan* circulation system since they are classified as collector or local streets (DCP, 2016). Therefore, modifications to these roadways would not conflict with *Mobility Plan 2035*. The modifications to I-405 and adjacent roadways would not preclude the construction of Metro's I-405 ExpressLanes Project, which is also included in the *Measure M Los Angeles County Traffic Improvement Plan. Attachment A, Measure M Expenditure Plan* (Metro, 2016). Metro is currently preparing a Draft Environmental Impact Report/Environmental Impact Statement for the I-405 ExpressLanes Project with an anticipated release in 2025. Any non-standard features proposed by Alternatives 1 and 3 within Department of Transportation right-of-way, such as reduced lane or shoulder widths, would be approved in accordance with the California Department of Transportation (Caltrans) *Project Development Procedures Manual* (Caltrans, 2024).

Alternatives 1 and 3 proposes a new passenger pick-up/drop-off area located on the east side of the Metro E Line Expo/Sepulveda Station. This area would be accessed via a new driveway off Pico Boulevard. The proximity of the driveway to the intersection of Pico Boulevard and Cotner Avenue would not allow for a westbound left-turn lane into the driveway, creating a risk of rear-end collisions if left-turning vehicles are queueing in the westbound through lane. Implementation of MM TRA-2 would minimize potential impacts associated with Alternatives 1 and 3 by limiting vehicular access to the pick-up/drop-off area at the Metro E Line Expo/Sepulveda Station to right-in/right-out only traffic.

Implementation of MM TRA-3 would minimize potential impacts associated with Alternatives 1 and 3 by requiring advance warning signs at the pick-up/drop-off location on Sherman Way to facilitate traffic flow and ensure pedestrian safety.

Alternative 4 would change roadway facilities, including adding a raised median along Sepulveda Boulevard between Ventura Boulevard and Raymer Street. This would prohibit left-turn movements at driveways between intersections and at La Maida Street, Valleyheart Drive South, Hesby Street, Hartsook Street, Archwood Street, Hart Street, Leadwell Street, and Covello Street. These roadways are not included in the *Mobility Plan 2035* circulation system since they are classified as collector or local streets. Therefore, the operation of Alternative 4 would not conflict with a program, plan, ordinance, or policy related to roadway facilities.

Alternative 5 would include various modifications to roadway facilities surrounding project stations, including reconstruction of portions of Bentley Avenue, Wilshire Boulevard, Gayley Avenue, Lindbrook Drive, and Westwood Plaza in the Westside, and Saugus Avenue, Dickens Street, Sepulveda Boulevard, G Line Busway, Raymer Street, and Van Nuys Boulevard in the San Fernando Valley. Wilshire Boulevard, Sepulveda Boulevard, and Van Nuys Boulevard are identified in the *Mobility Plan 2035* circulation system; however, modifications to these roadways would not be inconsistent with *Mobility Plan 2035*.

Alternative 6 would not require changes to roadway facilities other than a new access road east of Stone Canyon Reservoir in the Santa Monica Mountains. This roadway is not included in the *Mobility Plan 2035* circulation system since it is classified as an access road.

Intersection Evaluation

The LADOT Transportation Assessment Guidelines were applied to identify potential corrective actions for intersections forecast to have unacceptable vehicular level of service or extended queues under the project alternatives (LADOT, 2022). The following intersections were identified for corrective actions for the noted project alternatives. Intersections that could possibly require corrective actions under Modified Alternative 5 are also noted.

- Haskell Avenue/Sherman Way – Alternatives 1 and 3
- Haskell Avenue/Victory Boulevard – Alternatives 1, 3, 4, and 5
- Sepulveda Boulevard/Ventura Boulevard – Alternatives 1 and 3
- Sepulveda Boulevard/I-405 Southbound Off-Ramp – Alternatives 1 and 3
- Sunset Boulevard/Church Lane – Alternative 1
- Sawtelle Boulevard/Pico Boulevard – Alternatives 1 and 3
- Sepulveda Boulevard/Oxnard Street – Alternative 3
- Wilshire Boulevard/Sepulveda Boulevard – Alternative 3
- Firmament Avenue/I-405 NB Ramps and Sherman Way – Alternatives 4 and 5
- Sepulveda Boulevard/Vanowen Street – Alternative 4 and 5
- Sepulveda Boulevard/Victory Boulevard – Alternatives 4 and 5
- Sepulveda Boulevard/Metro G Line Busway and Park & Ride Road – Alternatives 4 and 5
- Sepulveda Boulevard/Oxnard Street – Alternatives 4 and 5
- Sherman Oaks Avenue/I-405 Southbound Ramps and Ventura Boulevard – Alternative 4
- Sepulveda Boulevard/Pico Boulevard – Alternatives 4, 5, and likely Modified Alternative 5
- Sepulveda Boulevard/Sherman Way – Alternative 5
- Van Nuys Boulevard/Saticoy Street – Alternative 6 and likely Modified Alternative 5
- Van Nuys Boulevard/Burbank Boulevard – Alternative 6 and likely Modified Alternative 5

- Van Nuys Boulevard/US-101 Southbound Off-Ramp – Alternative 6

Construction Effects

Construction vehicles would primarily use major arterials and freeways to comply with *Mobility Plan 2035 - An Element of the General Plan* (DCP, 2016) Policy 1.8 that "truck movement should be limited to the arterial street network as much as possible since these streets have the lanes and wider turning radii to accommodate these heavy large vehicles". Under Alternatives 1 and 3, guideway construction along I-405 would require limited duration off-peak median lane closures. Nighttime lane closures may be necessary to accommodate the movement of construction equipment and transportation of guideway components into the median work areas. Temporary lane and ramp closures on I-405 would be coordinated and permitted through Caltrans in coordination with LADOT, Los Angeles County, and the California Highway Patrol (CHP). Guideway construction and traction power substation (TPSS) transformer installation affecting local streets on the Westside, along Raymer Street and the I-405 northbound on-ramp at Burbank Boulevard in the San Fernando Valley would be coordinated and permitted through Caltrans and LADOT's Citywide Temporary Traffic Control Division. Traffic control measures necessary to complete construction of Alternative 1 would be temporary in nature. In accordance with Metro standard practice, implementation of MM TRA-4 would further reduce temporary impacts due traffic control measures by providing a TMP that specifies measures to limit disruption during construction (such as establishing detour routes, informing the traveling public, and coordinating with local business owners to maintain customer and delivery access).

Specific to Alternative 4, aerial guideway, foundation and column construction would require the establishment of temporary longitudinal work zones along Sepulveda Boulevard in the San Fernando Valley via the use of temporary lateral lane shifts, supplemented with additional short-term lane closures to allow construction of multiple foundations in one work zone. At aerial stations — including Ventura Boulevard, Sherman Way, Metro G Line, and Van Nuys Metrolink — construction would be executed in stages to allow for maintenance of traffic on Sepulveda Boulevard or Van Nuys Boulevard. Full road closures at aerial stations would be utilized on select weekend and night-shift operations to erect portions of the structure, including outrigger bents and superstructure elements. The TMP would minimize temporary impacts.

Specific to Alternatives 4, 5, and likely Modified Alternative 5, underground station construction at Santa Monica Boulevard and Metro D Line Stations would result in temporary lane closures to through traffic on Gayley Avenue for the duration of station box excavation and other construction activities. Deliveries to businesses along Santa Monica Boulevard near South Bentley Avenue would be affected during construction if access is unable to be maintained during construction. The TMP would minimize temporary impacts.

Specific to Alternatives 4 and 5, truck movements have the potential to temporarily impact pick-up and drop-off at the nearby Ivy Bound Sherman Oaks Charter School, which is expected to remain open during Project construction. Implementation of MM TRA-8 would minimize potential impacts by prohibiting trucks or other construction vehicles from operating or parking on Morrison Street during school pick-up and drop-off times.

Alternative 6 would require closures and detours of roadways, lanes, and I-10 freeway ramps during construction. The road closures and detours would last between 18 and 24 months, with I-10 ramp detours at Bundy Drive lasting for the duration of Alternative 6 construction. The TMP would minimize temporary impacts.

Potential NEPA Avoidance, Minimization, and Control Measures

MM TRA-2 and MM TRA-3 apply to Alternatives 1 and 3. MM TRA-4, defined previously, applies to all project alternatives. MM TRA-8 applies to Alternatives 4 and 5. These measures are included in the CEQA documentation and may be included in NEPA documentation.

MM TRA-2: *During final design, the project contractor shall coordinate with the Los Angeles Department of Transportation to limit vehicular access to the pick-up/drop-off area at the Metro E Line Expo/Sepulveda Station to only right-in/right-out traffic.*

MM TRA-3: *Before commencing revenue service, advance warning signs, in accordance with the California Manual on Uniform Traffic Control Devices standards, shall be installed at the pick-up/drop-off location on Sherman Way to facilitate traffic flow and ensure pedestrian safety.*

MM TRA-8: *To maintain safe and convenient access to the Ivy Bound Sherman Oaks Charter School, the project contractor shall not operate or park large trucks or other construction vehicles on Morrison Street between 6:30am and 9am or 1:30pm and 4pm on school days, or at such other times that the school informs the Project contractor that a large amount of student pick-up or drop-off activity will occur.*

3.1.5 Bicycle and Pedestrian Facilities

Pedestrian facilities vary across the Project Study Area, depending on the density, mix of land uses and roadway facilities. In the Valley and on the Westside, sidewalks are well-connected and follow the grid pattern of roadway facilities. In the Bel Air and Brentwood neighborhoods adjacent to the Sepulveda Pass, sidewalks are sparse and disconnected given roadway slopes and topography. Existing bicycle facilities in the Project Study Area consist of a network of approximately 123 miles of Class I, II, and III bicycle facilities, including approximately 29.4 miles of Class I bicycle paths. Planned bicycle facilities in the Project Study Area include 180 miles of additional bicycle facilities, including 21.1 miles of Class I paths.

Operational Effects

Each of the project alternatives would enhance bicycle and pedestrian access to station areas, including bike parking and connections to nearby bike facilities. Each project alternative also complies with Americans with Disabilities Act (ADA) guidelines regarding sidewalk widths, and in locations where sidewalks must be shifted or changed due to aerial alignments, sidewalks would be replaced to remain compliant with ADA guidelines. The elimination of the Willis Avenue Pedestrian Overhead under Alternatives 4 and 5 would remove a pedestrian facility that provides a connection between Willis Avenue and Raymer Street. Implementation of MM TRA-7 would minimize potential impacts by requiring the replacement of the Willis Avenue Pedestrian Bridge with another pedestrian bridge or pedestrian undercrossing.

Construction Effects

Station construction for each of the project alternatives is likely to inhibit bicycle and pedestrian circulation on roadways adjacent to station areas. Aerial guideway construction for Alternatives 1, 3, and 4 may also interfere with bicycle and pedestrian circulation along the aerial portion of the alignment for those alternatives. Street detours due to construction of stations and aerial guideways would require alternate routes to be identified for bicycle and pedestrian circulation to ensure safety. Implementation

of MM TRA-4, defined previously, would minimize potential impacts associated with all project alternatives by requiring a TMP during construction activities.

Potential NEPA Avoidance, Minimization, and Control Measures

MM TRA-7 applies to Alternatives 4 and 5. MM TRA-4, defined previously, applies to all project alternatives. These measures are included in the CEQA documentation and may be included in NEPA documentation.

MM TRA-7: *The Project shall replace the Willis Avenue Pedestrian Bridge with another pedestrian bridge or pedestrian undercrossing. The replacement structure must be completed and operational before the existing bridge is removed.*

3.2 Air Quality

Refer to the *Sepulveda Transit Corridor Project Air Quality Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025c). This report may also be referred for additional details than provided in this environmental scan related to methodologies used to quantify emissions and identifying potential effects from air pollutants.

The federal Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the United States (U.S.) Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare based on the latest science and requires states to adopt enforceable plans to achieve the standards. An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment, thus, it is used as a threshold metric to define clean air (CARB, 2024). Congress designed the law to minimize pollution increases from growing numbers of motor vehicles, and from new or expanded stationary sources (i.e., power plants, industrial plants, and other facilities that are not mobile). The EPA administers national programs to monitor concentrations of certain air pollutants and control emissions from major sources.

The CAA requires the EPA to set and revise NAAQS for certain common and widespread pollutants, known as “criteria pollutants,” and provides authority for the agency to add additional pollutants. Standards are in effect today for six pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM) (regulated as subsets of particles with diameter less than 2.5 microns and less than 10 microns denoted as $PM_{2.5}$ and PM_{10}, respectively), and lead (Pb). Federal law requires that all states attain the NAAQS. Areas of the state that are designated as “nonattainment " for one or more of the NAAQS are required under the CAA to develop plans meeting specific requirements depending on the severity of the pollution problem. The South Coast Air Quality Management District (SCAQMD) was created for planning, implementing, and enforcing air quality standards for the South Coast Air Basin (Basin), which includes all of Orange County; Los Angeles County (excluding the Antelope Valley portion); the western, non-desert portion of San Bernardino County; and the western Coachella Valley and San Gorgonio Pass portions of Riverside County. The Basin is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin portion of Los Angeles County is currently designated nonattainment of the NAAQS for O_3 and $PM_{2.5}$.

The SCAQMD has established various rules to manage and improve air quality in the Basin (SCAQMD, 2021). Rules applicable to the Project include Rule 401 (Visible Emissions), Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 1113 (Architectural Coatings), and Rule 1186 (PM_{10} Emissions from Paved and Unpaved Roads).

3.2.1 Transportation Conformity

The Transportation Conformity requirement is based on CAA Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing or approving plans, programs or projects that do not conform to air quality plans for attaining the NAAQS. Transportation Conformity applies to transit projects and takes place on two levels: the regional—or, planning and programming level—and the project level. A project must conform at both levels to be approved.

3.2.2 Regional Conformity

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS. Regional conformity is based on emission analysis of Regional Transportation Plans (RTP) and Federal Transportation Improvement Programs (FTIP) that include all transportation projects planned for a region over a period of at least 20 years for the RTP, and four years for the FTIP. RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements are met.

The Project, identified as project number 1160001 (Sepulveda Pass Transit Corridor Phase 2), is included in the SCAG 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which serves as the foundation for estimating the region's transportation sector air pollutant emissions through 2050 (SCAG, 2024). SCAG's General Council adopted the plan on April 4, 2024. Federal agencies determined on May 10, 2024 that the conforms to the State Implementation Plan designed to minimize pollutant emissions. The Project is not listed in the 2023 FTIP adopted for the SCAG region. Metro will coordinate with SCAG after selecting the Locally Preferred Alternative to ensure that the Project is included in the FTIP.

3.2.3 Project-Level Conformity

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and FTIP and the project has a design concept and scope that has not changed significantly from those in the RTP and FTIP. Project-level conformity also needs to demonstrate that project analyses have used the latest planning assumptions and EPA-approved emissions models, and the project complies with any air pollution control measures in regional air quality plans. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in PM and CO nonattainment areas to examine localized air quality impacts. A hot-spot is a localized pollutant concentration that exceeds air quality standards.

Regarding the potential for PM hot-spots, all transportation projects must be presented to the SCAG Transportation Conformity Working Group for Interagency Consultation to determine if they should be identified as Projects of Air Quality Concern (POAQC). The primary consideration for these determinations is the potential to increase localized exposure to diesel particulate matter emissions. Projects identified as POAQCs are typically highway widenings, interchange improvements, rail facilities, and shipping terminals. It is highly unlikely that an electrically powered light rail transit project would be identified as a POAQC, thereby requiring a detailed PM hot-spot analysis.

CO hot-spots at roadway intersections are typically found in areas with significant traffic congestion. The SCAQMD dispersion modeling that intersections in Los Angeles County that exceed average daily traffic volume of approximately 100,000 vehicles would not generate CO concentrations which would exceed the NAAQS (SCAQMD, 2003). The highest daily traffic volumes generated at an intersection within the vicinity of the Project would be approximately 75,460 vehicles per day at the intersection of Wilshire Boulevard and Sepulveda Boulevard (Metro, 2025c). Because the daily number of vehicles at this study intersection would not exceed 100,000 vehicles per day, it can be concluded that Project would not contribute to an exceedance of the air quality standards for CO.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.2.4 Criteria Pollutant and Ozone Precursor Emissions

Operational Effects

Operational emissions would be generated from mobile and area sources, as well as emergency generators related to the components of project alternatives, such as MSF and train stations. Other components such as TPSS or tunnel ventilation systems would not result in appreciable air pollutant emissions as site visits for maintenance would be infrequent and ventilation systems would be electric powered. Therefore, air pollutant emissions from these components were not quantified. Additionally, transit technology for project alternatives would be electric powered and would not generate air pollutant emissions during operations. Regional operational emissions would include emissions generated by on-site sources, such as landscaping equipment and emergency generators, and off-site sources, primarily mobile sources. Operational emissions for mobile sources and emergency generators were estimated using a spreadsheet methodology with emission factors and methodologies from California Emissions Estimator Model (CalEEMod) (CAPCOA, 2022), California Air Resources Board's (CARB) EMission FACtors model (EMFAC2021), and AP-42. Operational emissions for MSFs and stations were estimated in CalEEMod. The emissions modeling for project alternatives relied on alternative-specific data such as the sizes of stations and buildings, number of employees, and traffic data. Where project-specific information was not available, reasonable assumptions based on similar projects and default values from CalEEMod were used in the analysis.

Table 3-2 lists peak daily operational emissions in Horizon Year 2045 for the project alternatives, including regional VMT emissions associated with the No Build Alternative. The table also lists the SCAQMD thresholds to determine the significance of emissions from the implementation of new projects. Emissions have been estimated for criteria pollutants CO, SO_2, PM_{10}, and $PM_{2.5}$, along with ozone precursors volatile organic compounds (VOC) and nitrogen oxides (NO_X). Daily emissions associated with the project alternatives would not exceed SCAQMD's regional operational significance thresholds for any pollutant; rather, all project alternatives would result in an environmental benefit by resulting in a net decrease of daily criteria pollutant emissions for all pollutants except VOC. Daily VOC emissions would marginally increase relative to 2045 without Project conditions, but the magnitude of that increase would remain substantially below the applicable SCAQMD regional screening threshold for mass daily emissions. The benefit is due to the new transit line removing passenger vehicles and associated emissions from the regional roadway network. It is anticipated that Modified Alternative 5 would result in operational emissions similar to Alternatives 5 and 6. Refer to Table 3-1 in Section 3.1, Transportation, for VMT by project alternative. The marginal increase in ROG emissions is primarily due to the use of consumer cleaning products at the MSFs and stations.

Table 3-2. Peak Daily Regional Operational Emissions (Horizon Year 2045)

Alternative	Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Emissions Estimate by Alternative						
No Build Alternative	8,987	88,927	623,264	3,487	408,902	105,487
Alternative 1	8,995	88,894	622,945	3,485	408,666	105,426
Alternative 3	9,002	88,911	622,855	3,484	408,587	105,407
Alternative 4	8,994	88,826	622,492	3,482	408,355	105,346
Alternative 5	8,996	88,825	622,495	3,482	408,349	105,345
Alternative 6	8,999	88,823	622,636	3,483	408,413	105,361
Net Change in Emissions from 2045 without Project Conditions						
Alternative 1	8	-33	-319	-2	-237	-61
Alternative 3	15	-16	-409	-3	-315	-80
Alternative 4	7	-101	-772	-5	-548	-141
Alternative 5	9	-102	-769	-5	-553	-142
Alternative 6	12	-105	-628	-4	-489	-126
SCAQMD Regional Significance Thresholds	55	55	550	150	150	55

Source: Metro, 2025c

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxides
VOC = Volatile Organic Compounds

Construction Effects

Construction emissions would be generated from off-road equipment, mobile sources including workers, vendor trucks, and haul trucks traveling to and from construction sites, demolition, soil handling activities, paving, application of architectural coatings, and operation of temporary concrete batch plants. These emissions sources would be primarily related to constructing the rail alignment, stations, TPSS, and MSFs. Regional emissions include emissions generated from on-site sources (e.g., off-road equipment) operating within the construction site boundaries and off-site sources, primarily mobile sources (e.g., haul truck travel). Construction emissions were estimated using a spreadsheet approach that incorporated emission factors and methodologies from the CalEEMod, EMFAC2021, and the EPA Compilation of Air Pollutant Emission Factors (AP-42). The construction emissions modeling for each project alternative was based on alternative-specific construction data (schedule, equipment quantities, truck volumes, etc.) provided by design team engineers. Where alternative-specific data was not available, reasonable assumptions based on similar infrastructure/transit projects and default values from CalEEMod were applied in the analysis.

Construction contractors will be required to comply with the provisions of the Metro Green Construction Policy, which was adopted in 2011 to reduce harmful air pollutant emissions (particularly PM and NO_x) during Metro construction projects (Metro, 2011). Through adopting the Metro Green Construction Policy (Metro, 2011), Metro committed to the following construction equipment requirements, construction best management practices (BMP), and implementation strategies for all construction projects performed on Metro properties or within Metro right-of-way:

- All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 off-road emission standards at a minimum. In addition, if not already supplied with a factor-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology devices certified by CARB achieving no less than the equivalent of a Level 3 diesel emission control strategy.
- All on-road heavy-duty diesel trucks or equipment with a gross vehicle weight rating of 19,500 pounds or greater shall comply with EPA 2007 on-road emission standards for PM and NO_X (0.01 gram per brake horsepower hour [g/bhp-hr] and 1.2 g/bhp-hr, respectively).
- Every effort shall be made to utilize grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must meet the following standards:
  - Meet a 0.01 g/bhp-hr standard for PM, or
  - Be equipped with best available control technology for PM emissions reductions
- Best management practices shall include, at a minimum the following:
  - Use of diesel particulate traps or best available control technology, as feasible
  - Maintain equipment according to manufacturer's specifications
  - Restrict idling of construction equipment and on-road heavy-duty trucks to a maximum of five minutes when not in use (CARB exceptions apply)
  - Maintain a buffer zone that is a minimum of 1,000 feet between truck traffic and sensitive receptors, where feasible
  - Work with local jurisdictions to improve traffic flow by signal synchronization during construction hours, where feasible
  - Configure construction parking to minimize traffic interference, where feasible
  - Enforce truck parking restrictions, where applicable
  - Prepare haul routes that conform to local requirements to minimize traversing through congested streets or near sensitive receptor areas
  - Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, as feasible
  - Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable
  - Use electric power in lieu of diesel power where available
  - Maintain traffic speeds on all unpaved areas at or below 15 miles per hour

Table 3-3 lists peak daily construction emissions for each project alternative, including emission controls associated with the Metro Green Construction Policy (Metro, 2011). Modified Alternative 5 would use a similar design and construction approach as Alternative 5 and is anticipated to result in similar emissions. The peak daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of construction. Construction emissions would vary substantially from day to day, depending on the level of activity and the specific type of construction

activity. The table also lists the SCAQMD thresholds for regional construction emissions. Peak daily NO_X emissions would exceed the threshold under all project alternatives, and the peak daily CO emissions would exceed the threshold under all project alternatives except for Alternative 6 and possibly Modified Alternative 5. Implementation of MM AQ-1, MM AQ-2, and MM AQ-3 would minimize emissions by enforcing Metro and SCAQMD policies and requiring zero emissions or near zero emissions trucks, if commercially available. However, some SCAQMD significance thresholds may still be exceeded after implementation of these measures.

Table 3-3. Unmitigated Peak Daily Regional Construction Criteria Pollutant Emissions

Alternative	Daily Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Alternative 1	32	202	776	1	48	17
Alternative 3	33	243	795	2	64	19
Alternative 4	38	359	900	3	101	28
Alternative 5	34	442	890	3	135	33
Alternative 6	29	226	505	1	75	17
SCAQMD Regional Significance Thresholds	75	100	550	150	150	55

Source: Metro, 2025c

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxides
VOC = Volatile Organic Compounds

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6. They are included in the CEQA documentation and may be included in NEPA documentation.

***MM AQ-1**:* *The Project shall require zero emissions or near zero emissions on-road haul trucks such as heavy-duty trucks with natural gas engines that meet or exceed the California Air Resources Board's adopted optional nitrogen oxide emissions standard at 0.02 grams per brake horsepower hour, if and when feasible. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards. These records shall be submitted monthly to Metro for review and shall be made available to regulatory agencies upon request. To ensure compliance, Metro or its designated representative shall conduct regular inspections of construction operations, including on-site verification of truck compliance. Inspections shall occur at least twice per month during active construction. Any contractor found to be using non-compliant trucks without prior approval from Metro shall be subject to penalties, including suspension of operations until compliance is achieved.*

***MM AQ-2**:* *Construction contracts shall include language that compels contractors to implement all policies and emissions control measures as presented in Metro's Green Construction Policy.*

***MM AQ-3**:* *Construction contracts shall include language that compels contractors to implement all fugitive dust control measures as detailed in South Coast Air Quality Management District Rule 403 (Fugitive Dust).*

In addition, Metro's *Moving Beyond Sustainability – Sustainability Strategic Plan 2020* (Metro, 2020) requires that contractors use renewable diesel for all diesel engines. The use of renewable diesel reduces the negative health impacts from diesel exhaust. For the Metro Crenshaw/ Los Angeles International Airport Transit Corridor Project, the reduction in emissions for 2017 was equivalent to removing over 15,000 cars from the road (Metro, 2020). This plan also sets targets for achieving Leadership in Energy and Environmental Design (LEED) Silver certification for all new facilities over 10,000 square feet achieving Envision certification where LEED is not applicable; and designing and building 100 percent of capital projects to California Green Building Code Standards Tier 2 requirements.

3.2.5 Localized Exposure to Pollutant Concentrations

The term sensitive receptor refers land uses associated with people who are considered to be more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirmed are more susceptible to respiratory distress and other air quality-related health problems on average than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality.

Operational Effects

Localized emissions during operations would be generated from area sources (i.e., landscaping equipment, use of consumer products, and reapplication of architectural coatings) and emergency generator maintenance testing. Table 3-4 lists peak daily localized operational emissions in Horizon Year 2045 for the project alternatives. It is anticipated that Modified Alternative 5 would result in localized operational emissions similar to Alternatives 5 and 6. The table also lists the SCAQMD localized thresholds, which represent the maximum emissions a project can emit without causing or contributing to an air quality standard violation. The thresholds are dependent on the distance between construction activities and sensitive receptors, the size of the area being disturbed by equipment, and the location of emissions within the Basin. Localized operational emissions would not exceed the thresholds established by the SCAQMD.

Table 3-4. Unmitigated Peak Daily Localized Operational Criteria Pollutant Emissions

Alternative	Daily Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Alternative 1	17	40	1	1
Alternative 3	52	72	2	2
Alternative 4	18	63	<1	<1
Alternative 5	18	73	<1	<1
Alternative 6	<1	114	<1	<1
SCAQMD Regional Significance Thresholds	172	1,434	3	2

Source: Metro, 2025c

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District

Construction Effects

Localized construction emissions were based on emissions generated on-site within the construction site boundaries, including exhaust emissions from off-road equipment and trucks, and fugitive dust from demolition, earth movement activities, and truck travel. Table 3-5 lists peak daily localized construction emissions for the project alternatives, including emission controls associated with the Metro Green Construction Policy (Metro, 2011). It is anticipated that Modified Alternative 5 would result in localized construction emissions similar to Alternatives 5. The table also lists the SCAQMD localized thresholds, which represent the maximum emissions a project can emit without causing or contributing to an air quality standard violation. The thresholds are dependent on the distance between construction activities and sensitive receptors, the size of the area being disturbed by equipment, and the location of emissions within the Basin. Localized operational emissions would exceed the thresholds established by the SCAQMD. Table 3-5 lists that the PM_{10} localized threshold would be exceeded during the construction of all project alternatives. The $PM_{2.5}$ localized threshold would be exceeded during the construction of Alternatives 4 and 5. It is anticipated that this threshold may also be exceeded under Modified Alternative 5. Implementation of MM AQ-1, MM AQ-2, and MM AQ-3 would minimize emissions by enforcing Metro and SCAQMD policies and requiring zero emissions or near zero emissions trucks, if commercially available. However, some SCAQMD significance thresholds may still be exceeded after implementation of these measures.

Table 3-5. Unmitigated Localized Construction Criteria Pollutant Emissions

Alternative	Daily Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Alternative 1	56.2	240.6	9.6	3.8
Alternative 3	56.2	240.6	9.6	3.8
Alternative 4	92.2	356.0	30.2	9.4
Alternative 5	75.4	283.4	27.9	9.3
Alternative 6	36.0	69.7	8.9	1.2
SCAQMD Localized Significance Thresholds	114	786	7	4

Source: Metro, 2025c

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
SCAQMD = South Coast Air Quality Management District

Potential NEPA Avoidance, Minimization, and Control Measures

MM AQ-1, MM AQ-2, and MM AQ-3, which are defined above, apply to all project alternatives. In addition, construction contractors would be required to comply with the provisions of the Metro Green Construction Policy, which was adopted in 2011 to reduce harmful air pollutant emissions (particularly PM and NO_x) during Metro construction projects (Metro, 2011). In addition, Metro's 2020 Sustainability Strategic Plan (Metro, 2020) requires that contractors use renewable diesel for all diesel engines.

3.2.6 Odors

Operational Effects

Land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities. The Project is not associated with any of the aforementioned land uses. All project alternatives would include trash receptacles associated with the stations and MSFs. On-site trash receptacles would be covered and properly maintained to prevent adverse odors. With proper housekeeping practices, trash receptacles would be maintained in a manner that promotes odor control.

Construction Effects

During construction of all project alternatives, exhaust from equipment, activities associated with the application of architectural coatings and other interior and exterior finishes, and paving activities may produce discernible odors typical of most construction sites. Such odors would be, at worst, a temporary source of nuisance to adjacent uses, if at all, and would not affect a substantial number of people. The project alternatives would use architectural coatings compliant with SCAQMD Rule 1113, which would limit the odors associated with off-gassing from those coatings. Additionally, material deliveries and heavy-duty haul truck trips could occasionally produce odors from diesel exhaust. These odors would not affect a substantial number of people because construction would be temporary, and construction-generated odors dissipate rapidly with increasing distance from the source.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.3 Noise and Vibration

Refer to the *Sepulveda Transit Corridor Project Noise and Vibration Technical Report* (2024g) for information related to existing conditions and the applicable regulatory environment. This Report also includes detailed information related to the monitoring of existing noise and vibration levels, Federal Transit Administration (FTA) impact criteria, and the methodologies used to assess potential impacts.

3.3.1 Noise

Operational Effects

The FTA standards and criteria for assessing noise impacts related to transit projects are based on community reactions to noise. The criteria reflect changes in noise exposure using a sliding scale where the higher the level of existing noise, the lower the increase in total noise exposure is allowed. Some land use activities are more sensitive to noise than others, such as parks, churches, and residences, compared with industrial and commercial uses. Most commercial or industrial uses are not considered noise-sensitive because activities within these buildings are generally compatible with higher noise levels. Businesses can be considered noise-sensitive if low noise levels are an important part of operations, for example, sound and motion picture recording studios. Parks used primarily for active recreation such as sports complexes and bike or running paths are not considered noise-sensitive. However, parks (even some in dense urban areas) primarily used for passive recreation such as reading, conversation, or meditation may be valued as havens from the noise and rapid pace of everyday city life. The FTA has defined three levels of impacts for sensitive uses affected by transit projects: no impact, moderate impact, or severe impact. A description of each impact level is listed in Table 3-6.

Table 3-6. Levels of Impact

Level of Impact	Description
No Impact	Project-generated noise is not likely to cause community annoyance. Noise projections in this range are considered acceptable by the Federal Transit Administration and mitigation is not required.
Moderate Impact	Project-generated noise in this range is considered to cause an impact at the threshold of measurable annoyance. Moderate impacts serve as alerts to project planners that potential adverse impacts and complaints from the community may occur. Mitigation should be considered at this level of impact depending on project specifics and details concerning the affected properties.
Severe Impact	Project-generated noise in this range is likely to cause a high level of community annoyance. The project sponsor should first evaluate alternative locations/alignments to determine whether it is feasible to avoid severe impacts altogether. In densely populated urban areas, evaluation of alternative locations may reveal a trade-off of affected groups, particularly for surface rail alignments. Projects that are characterized as point sources rather than line sources often present greater opportunity for selecting alternative sites. The Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* Manual (FTA, 2018) and environmental impact regulations both encourage project sites that are compatible with surrounding development when possible. If it is not practical to avoid severe impacts by changing the location of the project, mitigation measures must be considered.

Source: FTA, 2018

The project alternatives would generate permanent noise associated with rail operations. This includes vehicle passby noise, motor noise, tire-guideway noise, aerodynamic noise, and noise from air conditioning and other auxiliary equipment on the vehicles. Other factors such as crossover noise and attenuation effects of intervening buildings and existing soundwalls also contribute to the overall noise level. In addition to rail operations noise, ancillary sources of noise associated would potentially generate noise at noise-sensitive land uses. Ancillary sources include TPSS units and ventilation facilities, where needed for underground segments. The primary noise sources on TPSS units are the transformer hum and noise from its cooling systems or ventilation fan.

Table 3-7 lists moderate and severe impacts by project alternative without implementation of mitigation measures, as well as the total number of noise impacts. Alternatives 1 and 3 would both result in five unmitigated moderate impacts. Alternative 4 would result in the greatest number of noise impacts with 4 unmitigated moderate impacts and 6 unmitigated severe impacts, for a total of 10 unmitigated noise impacts. Alternative 5 would not result in noise impacts. Alternative 6 would result in 2 unmitigated moderate impacts. The potential noise impacts of Modified Alternative 5 will be determined during the upcoming design process.

Table 3-7. Summary of Unmitigated Noise Impacts Associated with Rail Operations and Ancillary Facilities

Alternative	Noise Source	Noise Impacts		
		Moderate	Severe	Total
Alternative 1	Rail Operations	5	0	5
	Ancillary Facilities	0	0	0
	Alternative 1 Total	***5***	***0***	***5***
Alternative 3	Rail Operations	5	0	5
	Ancillary Facilities	0	0	0
	Alternative 3 Total	***5***	***0***	***5***
Alternative 4	Rail Operations	4	6	10
	Ancillary Facilities	0	0	0
	Alternative 4 Total	***4***	***6***	***10***
Alternative 5	Rail Operations	0	0	0
	Ancillary Facilities	0	0	0
	Alternative 5 Total	***0***	***0***	***0***
Alternative 6	Rail Operations	0	0	0
	Ancillary Facilities	2	0	2
	Alternative 6 Total	***2***	***0***	***2***

Source: Metro, 2025d

Implementation of MM NOI-1.1, MM NOI-3.1, and MM NOI-4.1 would minimize potential noise impacts by requiring the installation of soundwalls along portions of the aerial alignment and at the southern property boundaries of the MSF site for Alternatives 1, 3, and 4. Soundwalls reduce noise levels at noise-sensitive receptors by breaking the direct line-of-sight between source and receptor with a solid wall. Soundwalls are proposed at heights of 3 feet to 10 feet to reduce noise at sensitive receptors. Implementation of MM NOI-6.1 would minimize potential noise impacts associated with TPSS sites 7 and 9 for Alternative 6 by requiring noise reduction measures such as orienting fans and heating, ventilation and air conditioning (HVAC) equipment away from receptors and installing enclosures around the TPSS. The FTA noise impact criteria would no longer be exceeded for rail operations and ancillary facilities after implementation of mitigation.

In addition to noise generated by rail operations and ancillary facilities, the MSF associated with each project alternative would potentially generate excessive noise at noise-sensitive land uses. Noise from the MSF options includes train movements on lead tracks, wheel squeal on tight radius curves, track crossovers, the car wash facility, maintenance shop, and TPSS equipment within the MSF yard.

Construction Effects

Construction of the project alternatives would include various phases that would involve the use of construction equipment at specific locations along the proposed alignment. Example phases of construction include at-grade rail construction, aerial station and guideway construction, underground station and rail construction, roadway improvements, construction of ancillary facilities, utility relocation, demolition, and excavation. Construction noise levels would typically range from 74 to 96 A-weighted decibels (dBA) at 50 feet depending on the construction equipment mix for each phase. This is an 8-hour average noise level (L_{eq}). The FTA has provided guidance for assessing construction noise associated with transit projects. The criteria are based upon an 8-hour L_{eq}. For residential uses, the threshold is 80 dBA for daytime construction and 70 dBA for nighttime construction. Commercial uses are held to an 85-dBA daytime and nighttime noise construction threshold. Industrial uses are held to a 90 dBA daytime and nighttime noise construction threshold. The project alternatives, as is anticipated for Modified Alternative 5, would result in temporary and periodic increases in ambient noise levels due to construction activity that would exceed the FTA criteria, including at residential land uses. Implementation of MM NOI-1.2, MM NOI-3.2, MM NOI-4.2, MM NOI-5.2, MM NOI-6.2 would minimize construction noise levels by requiring a Noise Control Plan.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6. They are included in the CEQA documentation and may be included in NEPA documentation.

MM NOI-1.2, MM NOI-3.2, MM NOI-4.2, MM NOI-5.2, MM NOI-6.2:

Noise Control Plan:

- *Prior to the initiation of localized construction activities, the Project contractor shall develop a Noise Control Plan demonstrating how the Federal Transit Administration 8-hour $L_{eq.equip}$ (equivalent noise level of equipment) noise criteria would be achieved during construction. The Noise Control Plan shall be prepared by a board-certified acoustical engineer. The Federal Transit Administration 8-hour $L_{eq.equip}$ construction noise standards are as follows: Residential daytime standard of 80 dBA $L_{eq.equip}$ and nighttime standard of 70 dBA $L_{eq.equip}$, Commercial daytime and nighttime standard of 85 dBA $L_{eq.equip}$, and Industrial daytime and nighttime standard of 90 dBA $L_{eq.equip}$. The Noise Control Plan shall be designed to follow Metro requirements, and shall include measurements of existing noise, a list of the major pieces of construction equipment that would be used, predictions of the noise levels at the closest noise-sensitive receptors (residences, hotels, schools, religious facilities, and similar facilities), and noise mitigation measures to be implemented to achieve compliance with the Federal Transit Administration 8-hour $L_{eq.equip}$ construction noise standards to the degree feasible. The Noise Control Plan must be approved by Metro prior to initiating noise-generating construction activities. The Project contractor shall conduct continuous noise monitoring to demonstrate compliance with the Federal Transit Administration 8-*

hour $L_{eq.equip}$ noise limits. If the Federal Transit Administration 8-hour $L_{eq.equip}$ criteria are exceeded, the Project contractor shall implement measures to reduce construction noise as much as feasible. The Project contractor shall establish a public information and complaint system. The Project contractor shall respond to and provide corrective action for complaints within 24-hours. In addition, the Project shall comply with local noise ordinances when applicable, including by obtaining a variance(s) from the applicable local jurisdiction when nighttime work is required. Noise reducing methods that may be implemented by the Project contractor include:

- *If nighttime construction is planned, a noise variance may be prepared by the Project contractor, if required by the jurisdiction, that demonstrates the implementation of control measures to maintain noise levels below the applicable Federal Transit Administration and local standards.*
- *Where nighttime construction would exceed the FTA nighttime criteria, avoid nighttime construction to the degree feasible.*
- *Utilize specialty equipment equipped with enclosed engines and/or high performance mufflers as feasible. The Project contractor shall locate equipment and staging areas as far from noise-sensitive receptors as possible.*
- *Limit unnecessary idling of equipment.*
- *Install temporary noise barriers as needed where feasible.*
- *Reroute construction related truck traffic away from residential streets to the extent permitted by the relevant municipality.*
- *Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible.*
- *Where Project construction cannot be performed in accordance with the requirements of the applicable noise limits, the Project contractor shall be required to investigate alternative construction methods that would result in lower sound levels.*

The following mitigation measures are applicable to Alternatives 1 through 6 as defined below. They are included in the CEQA documentation and may be included in NEPA documentation.

- MM NOI-1.1 applies to Alternative 1
- MM NOI-3.1 applies to Alternative 3
- MM NOI-4.1 applies to Alternative 4
- MM NOI-5.1 applies to Alternative 5
- MM NOI-6.1 applies to Alternative 6

MM NOI-1.1: ***Soundwalls*:**

- *Soundwalls of 3.5 feet in height shall be installed above the top of the guideway beams to reduce noise to below the Federal Transit Administration moderate-impact noise criteria. Locations shall be verified during final design as necessary*

to reduce noise to below the Federal Transit Administration moderate-impact noise criteria. Table 3-8 lists the soundwall locations.

Table 3-8. Alternative 1: MM NOI-1.1 – Soundwalls Locations

Location	Type	Civil Station Location	Track Side
Alber's Apartments 15328 Albers Street and Best Western Plus Carriage Inn 5525 Sepulveda Boulevard	3.5-foot-high soundwall above the guideway beams	1047+80 to 1053+00 East of tracks	Northbound
Granada Apartments 15630 Vanowen Street	3.5-foot-high soundwall above the guideway beams	1137+40 to 1142+00 East of tracks	Northbound
Single-family Backyards east of I-405, between Vanowen Street and Lili Way	3.5-foot-high soundwall above the guideway beams	1142+00 to 1160+30 East of tracks	Northbound
Single-family homes along the east side of Firmament Ave, between Cohasset Street and Saticoy Street	3.5-foot-high soundwall above the guideway beams	1189+00 to 1195+00 East of tracks	Northbound

Source: HTA, 2024

MM NOI-3.1: ***Soundwalls*:**

- *Soundwalls of 3.5 feet in height shall be installed above the top of the guideway beams to reduce noise to below the Federal Transit Administration moderate-impact noise criteria. Locations shall be verified during final design as necessary to reduce noise to below the Federal Transit Administration moderate-impact noise criteria. Table 3-9 lists the soundwall locations.*

Table 3-9. Alternative 3: MM NOI-3.1 – Soundwalls Locations

Location	Type	Civil Station Location	Track Side
Alber's Apartments 15328 Albers Street and Best Western Plus Carriage Inn 5525 Sepulveda Boulevard	3.5-foot-high soundwall above the guideway beams	1047+80 to 1053+00 East of tracks	Northbound
Granada Apartments 15630 Vanowen Street	3.5-foot-high soundwall above the guideway beams	1137+40 to 1142+00 East of tracks	Northbound
Single-family Backyards east of I-405, between Vanowen Street and Lili Way	3.5-foot-high soundwall above the guideway beams	1142+00 to 1160+30 East of tracks	Northbound
Single-family homes along the east side of Firmament Avenue, between Cohasset Street and Saticoy Street	3.5-foot-high soundwall above the guideway beams	1189+00 to 1195+00 East of tracks	Northbound

Source: HTA, 2024

MM NOI-4.1: ***Soundwalls*:**

- *Soundwalls of heights of 3 to 10 feet shall be installed above the rail girder structure to reduce noise impacts to below the Federal Transit Administration moderate noise impact criteria. Locations shall be verified during final design as necessary to reduce noise to below the Federal Transit Administration moderate-*

impact noise criteria. Table 3-10 Shows the recommended locations of soundwalls.

Table 3-10. Alternative 4: MM NOI-4.1 – Soundwalls Locations

Location	Type	Civil Stations	Track Side
East of aerial guideway, between Sutton Street and Greenleaf Street	4-foot-high absorptive soundwall atop U-shaped girder	958+00 to 961+00	Northbound
	5-foot-high absorptive soundwall atop U-shaped girder	961+00 to 963+00	Northbound
West of aerial guideway, north of Weddington Street	3-foot-high absorptive soundwall atop U-shaped girder	1018+00 to 1021+00	Southbound
East of aerial guideway, between Burbank Boulevard and Hatteras Street	3-foot-high absorptive soundwall atop U-shaped girder	1041+60 to 1044+40	Northbound
	10-foot-high absorptive soundwall atop U-shaped girder	1045+00 to 1048+00	Northbound
East of aerial guideway, between Haynes Street and Kittridge Street	10-foot-high absorptive soundwall atop U-shaped girder	1098+00 to 1101+00	Northbound
	5-foot-high absorptive soundwall atop U-shaped girder	1101+00 to 1102+50	Northbound
West of aerial guideway, between Wyandotte Street and Leadwell Street	3-foot-high absorptive soundwall atop U-shaped girder	1152+00 to 1154+00	Southbound
East of aerial guideway, between Valerio Street and Cohasset Street	3-foot-high absorptive soundwall atop U-shaped girder	1157+50 to 1161+00	Northbound
	3-foot-high absorptive soundwall atop U-shaped girder	1161+00 to 1164+20	Northbound

Source: HTA, 2024

MM NOI-6.1: ***Traction Power Substation Noise Reduction:***

- *The Project shall implement measures including, but not limited to, the following to reduce traction power substation noise:*
  - *Orient cooling fans and HVAC equipment away from sensitive receptors (i.e., At site 7, traction power substation fans shall be located on the sides of units closest to and facing Van Nuys Boulevard. At Site 9, traction power substation fans shall be located nearest to Vanowen Street and away from the nearest buildings north and east of the site.)*
  - *Use quieter cooling fans or heating, ventilation, and air conditioning equipment*
  - *Provide a surrounding enclosure around the traction power substation unit.*
  - *Install baffles on the exterior of the cooling fan and heating, ventilation, and air conditioning equipment.*
  - *Provide sound insulation of traction power substation unit enclosure or mount sound-isolation materials to minimize transformer hum.*

3.3.2 Vibration

Operational Effects

The project alternatives could potentially result in exposure of sensitive land uses to excessive vibration. The FTA developed impact criteria for acceptable levels of groundborne noise and groundborne vibration (FTA, 2018). The FTA vibration impact criteria are based on the maximum indoor vibration level from a train passby for different land use categories. Category 1 land uses are buildings where vibration would interfere with interior operations. Category 2 land uses are residences and buildings where people normally sleep. Category 3 land uses are institutional land uses with primarily daytime use. The FTA has also published criteria for special buildings such as concert halls, television and recording studios, auditoriums, and theaters, which are also sensitive to vibration but do not fit into the three FTA sensitive land use categories previously described. These impact criteria were used to create the summary of potential impacts presented below.

Train operations would potentially generate excessive vibration at sensitive receptors. Groundborne vibration (GBV) levels at the identified vibration-sensitive buildings were predicted based on the transit mode of the project alternative being evaluated. Adjustments to the vibration level were then applied based on factors such as vehicle speeds, distance to the tracks, and other adjustments based on project-specific features, including transit station box structures, crossovers, presence of direct fixation rail fasteners, and train movements on aerial structures. Table 3-11 lists vibration impacts by project alternative as well as the total number of vibration impacts. Alternatives 1 and 3 would both result in no vibration impacts. Alternative 6 would implement the use of high resilient direct fasteners, low-impact or spring frogs, floating slab track, and resiliently supported ties throughout the project alignment as part of the project design. Alternative 4 would result in 48 unmitigated vibration impacts, Alternative 5 would result in 313 unmitigated vibration impacts, and Alternative 6 in 26 unmitigated vibration impacts. Alternative 6 would implement the use of high resilient direct fasteners, low-impact or spring frogs, floating slab track, and resiliently supported ties throughout the project alignment as part of the project design to avoid impacts. Modified Alternative 5 would utilize the Alternative 6 alignment in the Valley, which would potentially avoid some of the unmitigated operational vibration impacts associated with Alternative 5. However, Modified Alternative 5 is anticipated to have increased peak and off-peak hour frequency and could potentially result in more unmitigated operational vibration impacts than Alternative 6. Operation of the Monorail Transit MSF Base Design, Monorail Transit MSF Design Option 1, Electric Bus MSF, and Heavy Rail Transit MSFs is not predicted to result in operational vibration impacts. Implementation of MM VIB-4.1 and MM VIB-5.1 would minimize potential impacts related to rail operations by requiring the implementation of trackwork isolation methods to reduce vibration generated during rail operations. The types of vibration reduction methods include high resilience direct fixation rail fasteners, low-impact or spring frogs, floating slab track and resiliently supported ties. The FTA vibration impact criteria would no longer be exceeded related to rail operations after implementation of mitigation.

Table 3-11. Summary of Vibration Impacts Associated with Rail Operations

Alternative	Vibration Impacts			
	Category 1 Land Use	Category 2 Land Use	Category 3 Land Use	Total
Alternative 1	0	0	0	0
Alternative 3	0	0	0	0
Alternative 4	15	33	0	48
Alternative 5	21	292	0	313
Alternative 6	0	0	0	0

Source: Metro, 2025d

Construction Effects

Vibration would be generated by heavy equipment during construction of the project alternatives and MSFs. In most cases, the primary concern regarding construction vibration relates to potential damage effects. Construction activities, such as pile driving, use of drill rigs, pavement breaking, and the use of tracked vehicles (e.g., bulldozers) and hoe rams, could result in perceptible levels of groundborne vibration at sensitive buildings located in close proximity to construction sites. These activities would typically be limited in duration and their vibration levels are likely to be well below thresholds for minor cosmetic building damage. The FTA guidance states that a damage risk criterion of 0.2 inch per second (in/sec) (peak particle velocity [PPV]) is protective of all but the most fragile buildings (FTA, 2018). The limit of 0.12 PPV for fragile historic structures is among the most restrictive limits used for vibration damage risk to buildings. Construction would include a limited number of activities expected to generate vibration that approaches the building damage limit. For example, use of a drilling rig, hoe ram, or large bulldozer would be safe at distances greater than 25 feet from fragile buildings. At distances of 40 feet or greater, a vibratory roller would begin to generate groundborne vibration levels that approach the building damage criterion of 0.12 in/sec PPV. However, historic structures have been identified for each Alternative at which a vibration damage impact could occur.

Along the underground alignments of Alternatives 3, 4, 5, 6, and likely Modified Alternative 5, the tunnel boring machine (TBM) would be the main source of groundborne vibrations. However, the TBM is slow moving and causes very little vibration and related groundborne noise to the surrounding area when operating at full tunnel depths. The Alternative 3 underground tunnel would be at depths of less than 20 feet to nearly 400 feet from the above ground buildings along the tunnel alignment. In a few multi-family residential areas south of Wilshire Boulevard and for residential buildings closest to the north tunnel portal, groundborne vibration from the TBM may be felt distinctly for a short period (about 2 days) while the machine passes under the receptor locations. Throughout the rest of the tunnel alignment, groundborne vibration from the TBM would be either not perceptible or just barely perceptible to some building occupants. Expected TBM vibration levels, however, would be well below the strictest building damage threshold of 0.12 inches per second. Construction of the proposed Wilshire/Metro D Line station along the underground alignment would likely be cut-and-cover construction, which could result in aboveground vibration. However, buildings would typically be located more than 50 feet away from station construction and appear to be constructed of engineered concrete and masonry (0.3 in/sec threshold), resulting in limited potential for excessive vibration damage and annoyance. The alignment would surface in the Santa Monica Mountains near the Getty Center parking area. Construction activity would typically occur at distances greater than 50 feet from sensitive buildings in the Santa Monica Mountains between the Getty Center and Green Leaf Street in the Valley, because the alignment would be located in either the I-405 ROW or areas immediately adjacent to I-405, where there are limited to no structures. The potential for vibration damage and

annoyance would be limited in this area. North of Greenleaf Street, the alignment would travel along the east side of I-405 in a constrained area with buildings adjacent to the construction footprint. The FTA building damage criteria and vibration annoyance criteria could potentially be exceeded at buildings in these areas.

The Alternative 4 underground tunnel would be at depths of approximately 30 feet to over 750 feet from the aboveground buildings along the tunnel alignment. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. In residential areas in the mountain region between Sunset Boulevard and the north tunnel portal, groundborne vibration from the TBM would not be perceptible, because the tunnel would be very deep underground. Expected TBM vibration levels would be well below the strictest building damage threshold of 0.12 inches per second along the entire underground alignment. Construction of the proposed Metro E Line and Santa Monica Boulevard Stations along the underground alignment would likely be cut-and-cover construction, which could at times occur within 25 feet of structures, potentially resulting in excessive vibration. The alignment would surface in the Santa Monica Mountains near Del Gado Drive. Between Del Gado Drive and Ventura Boulevard, construction activity could occur at distances of 25 feet or less of adjacent buildings, including single-family residences, multi-family residences, and commercial buildings. Construction activity in this area could result in the exceedance of the FTA building damage or vibration annoyance criteria. North of Ventura Boulevard, construction activity would typically occur within the Sepulveda Boulevard ROW, and nearby buildings would typically be located at distances of 50 feet or greater, thus reducing the potential for vibration damage or annoyance. In some instances, construction activity may occur at closer distances to sensitive buildings or more intense vibration-generating equipment (vibratory roller) may be used, which could result in the potential to exceed the FTA building damage or vibration annoyance criteria. East of the intersection of Sepulveda Boulevard and Raymer Street, construction activity would primarily occur in the LOSSAN rail corridor that is surrounded by industrial buildings, which would have limited potential for vibration damage and annoyance.

The Alternative 5 underground tunnel would be at depths of approximately 30 feet to over 750 feet from the aboveground buildings along the tunnel alignment. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. In residential areas in the mountain region between Sunset Boulevard and Valley View Boulevard, groundborne vibration from the TBM would not be perceptible because the tunnel would be very deep underground. Expected TBM vibration levels would be well below the strictest building damage threshold of 0.12 inches per second along the entire underground alignment. Construction of the proposed Metro E Line, Santa Monica Boulevard, Wilshire/Metro D Line, UCLA Gateway Plaza, Ventura Boulevard, Metro G Line, and Sherman Way Stations along the underground alignment would likely be cut-and-cover construction, which could at times occur within 25 feet of structures, potentially resulting in excessive vibration. The alignment would surface near the intersection of Raymer Street and Burnett Avenue. Nearby structures are primarily industrial and would be most similar to engineered and concrete masonry buildings with a 0.3 inches per second PPV vibration damage threshold. Vibration annoyance impacts are unlikely to occur in this area, as the uses are not vibration sensitive. However, due to the proximity of nearby buildings, there is potential for vibration damage to occur. East of the tunnel portal, construction activity would primarily occur in the LOSSAN rail corridor surrounded by industrial buildings, which would have limited potential for vibration damage and annoyance.

Alternative 6 underground tunnels would be at depths of approximately 40 feet to over 700 feet from the aboveground buildings along the tunnels' alignment, and it is anticipated that the Modified Alternative 5 tunnels would be at similar depths. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. In residential areas in the mountain region between Sunset Boulevard and Mulholland Drive, groundborne vibration from the TBM would not be perceptible, because the tunnels would be very deep underground. Expected TBM vibration levels would be well below the strictest building damage threshold of 0.12 inches per second along the entire alignment. In some residential areas, groundborne vibration from the TBM may be felt for a short period (about 2 days) while the machine passes under the receptor locations. Construction of the proposed Metro E Line, Santa Monica Boulevard, Wilshire/Metro D Line, UCLA Gateway Plaza, Ventura Boulevard, Metro G Line, and Van Nuys Metrolink Stations along the underground alignment would likely be cut-and-cover construction, which could at times occur within 25 feet of structures, therefore potentially resulting in excessive vibration. Regarding the mid-mountain shaft, the nearest structures would be located more than 500 feet to the east of construction activity, and there would be no potential for vibration damage or annoyance impacts to occur.

Construction of the Monorail Transit MSF Base Design, Monorail Transit MSF Design Option 1, and Electric Bus MSF is not predicted to result in vibration damage impacts. Construction of the Heavy Rail Transit MSF for Alternatives 4, 5, 6, and likely Modified Alternative 5 would result in vibration levels that would exceed 0.2 in/sec PPV building damage criterion during operation of a vibratory roller along the southern property line of the MSF sites.

In rare instances when vibration-intensive construction activities occur close to sensitive structures (within 25 feet), such as residential buildings, or special use buildings like laboratories or recording studios, vibration could exceed the FTA vibration annoyance criteria. Significant groundborne vibration could occur when certain construction activities would occur at close distances to sensitive receptors. Implementation of MM VIB-1.1, MM VIB-3.1, MM VIB-4.2, MM VIB-5.2, MM VIB-6.1 would minimize vibration exposure by requiring preparation of a vibration control plan to determine if construction vibration would exceed vibration standards and to identify vibration reducing methods.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6. They are included in the CEQA documentation and may be included in NEPA documentation.

- MM VIB-1.1 applies to Alternative 1
- MM VIB-3.1 applies to Alternative 3
- MM VIB -4.2 applies to Alternative 4
- MM VIB -5.2 applies to Alternative 5
- MM VIB -6.1 applies to Alternative 6

MM VIB-1.1: Vibration Control Plan:

- *Prior to construction, the Project contractor shall prepare a Vibration Control Plan demonstrating how the Federal Transit Administration building damage risk criteria and the Federal Transit Administration vibration annoyance criteria would be achieved. The Vibration Control Plan shall be approved by Metro prior to initiating vibration-generating construction activities. The Vibration Control Plan would include a list of the major pieces of construction equipment that will*

be used, and the predictions of the vibration levels at the closest sensitive receivers. The Project contractor shall conduct vibration monitoring to demonstrate compliance with the vibration limits during construction activity. Where the construction cannot be performed to meet the vibration criteria, the Project contractor would implement alternative means and methods of construction measures to reduce vibration levels as much as feasible. Vibration reducing methods that may be implemented by the Project contractor include:

- *When feasible, use less vibration intensive equipment or techniques near vibration sensitive locations.*
- *Use as small an impact device (i.e., hoe ram, pile driver) as possible to accomplish necessary tasks.*
- *Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible.*
- *When feasible, in construction areas close to sensitive buildings, select non-impact demolition and construction methods such as saw or torch cutting and removal for off-site demolition, and use chemical splitting, or hydraulic jack splitting, instead of high impact methods.*

- *The Project contractor shall monitor construction vibration levels at structures identified as a "historic" resource within the meaning of CEQA Guidelines Section 15064.5(a) to ensure the vibration damage threshold of 0.12 in/sec peak particle velocity shall not be exceeded. The vibration monitoring shall be conducted by a qualified professional for real-time vibration monitoring for construction work at the Project construction site requiring heavy equipment or ground compaction devices. A pre-construction and post-construction survey of these buildings shall be conducted by a qualified structural engineer. Any damage shall be noted. All vibration monitors used for these measurements shall be equipped with an "alarm" feature to provide advanced notification that vibration impact criteria have been approached. Documented damage in the post-construction survey shall be repaired as required by the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The following historic resources shall be included in the Vibration Control Plan.*
  - *Historic building located at 4511 Sepulveda Boulevard, Sherman Oaks*
  - *Photo Electronics Corp. Building, 1944 Cotner Avenue, Los Angeles*
  - *Dual Ultimate Pharmacy, 2020 Cotner Avenue, Los Angeles*
  - *Building at 2114 Cotner Avenue, Los Angeles*
  - *15300 Ventura Boulevard, Sherman Oaks*
  - *Historic building located at 14746 Raymer Street, Van Nuys*

MM VIB-3.1: Vibration Control Plan:

- *Prior to construction, the Project contractor shall prepare a Vibration Control Plan demonstrating how the Federal Transit Administration building damage risk criteria and the Federal Transit Administration vibration annoyance criteria*

would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels at the closest sensitive receivers. The Project contractor would conduct vibration monitoring to demonstrate compliance with the vibration limits during construction activity. Where the construction cannot be performed to meet the vibration criteria, the Project contractor shall implement alternative means and methods of construction measures to reduce vibration levels as much as feasible. Vibration reducing methods that may be implemented by the Project contractor include:

  - *When feasible, use construction equipment or less vibration intensive techniques near vibration sensitive locations.*
  - *Use as small an impact device (i.e., hoe ram, pile driver) as possible to accomplish necessary tasks.*
  - *Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible.*
  - *When feasible, in construction areas close to sensitive buildings, select non-impact demolition and construction methods such as saw or torch cutting and removal for off-site demolition, and use chemical splitting, or hydraulic jack splitting, instead of high impact methods.*

- *The Project contractor shall monitor construction vibration levels at structures identified as a "historic" resource within the meaning of CEQA Guidelines Section 15064.5(a)to ensure the vibration damage threshold of 0.12 in/sec peak particle velocity shall not be exceeded. The vibration monitoring shall be conducted by a qualified professional for real-time vibration monitoring for construction work at the Project construction site requiring heavy equipment or ground compaction devices. A pre-construction and post-construction survey of these buildings shall be conducted by a qualified structural engineer. Any damage shall be noted. All vibration monitors used for these measurements shall be equipped with an "alarm" feature to provide advanced notification that vibration impact criteria have been approached. Documented damage in the post-construction survey shall be repaired as required by the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The following historic resources shall be included in the Vibration Control Plan.*

  - *Historic building located at 4511 Sepulveda Boulevard, Sherman Oaks*
  - *Photo Electronics Corp. Building, 1944 Cotner Avenue, Los Angeles*
  - *Dual Ultimate Pharmacy, 2020 Cotner Avenue, Los Angeles*
  - *Building at 2114 Cotner Avenue, Los Angeles*
  - *UCLA Ackerman Hall, 308 Westwood Plaza, Los Angeles*
  - *15300 Ventura Boulevard, Los Angeles*
  - *Historic building located at 14746 Raymer Street, Van Nuys*

MM VIB-4.2: Vibration Control Plan:

- *Prior to construction, the Project contractor shall prepare a Vibration Control Plan demonstrating how the Federal Transit Administration building damage risk criteria and the Federal Transit Administration vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels at the closest sensitive receivers. The Project contractor would conduct vibration monitoring to demonstrate compliance with the vibration limits during construction activity. Where the construction cannot be performed to meet the vibration criteria, the Project contractor shall implement alternative means and methods of construction measures to reduce vibration levels as much as feasible. Vibration reducing methods that may be implemented by the Project contractor include:*
  - *When feasible, use construction equipment or less vibration intensive techniques near vibration sensitive locations.*
  - *Use as small an impact device (i.e., hoe ram, pile driver) as possible to accomplish necessary tasks.*
  - *Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible.*
  - *When feasible, in construction areas close to sensitive buildings, select non-impact demolition and construction methods such as saw or torch cutting and removal for off-site demolition, and use chemical splitting, or hydraulic jack splitting, instead of high impact methods.*
- *The Project contractor shall monitor construction vibration levels at structures identified as a "historic" resource within the meaning of California Environmental Quality Act Guidelines Section 15064.5(a)to ensure the vibration damage threshold of 0.12 in/sec peak particle velocity shall not be exceeded. The vibration monitoring shall be conducted by a qualified professional for real-time vibration monitoring for construction work at the Project construction site requiring heavy equipment or ground compaction devices. A pre-construction and post-construction survey of these buildings shall be conducted by a qualified structural engineer. Any damage shall be noted. All vibration monitors used for these measurements shall be equipped with an "alarm" feature to provide advanced notification that vibration impact criteria have been approached. Documented damage in the post-construction survey shall be repaired as required by the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The following historic resources shall be included in the Vibration Control Plan.*

- *Gayley Center located at 1101 Gayley Avenue, adjoining the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*
- *Linde Medical Building located at 10921 Wilshire Boulevard, Los Angeles adjacent to the proposed Wilshire Boulevard/Metro D Line Station*
- *Tishman Building located at 10950 Wilshire Boulevard, Los Angeles adjacent to the proposed Wilshire Boulevard/Metro D Line Station*
- *Historic building located at 4511 Sepulveda Boulevard, Los Angeles, next to the proposed aerial structure*
- *UCLA Ackerman Hall, 308 Westwood Plaza, Los Angeles*
- *Historic buildings located at 15300 and 15233 Ventura Boulevard, Sherman Oaks*
- *Historic building located at 4700 Sepulveda Boulevard, Sherman Oaks*
- *Lt. Patrick H. Daniels United States Army Reserve Center located at 5161 Sepulveda Boulevard, Sherman Oaks*
- *Starlight Cottage located at 5450 Sepulveda Boulevard, Sherman Oaks*
- *Cathedral of St. Mary Church located at 5335 Sepulveda Boulevard, Sherman Oaks*
- *Historic building located at 5724 Sepulveda Boulevard, Van Nuys*
- *Cabana Motel located at 5764 Sepulveda Boulevard, Van Nuys*
- *El Cortez Motel located at 5746 Sepulveda Boulevard, Van Nuys*
- *Historic building located at 6160 Sepulveda Boulevard, Van Nuys*
- *Historic building located at 6833 Sepulveda Boulevard, Van Nuys*
- *Lancer Lion II Apartments located at 7657 Sepulveda Boulevard, Van Nuys*
- *Historic building located at 7721 Sepulveda Boulevard, Van Nuys*
- *The Performing Arts Center located at 7735 Sepulveda Boulevard, Van Nuys*
- *Historic building located at 6833 Sepulveda Boulevard, Van Nuys*
- *Historic building located at 14746 Raymer Street, Van Nuys*
- *Air Raid Siren No. 110 located at the northeast corner of Covello Street and Sepulveda Boulevard in Van Nuys, and*
- *Air Raid Siren No. 117 on the north side of Oxnard Street just west of Sepulveda Boulevard in Van Nuys*

MM VIB-5.2: Vibration Control Plan:

- *Prior to construction, the Project contractor shall prepare a Vibration Control Plan demonstrating how the Federal Transit Administration building damage risk criteria and the Federal Transit Administration vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels at the closest sensitive receivers. The Project contractor would conduct vibration monitoring to demonstrate compliance with the vibration limits during construction activity. Where the construction cannot be performed to meet the vibration criteria, the Project contractor shall implement alternative means and methods of construction measures to reduce vibration levels as much as feasible. Vibration reducing methods that may be implemented by the Project contractor include:*
  - *When feasible, use construction equipment or less vibration intensive techniques near vibration sensitive locations.*
  - *Use as small an impact device (i.e., hoe ram, pile driver) as possible to accomplish necessary tasks.*
  - *Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible.*
  - *When feasible, in construction areas close to sensitive buildings, select non-impact demolition and construction methods such as saw or torch cutting and removal for off-site demolition, and use chemical splitting, or hydraulic jack splitting, instead of high impact methods.*
- *The Project contractor shall monitor construction vibration levels at structures identified as a "historic" resource within the meaning of California Environmental Quality Act Guidelines Section 15064.5(a)to ensure the vibration damage threshold of 0.12 in/sec peak particle velocity shall not be exceeded. The vibration monitoring shall be conducted by a qualified professional for real-time vibration monitoring for construction work at the Project construction site requiring heavy equipment or ground compaction devices. A pre-construction and post-construction survey of these buildings shall be conducted by a qualified structural engineer. Any damage shall be noted. All vibration monitors used for these measurements shall be equipped with an "alarm" feature to provide advanced notification that vibration impact criteria have been approached. Documented damage in the post-construction survey shall be repaired as required by the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The following historic resources shall be included in the Vibration Control Plan.*
  - *Gayley Center located at 1101 Gayley Avenue, adjoining the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*

- *Linde Medical Building located at 10921 Wilshire Boulevard, adjacent to the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*
- *Tishman Building located at 10950 Wilshire Boulevard, adjacent to the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*
- *UCLA Ackerman Hall, 308 Westwood Plaza, Los Angeles*
- *Historic buildings located at 4506 Saugus Street, Sherman Oaks*
- *Historic building located at 14746 Raymer Street, Van Nuys*

MM VIB-6.1: Vibration Control Plan:

- *Prior to construction, the Project contractor shall prepare a Vibration Control Plan demonstrating how the Federal Transit Administration building damage risk criteria and the Federal Transit Administration vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels at the closest sensitive receivers. The Project contractor would conduct vibration monitoring to demonstrate compliance with the vibration limits during construction activity. Where the construction cannot be performed to meet the vibration criteria, the Project contractor shall implement alternative means and methods of construction measures to reduce vibration levels as much as feasible. Vibration reducing methods that may be implemented by the Project contractor include:*
  - *When feasible, use construction equipment or less vibration intensive techniques near vibration sensitive locations.*
  - *Use as small an impact device (i.e., hoe ram, pile driver) as possible to accomplish necessary tasks.*
  - *Avoid impact pile driving where possible. Drilled piles or vibratory pile drivers would be required where feasible.*
  - *When feasible, in construction areas close to sensitive buildings, select non-impact demolition and construction methods such as saw or torch cutting and removal for off-site demolition, and use chemical splitting, or hydraulic jack splitting, instead of high impact methods.*
- *The Project contractor shall monitor construction vibration levels at structures identified as a "historic" resource within the meaning of California Environmental Quality Act Guidelines Section 15064.5(a)to ensure the vibration damage threshold of 0.12 in/sec peak particle velocity shall not be exceeded. The vibration monitoring shall be conducted by a qualified professional for real-time vibration monitoring for construction work at the Project construction site requiring heavy equipment or ground compaction devices. A pre-construction and post-construction survey of these buildings shall be conducted by a qualified structural engineer. Any damage shall be noted. All vibration monitors used for these measurements shall be equipped with an "alarm" feature to provide advanced*

notification that vibration impact criteria have been approached. Documented damage in the post-construction survey shall be repaired as required by the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The following historic resources shall be included in the Vibration Control Plan.

- *Gayley Center located at 1101 Gayley Avenue, adjoining the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*
- *Linde Medical Building located at 10921 Wilshire Boulevard, adjacent to the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*
- *Tishman Building located at 10950 Wilshire Boulevard, adjacent to the proposed Wilshire Boulevard/Metro D Line Station, Los Angeles*
- *UCLA Ackerman Hall, 308 Westwood Plaza, Los Angeles*
- *Historic buildings located at 5958 Van Nuys Boulevard, Sherman Oaks*

The following mitigation measures are applicable to Alternatives 1 through 6 as defined below. They are included in the CEQA documentation and may be included in NEPA documentation.

- MM VIB-4.1 applies to Alternative 4
- MM VIB-5.1 applies to Alternative 5

MM VIB-4.1: Trackwork Isolation Methods:

- *The Project shall implement trackwork isolation to reduce groundborne vibration levels to below the Federal Transit Administration groundborne vibration impact criteria for frequent events at the locations where exceedance of the groundborne vibration impact criteria are anticipated to occur. The Project shall isolate trackwork using one of the following four methods:*
  - *High Resilience Direct Fixation Rail Fasteners (HRDF): HRDF attaches the rail directly to the fastener body. HRDF is used to attach the rails to the first concrete pour and then the space around the tacks is filled with precast concrete panels. There are several models of highly resilient direct fixation fasteners available that can be effective at controlling vibration.*
  - *Low-Impact or Spring Frogs: Wheel impacts at crossovers could increase vibration levels up to 10 VdB at sensitive buildings near the crossovers. Where vibration impact occurs at the crossovers along the project alignment, the impact vibration can be reduced through the use of low-impact frogs.*
  - *Floating Slab Track: This approach typically provides the highest reduction in GBV levels and is employed near Category 1 buildings where thresholds of impact are more stringent. Under this method, the track is constructed on a concrete slab that is supported by either resilient pads or a continuous resilient mat.*

  - *Resiliently Supported Ties: The resiliently supported tie system consists of concrete ties supported by rubber pads resting on top of a slab track or subway invert. The rails are fastened directly to the concrete ties using standard rail clips. This type of system has been shown to reduce GBV levels by up to 10 VdB.*

- *Locations where mitigation is required are identified in Table 3-12 and will be verified during final design*

Table 3-12. Alternative 4: MM VIB-4.1 – Trackwork Isolation Methods Locations

Mitigation Measure Type	Civil Station Limits From – To		Location Description
High Resilience Direct Fixation Rail Fasteners	519+00	520+50	Between 2355 S Bentley Avenue and 2345 S Bentley Avenue
Floating Slab	520+50	525+50	2337 S Bentley Avenue to Tennessee Avenue
High Resilience Direct Fixation Rail Fasteners	525+50	549+00	Tennessee Avenue to 1921 S Bentley Avenue
Floating Slab	549+00	551+00	1921 S Bentley Avenue to Missouri Avenue
High Resilience Direct Fixation Rail Fasteners	551+00	555+50	Missouri Avenue to 1835 S Bentley Avenue
Spring Frogs at Double Crossover	599+73	602+31	Crossovers north of Ashton Avenue
High Resilience Direct Fixation Rail Fasteners	611+50	616+00	1101 Westwood Boulevard to 1045 Westwood Boulevard
Floating Slab	625+50	630+00	North of Le Conte Avenue to 100 Medical Plaza
Resiliently Supported Ties	630+00	633+00	100 Medical Plaza to 710 Westwood Plaza
Floating Slab	633+00	639+00	710 Westwood Plaza to south of 570 Westwood Plaza
High Resilience Direct Fixation Rail Fasteners	673+50	711+00	South side of 121 Udine Way to north side of Hotel Bel-Air
High Resilience Direct Fixation Rail Fasteners	721+00	722+50	Residence located at 10651 Capello Way
High Resilience Direct Fixation Rail Fasteners	727+00	733+00	10650 Somma Way to 10687 Somma Way
High Resilience Direct Fixation Rail Fasteners	771+00	773+00	Residence located at 1545 Tanner Bridge Road
High Resilience Direct Fixation Rail Fasteners	907+00	909+00	3671 Meadville Drive to 3677 Meadville Drive
High Resilience Direct Fixation Rail Fasteners	918+00	931+00	3800 Scadlock Lane to north end of Briarwood Drive cul-de-sac

Source: HTA, 2024

MM = mitigation measure
S = south
VIB = vibration

MM VIB-5.1: Trackwork Isolation Methods:

- *The Project shall implement trackwork isolation to reduce groundborne vibration levels to below the Federal Transit Administration groundborne vibration impact criteria for frequent events at the locations where exceedance of the groundborne vibration impact criteria are anticipated to occur. The Project shall isolate trackwork using one of the following four methods:*
  - *High Resilience Direct Fixation Rail Fasteners (HRDF): HRDF attaches the rail directly to the fastener body. HRDF is used to attach the rails to the first concrete pour and then the space around the tacks is filled with precast concrete panels. There are several models of highly resilient direct fixation fasteners available that can be effective at controlling vibration.*
  - *Low-Impact or Spring Frogs: Wheel impacts at crossovers could increase vibration levels up to 10 VdB at sensitive buildings near the crossovers. Where vibration impact occurs at the crossovers along the project alignment, the impact vibration can be reduced through the use of low-impact frogs.*
  - *Floating Slab Track: This approach typically provides the highest reduction in GBV levels and is employed near Category 1 buildings where thresholds of impact are more stringent. Under this method, the track is constructed on a concrete slab that is supported by either resilient pads or a continuous resilient mat.*
  - *Resiliently Supported Ties: The resiliently supported tie system consists of concrete ties supported by rubber pads resting on top of a slab track or subway invert. The rails are fastened directly to the concrete ties using standard rail clips. This type of system has been shown to reduce GBV levels by up to 10 VdB.*
- *Locations where mitigation is required are identified in Table 3-13 and will be verified during final design.*

Table 3-13. Alternative 5: MM VIB-5.1 – Trackwork Isolation Methods Locations

Mitigation Measure Type	Civil Station Limits (From - To)		Location Description
High Resilience Direct Fixation Rail Fasteners	519+00	520+50	Between 2355 S Bentley Avenue and 2345 S Bentley Avenue
Floating Slab	520+50	525+50	2337 S Bentley Avenue to Tennessee Avenue
High Resilience Direct Fixation Rail Fasteners	525+50	549+00	Tennessee Avenue to 1921 S Bentley Avenue
Floating Slab	549+00	551+00	1921 S Bentley Avenue to Missouri Avenue
High Resilience Direct Fixation Rail Fasteners	551+00	555+50	Missouri Avenue to 1835 S Bentley Avenue
Spring Frogs at Double Crossover	599+73	602+31	Crossovers north of Ashton Avenue
High Resilience Direct Fixation Rail Fasteners	611+50	616+00	1101 Westwood Boulevard to 1045 Westwood Boulevard

Mitigation Measure Type	Civil Station Limits (From - To)		Location Description
Floating Slab	625+50	630+00	North of Le Conte Avenue to 100 Medical Plaza
Resiliently Supported Ties	630+00	633+00	100 Medical Plaza to 710 Westwood Plaza
Floating Slab	633+00	639+00	710 Westwood Plaza to south of 570 Westwood Plaza
High Resilience Direct Fixation Rail Fasteners	673+50	711+00	South side of 121 Udine Way to north side of Hotel Bel-Air
High Resilience Direct Fixation Rail Fasteners	721+00	722+50	residence located at 10651 Capello Way
High Resilience Direct Fixation Rail Fasteners	727+00	733+00	10650 Somma Way to 10687 Somma Way
High Resilience Direct Fixation Rail Fasteners	771+00	773+00	residence located at 1545 Tanner Bridge Road
High Resilience Direct Fixation Rail Fasteners	907+00	909+00	3671 Meadville Drive to 3677 Meadville Drive
High Resilience Direct Fixation Rail Fasteners	910+00	911+50	3721 Meadville Drive to 3719 Meadville Drive
High Resilience Direct Fixation Rail Fasteners	918+00	950+00	South end of Kingswood Road to 15259 Valley Vista Boulevard
High Resilience Direct Fixation Rail Fasteners	952+50	954+00	4321 Saugus Avenue to Sutton Street
Resiliently Supported Ties	954+00	958+00	Sutton Street to Ventura Boulevard/Sepulveda Boulevard Station
Low-Impact Frogs at Double Crossover	957+70	960+30	Crossovers south of Ventura Boulevard/Sepulveda Boulevard Station
Resiliently Supported Ties	965+50	967+00	Television and radio studios located at 15260 Ventura Boulevard
Floating Slab	970+00	972+00	3 Ball Entertainment video production located at 15301 Ventura Boulevard
High Resilience Direct Fixation Rail Fasteners	973+00	987+00	4650 Sepulveda Boulevard to US-101 southbound on-ramp
High Resilience Direct Fixation Rail Fasteners	990+00	1005+00	South of US-101 northbound offramp to Hartsook Street
Floating Slab	1008+00	1011+00	LA Live Stream film production at 15315 Magnolia Boulevard
High Resilience Direct Fixation Rail Fasteners	1011+00	1034+00	5225 Sepulveda Boulevard to south side of Burbank Boulevard
High Resilience Direct Fixation Rail Fasteners	1038+00	1048+00	5638 Sepulveda Boulevard to Hatteras Street
High Resilience Direct Fixation Rail Fasteners	1078+00	1079+00	Cinema Motel located at 6242 Sepulveda Boulevard
High Resilience Direct Fixation Rail Fasteners	1094+50	1111+00	Haynes Street to north side of Archwood Street
High Resilience Direct Fixation Rail Fasteners	1117+00	1129+00	6831 Sepulveda Boulevard to north side of 7007 Sepulveda Boulevard
Resiliently Supported Ties	1129+00	1134+00	North side of 7007 Sepulveda Boulevard to Sherman Way Station
Low-Impact Frogs at Double Crossovers	1131+30	1133+87	crossovers south of Sherman Way Station

Mitigation Measure Type	Civil Station Limits (From - To)		Location Description
High Resilience Direct Fixation Rail Fasteners	1148+00	1164+00	North of Wyandotte Street to north of Covello Street
High Resilience Direct Fixation Rail Fasteners	1168+00	1170+00	La Posada Motel locates at 7615 Sepulveda Boulevard
Resiliently Supported Ties	1175+00	1177+00	7721 Sepulveda Boulevard and 7735 Sepulveda Boulevard
Resiliently Supported Ties	1181+00	1183+00	Third Encore Annex Studios – Stagg 15239 Stagg Street
High Resilience Direct Fixation Rail Fasteners	1186+00	1189+00	Stagg Street Studio 15147 Stagg Street

Source: HTA, 2024

3.4 Ecosystems and Biological Resources

This summary addresses federally protected wildlife and plant species, critical habitat, wildlife corridors, and jurisdictional resources. Refer to the *Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025e).

3.4.1 Wildlife and Plant Species

Wildlife expected in the urbanized areas of the Project Study Area such as the Valley to the north and the Westside communities of Los Angeles to the south, are mostly regionally common species adapted to human disturbances. These common species include birds, reptiles (i.e., common snakes, common lizards), small mammals (i.e., squirrels, rabbits, opossums, racoons, skunks, bats), and larger mammals such as coyotes. The Planning and Environmental Linkages (PEL) Study presents only special-status wildlife species listed as endangered, threatened, or a candidate for listing under the federal Endangered Species Act. Certain animal species receive federal protection under the Bald and Golden Eagle Protection Act (i.e., bald eagle, golden eagle) and the Migratory Bird Treaty Act (MBTA). Database searches identified 13 possible special-status wildlife species in the Project Study Area, although no suitable habitat in the Project Study Area was identified for 11 species. *Polioptila californica* (Coastal California gnatcatcher) is a federally threatened species with low potential to be present. While the Project Study Area is located within the species range, suitable breeding habitat is generally absent. *Vireo bellii pusillus* (Least Bell's vireo) is a federally endangered species. Occupied nesting and foraging habitat is present within the Project Study Area within the Sepulveda Basin Wildlife Reserve in riparian habitat found along the Los Angeles River and the connecting Bull Creek.

Vegetation communities in the highly urbanized areas of the northern and southern portions of the Project Study Area include California annual grasslands, coyote brush shrubland, and land cover classes that include developed, ruderal, open water, and undifferentiated classes. Vegetation communities in the Santa Monica Mountains, which run east-west through the middle of the Project Study Area, include ceanothus chaparral, laurel sumac shrubland, toyon shrubland, and various other native vegetation communities. Database searches identified 6 possible federal special-status plant species, although no suitable habitat in the Project Study Area was identified for 3 species. *Dodecahema leptoceras (*Slender-horned spineflower) is a federally endangered species with low potential to be present, although there are no occurrences of the species recorded in the Project Study Area. *Dudleya cymose* ssp. *ovatifolia (*Santa Monica dudleya) is a federally threatened species with low potential to be present, although the

nearest occurrence (5 miles to the west) is from 1960s. *Astragalus brauntonii (*Braunton's milk-vetch*)* is a federally endangered species with moderate potential to be present because suitable habitat occurs within the Project Study Area and records of the species have been observed in Topanga State Park.

Operational Effects

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 because aboveground alignments occur in developed areas. The construction of and operational activities associated with the underground portions of Alternatives 4, 5, 6, and likely Modified Alternative 5 have no potential to interfere with wildlife habitats or vegetation. The following assessments pertain to Alternatives 1 and 3, and the aboveground portions of Alternative 4.

Invertebrates and Reptiles

Invertebrates and 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 aboveground alignments associated with Alternatives 1, 3, and 4 are primarily aerial and occur in mostly developed areas that are not suitable for these species. The areal extent of suitable habitat for special-status invertebrates and reptiles that overlaps with the project alternatives is very limited. Habitat degradation due to edge effects where native habitats are removed would be limited due to the low amount of suitable habitat present along the alignment. Edge effects may include changes to the microclimate due to increased 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).

Birds and Bats

Nesting birds or roosting bats may be 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. Impacts from dust and noise to birds or bats are not anticipated during operation, since maintenance activities would primarily occur within developed or paved areas. MM BIO-1 and MM BIO-2 would minimize operations-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, conducting preconstruction nesting bird and bat surveys during the appropriate season, and installation and biological monitoring of no-disturbance buffers around nests or roosts to ensure the resource is adequately protected.

Mammals

Collisions between mountain lions and aerial monorail vehicles associated with Alternatives 1 and 3 are unlikely due to the height at which vehicles would be traveling (16.5 feet to 32 feet). While operational activities would reduce vehicle traffic on I-405, changes in vehicle traffic 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. Alternatives 1 and 3 are 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 Alternatives 1 and 3, 11 percent (47.9 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 would 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 would not inhibit mountain lion survival or recovery in the wild. 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.

Plants

Impacts to plants that would occur during aboveground operations 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 operations would result in impacts to plants, including from exposure to fugitive dust. One California protected 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 impacts are anticipated since Nuttall's scrub oak was not identified within the Ground Disturbance Area during the initial tree inventory. MM BIO-3 would reduce operational-related impacts to protected trees from vegetation maintenance through application of mitigation, as determined in the applicable local ordinance or policy.

Construction Effects

Construction activities have potential to affect sensitive vegetation communities, as well as wildlife or plant species, both directly and through modifications to their habitat. While most of the vegetation that could be impacted consists of non-native and ornamental landscaping, some native vegetation is also present. Construction activities could impact wildlife including nesting birds, special-status plant species, and sensitive vegetation communities if mitigation measures are not implemented. These potential impacts include injury 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 extended human disturbances within species habitats during construction. Other anticipated impacts related to the construction along Sepulveda Pass for Alternatives 1 and 3 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 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.

Invertebrates

Crotch's bumble bee, a protected species, has potential to be present 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 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 where preferred flowering plants are present 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. 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. Ground-disturbing impacts from grading and vegetation clearing would likely result in loss of suitable habitat that would be used for nesting, breeding, shelter, and/or foraging for Crotch's bumble bee.

Reptiles

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, 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. 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 would be used for nesting, breeding, shelter, and/or foraging.

Birds and Bats

Based on habitat requirements, protected birds are likely to be found 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. Additionally, 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 would be used for nesting, breeding, sheltering, and/or foraging for the following nine special-status species and nesting birds protected under the MBTA.

Within the developed northern and southern ends of the projects, protected bats would 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.

Mammals

Three protected mammals were identified in the Project Study Area, 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 would 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. 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.

Special-Status Plants

Based on habitat requirements, protected plants are most likely to occur in chaparral and/or coastal sage scrub which occurs on the Project in the Sepulveda Pass and would be in or proximate to work areas along I-405 in the Santa Monica Mountains. 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 protected plants.

Mitigation Measures

Mitigation measures would be implemented to reduce construction-related impacts to protected 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); 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-10). General construction measures to protect 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).

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6, except as noted below. They are included in the CEQA documentation and may be included in NEPA documentation.MM BIO-9 applies to Alternatives 1, 3, 5, and 6

- MM BIO-10 applies to Alternatives 1, 3, 4, and 6
- MM BIO-11 applies to Alternatives 1 and 3
- MM BIO-12 applies to Alternatives 4 and 5
- MM BIO-13 applies to Alternative 6

MM BIO-1: ***Avoid and Minimize Operations-Related Impacts to Nesting Birds.*** *Vegetation trimming for operation of the Project related to operational maintenance shall occur outside of the nesting bird season (generally February 15 through September 15) unless specific operational constraints necessitate trimming during this period, as determined by Metro. If trimming must occur during the nesting bird season, 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 (MBTA) and California Fish and Game Code:*

- *A nesting bird survey of the work area plus a 300-foot buffer shall be conducted by an experienced avian biologist (hereafter, Qualified Biologist) within three days prior to the start of vegetation trimming activities associated with operational activities to determine if active nests are present within 100 feet for non-special-status songbirds or 300 feet for raptors and special-status species of the work zone. All active nests (nests with eggs or young) 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 operational vegetation trimming.*
- *Active bird nests for species protected by the MBTA 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 (see 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, and observations specific nesting pair tolerance. Nest monitoring by the Qualified Biologist shall be required following buffer modifications to verify there is no disruption of native bird breeding behaviors due to work activities. 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). Additional monitoring may be required if conditions change or as determined necessary by the Qualified Biologist to ensure compliance with the no-disturbance buffers. 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 of 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.*
- *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 avoidance and minimization measures for operational work to avoid and minimize Project-related impacts to roosting, overwintering, and breeding special-status bat species. The BHMMP also will include reporting requirements to document activities and the results of these measures. Bat protection measures:*
  - *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 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 (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 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 CDFW 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 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 Los Angeles Policy shall require coordination with the City of Los Angeles Department of Public Works, Urban Forestry Division.*
  - *Trees protected by the Metro Tree Policy shall require the Project to prepare a Tree Protection Plan that identifies Tree Protection Zones for all trees designated for retention. The Project shall also 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 CESA or ESA:*** *Impacts to all trees protected by CESA or ESA (e.g., Quercus dumosa) shall require coordination with CDFW or USFWS, 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-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 (see 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 of 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 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 Bat 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 CDFW 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 Bat 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 Bat 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 Bat Biologist) using a two-step process that occurs over two consecutive days.*
  - *Day 1, Step 1: Under the supervision of a Qualified Bat 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 Bat 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 CDFW 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 and 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 and 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 and 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 and Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.

- *Following 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 and 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 and 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 and 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 and Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.*
- *If 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 and 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 and 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 and 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 and Wildlife Service protocol, surveyors shall not survey more than 3 linear kilometers or more than 50 hectares in one day.*
- *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 and 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 USFWS or CDFW, 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 CESA or ESA, 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 and 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., CDFW or USFWS) 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 will be defined with a goal of meeting or exceeding pre-construction habitat value for disturbed areas and will 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 will 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 (Attachment 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.*

- *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 (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 damage to or removed a protected tree; decisions would be made in accordance with local ordinances identifying protected trees.*

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 (Attachment 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 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 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 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 damaged or removed tree; decisions would be made in accordance with local ordinances identifying protected trees.*

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 (Attachment 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 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 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 (Attachment 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 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:*
  - *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 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 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 (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 (i.e., 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 (Attachment A from the Sepulveda Transit Corridor Project, Final 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 BMPs 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-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 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 would 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.*

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 CDFW 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.*

3.4.2 U.S. Fish and Wildlife Service Critical Habitat

Critical habitat areas are designated by the USFWS for species listed under the federal Endangered Species Act as space for individual populations to grow and for normal behavior by the species. These areas provide cover, shelter, food, water, light, minerals and other nutritional or physiological requirements for survival of the species. They also provide sites for breeding and rearing offspring and habitat that are protected from disturbances and are representative of the historical geographical distribution of the species. No USFWS-designated critical habitat coincides with the Project Study Area.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that any project alternative will require control measures to avoid, minimize, or mitigate potential adverse effects.

3.4.3 Wetlands

There are no federally protected wetlands within the Ground Disturbance Area for any of the project alternatives. The Los Angeles River is concrete-lined and devoid of riparian or herbaceous wetland vegetation where the project alternatives traverse the river. No wetlands are associated with the Los Angeles River at this location. Construction activities would occur outside of jurisdictional areas associated with the Los Angeles River for all project alternatives. Implementation of MM BIO-13, defined previously, would minimize potential Impacts to jurisdictional aquatic resources by protecting drainages.

Potential NEPA Avoidance, Minimization, and Control Measures

Refer to MM BIO-13. It is included in the CEQA documentation and may be included in NEPA documentation.

3.4.4 Tree Removal

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, 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 Project Study Area. Due to their location adjacent to roadways, there is potential for several of these native trees to be revegetation efforts from entities such as Caltrans. In the central, less developed portion of the Project Study Area, native trees are more frequent, specifically to the east and west of the I-405 freeway from Valley Vista Boulevard to Getty Center Drive. Four local ordinances or policies protecting trees are present within the Project Study Area: City of Los Angeles Protected Tree and Shrub Ordinance, Los Angeles County Oak Tree Ordinance, City of Los Angeles Street Tree Policy, and the Metro Tree Policy. Mitigation amounts and maintenance periods varies between ordinances and policies (Table 3-14).

Table 3-14. 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 Los Angeles Protected Tree and Shrub Ordinance	City of Los Angeles including private property	4:1	3 years	Survival of continuously living replacements for maintenance period required.
Los Angeles County Oak Tree Ordinance	Unincorporated Los Angeles County	2:1	2 years minimum	Applicant's proposal should include future maintenance measures where required.

Jurisdiction	Landowner	Mitigation Ratio for Protected Species[a]	Maintenance Period	Additional Notes
Santa Monica Mountains National Recreation Area	Many, National Park Service acts as administrator	2:1 to 4:1[b]	3 to 5 years[b]	Mitigation for impacts within the Santa Monica Mountains National Recreation Area are determined through coordination with appropriate entities. Replacement ratio and 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.
City of Los Angeles Street Tree Policy	City of Los Angeles 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 the Caltrans right-of-way, or on the University of California, Los Angeles campus[c] unless the tree was planted and maintained by the City.

Source: Metro, 2025e

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

[b.] Mitigation ratio and maintenance period for trees within SMMNRA and the City of Santa Monica estimated from the range of replacement trees from the Metro Tree Policy to the City of Los Angeles Ordinance.

[c.] Teresa Estrada, phone call by C. Hargreaves to Los Angeles Urban Forestry Division, July 19, 2024

Operational Effects

Each of the project alternatives would require routine maintenance and trimming of trees necessitating coordination with various jurisdictions. The City of Los Angeles Ordinance requires permits for alterations made to protected tree and shrub species. Another permit is required from the City of Los Angeles Department of Public Works for modifications to oak trees covered by the County Oak Tree Ordinance. The Los Angeles Street Tree Policy requires coordination with the City of Los Angeles Department of Public Works for maintenance of trees within the public right-of-way. This policy does not apply to trees within private property, UCLA, or the Caltrans right-of-way. The Metro Tree Policy requires coordination with the landowners (e.g., private landowners, UCLA, Caltrans) to trim, prune, or remove trees). A mitigation plan would be developed in consultation with a Certified Arborist if operational impacts resulted in a damaged or removed tree; decisions would be made in accordance with local ordinances identifying protected trees. Implementation of MM BIO-3 would minimize potential impacts to protected trees and shrubs through various protections.

Construction Effects

Construction activities for all project alternatives would require tree and shrub removal. Table 3-15 provides a summary of the protected trees and shrubs potentially affected by each of the project alternatives. It is anticipated that Modified Alternative 5 would remove a similar number of trees as Alternatives 5 and 6. However, Modified Alternative 5 would avoid the need for the Stone Canyon Reservoir vent shaft and access road under Alternative 6 and therefore would likely affect fewer protected trees. Implementation of MM BIO-11, defined previously, for Alternatives 1 and 3 would minimize operational impacts to protected trees and shrubs through application of installation and maintenance of replacement trees or shrubs following requirements of the pertinent tree preservation policy or ordinance. MM BIO-12 is a similar measure for Alternatives 4 and 5, and MM BIO-13 is a similar measure for Alternative 6. It is anticipated that Modified Alternative 5 would require a measure similar to
MM BIO-12 and MM BIO-13. Specific to Alternatives 1 and 3, 98 trees have been identified with the Santa Monica Mountains National Recreation Area. Mitigation for potential impacts to these trees would be determined through coordination with applicable entities.

Potential NEPA Avoidance, Minimization, and Control Measures

Refer to MM BIO-3, MM BIO-11, MM BIO-12, and MM BIO-13. They are included in the CEQA documentation and may be included in NEPA documentation.

Table 3-15. Ordinance-Protected Trees and Shrubs within Ground Disturbance Area

Jurisdiction	Species Name	Alternative 1		Alternative 3		Alternative 4		Alternative 5		Alternative 6	
		Quantity	Mitigation Amount*	Quantity	Mitigation Amount*	Quantity	Mitigation Amount*	Quantity	Mitigation Amount*	Quantity	Mitigation Amount*
City of Los Angeles Protected Tree and Shrub Ordinance	Toyon *(Heteromeles arbutifolia)*	55	220	29	116	0	0	0	0	0	0
	Southern California black walnut *(Juglans californica)*	31	124	20	80	2	8	0	0	314	1,256
	Western sycamore *(Platanus racemosa)*	24	104	24	96	11	44	9	36	0	0
	Coast live oak (*Quercus agrifolia)*	109	436	53	212	53	212	43	172	13	52
	Valley oak *(Quercus lobata)*	2	8	2	8	13	52	13	52	0	0
	Canyon live oak *(Quercus chrysolepis)*	3	12	3	12	1	4	2	8	0	0
	Mexican elderberry *(Sambucus mexicana)*	22	88	23	92	2	8	2	8	2	8
Los Angeles County Oak Tree Ordinance	Coast live oak *(Quercus agrifolia)*	3	6	3	6	0	0	0	0	0	0
	Holly oak *(Quercus ilexa)*	1	2	1	2	0	0	0	0	0	0
	Total	**250**	**992**	**158**	**624**	**82**	**328**	**69**	**276**	**329**	**1,316**

Jurisdiction	Species Name	Alternative 1		Alternative 3		Alternative 4		Alternative 5		Alternative 6	
		Quantity	Mitigation Amount*	Quantity	Mitigation Amount*	Quantity	Mitigation Amount*	Quantity	Mitigation Amount*	Quantity	Mitigation Amount*
Santa Monica Mountains National Recreation Area	Numerous native and non-native tree species[b]	98	196 to 392[c]	98	196 to 392[c]	0	0	0	0	0	0
City of Santa Monica Tree Code	Numerous native and non-native tree species[b]	0	0	0	0	76	152 to 304[d]	76	152 to 304[d]	0	0
Metro/City of Los Angeles Street Tree Policy	Numerous native and non-native tree species	2,934	5,868 plus additional for heritage trees	2,670	5,340 plus additional for heritage trees	1,480	2,960 plus additional for heritage trees	1,080	2,160 plus additional for heritage trees	609	1,218 plus additional for heritage trees
	Grand Total	**3,282**	**7,056 to 7,252 plus heritage trees**	**2,926**	**6,160 to 6,356 plus heritage trees**	**1,638**	**3,440 to 3,592 plus heritage trees**	**1,225**	**2,588 to 2,740 plus heritage trees**	**938**	**2,534 plus heritage trees**

Source: Metro, 2025e

[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 Santa Monica Mountains National Recreation Area and Policy-protected trees listed in the Sepulveda Transit Corridor Project Ecosystems and Biological Resources Technical Report, Appendix B – Attachment 1, Tree Inventory Tables.

[d.] Santa Monica Mountains National Recreation Area mitigation amounts presumed to be within range of ordinances and policies within the area; final mitigation would be decided through coordination.

TBD = To be determined.
* Mitigation amount describes the number of replacement trees as per applicable tree ordinance or policy.

3.5 Water Resources

Refer to the *Sepulveda Transit Corridor Project Water Resources Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025f).

3.5.1 Water Quality and Drainage

The Clean Water Act of 1972 (CWA) establishes the basic structure for regulating discharges of pollutants into waters of the U.S. and gives the EPA the authority to implement pollution control programs such as setting wastewater standards for industries. In most states, including California, the EPA has delegated this authority to state agencies. The water resources study area includes surface water and groundwater resources within the Project Study Area. A variety of creeks, rivers, man-made reservoirs, and canals exist within the Project Study Area (Figure 3-1). In the northern portion of the Project Study Area, the Pacoima Wash extends to Vanowen Street between Sepulveda Boulevard and Van Nuys Boulevard. North of the Santa Monica Mountains, the Los Angeles River crosses the Project Study Area north of US-101. Encino Creek is located southwest of the I-405 and US-101 junction. Located outside and south of the Project Study Area, Ballona Creek, the Centinela Creek Channel, and the Sepulveda Channel cross near State Route 90. South of the Project Study Area, the Sepulveda Channel runs along the westside of I-405 and collects water from various catch basins and transports the water to Ballona Creek. Water from Ballona Creek ultimately discharges at the Marina del Rey Harbor. There are several reservoirs largely concentrated in the Santa Monica Mountains. The Stone Canyon Reservoir is located to the east of I-405 in the Santa Monica Mountains, 13 miles northwest of downtown Los Angeles. This reservoir provides water to 400,000 people in Pacific Palisades, the Santa Monica Mountains, and West Los Angeles. The Encino Reservoir is located west of I-405 within the Santa Monica Mountains in the City of Encino. The Sepulveda Dam Recreation Area is located north of the I-405/US-101 interchange in the Valley.

The Project Study Area is urbanized and largely covered with impervious surfaces associated with areas of asphalt, concrete, buildings, and other land uses that concentrate storm runoff. Stormwater and other surface water runoff are conveyed to municipal storm drains. Most local drainage networks are controlled by structural flood control measures. There is a large portion of the Project Study Area that is undeveloped, pervious lands in the open space area of the Santa Monica Mountains.

The general stormwater drainage pattern in the southern portion of the Project Study Area is from north to south. The majority of stormwater runoff drains into the Los Angeles County Flood Control District Sepulveda Channel, which starts at the upper reach of the Ballona Creek Watershed as a large diameter storm drain pipe that crosses under the I-405 several times. It then transitions to a large drainage box culvert and then south of the Project Study Area to an open channel before connecting with Ballona Creek, which is a flood control channel.

The general stormwater drainage pattern in the northern portion of the Project Study Area in Upper Los Angeles River Watershed is from south to north in developed storm drain systems. From the ridge of the Sepulveda Pass going north, the majority of stormwater drains to a Caltrans storm drain main that connects to a Los Angeles County Flood Control District large drainage box culvert that discharges to the Los Angeles River, which is a flood control channel.

Operational Effects

Table 3-16 lists the estimated total impervious surface areas created, existing impervious surface areas, and amount of new impervious surfaces for the project alternatives. Alternatives 1, 3, and 6 would increase impervious surface area in the Project Study Area. Alternatives 4 and 5 would decrease impervious surface area in the Project Study Area. It is anticipated that Modified Alternative 5 would also likely result in a decrease in impervious surface area.

Table 3-16. New Impervious Surface Area

Alternative	Existing Impervious Surface Area (sq. ft.)	Amount of New and Reconstructed Impervious Surface Area Site (sq. ft.)	Net Impervious Area (sq. ft.)
Alternative 1	457,853	709,856	252,003
Alternative 3	571,893	657,821	85,928
Alternative 4	473,986	460,489	-13,497
Alternative 5	430,675	408,127	-22,548
Alternative 6	Not Applicable	688,731	395,539

Source: Metro, 2025f

sq. ft. = square feet

Figure 3-1. Watersheds in the Project Study Area



Source: Metro, 2025f

All project alternatives would be designed to incorporate several sustainability features, such as native landscaping, rainwater cisterns for capture and reuse, permeable surfaces, soil improvements, increased vegetation, and on-site retention, in compliance with the *Low Impact Development Standards Manual* (LADPW, 2014) and the City of Los Angeles *Planning and Land Development Handbook for Low Impact Development* (City of Los Angeles Department of Sanitation, 2016), which would serve to reduce impervious area and promote infiltration, thereby improving water quality. It would also comply with all

applicable federal, state, regional and local agency water quality protection laws and regulations, as well as commonly used industry standards. All project alternatives would comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements, Statewide Stormwater Permit, the City of Los Angeles Municipal Code, the City of Los Angeles and County of Los Angeles Low Impact Development (LID) Ordinance, and all other applicable regulations for all operational activities, including adherence to an approved LID Plan which would identify the BMPs for operations. The types of LID BMP designs to be incorporated would be determined during the design phase. Although final design would dictate actual stormwater management aspects of the Project, potential BMPs would include depressed landscape gardens for runoff retention and infiltration, permeable surfaces to reduce runoff volume, hardscape replacement with pervious or planted substitutions, bioswales or artistic water features that creatively convey runoff into planted or pervious areas, roof downspout discharges to vegetated areas, and rainwater cisterns and other on-site stormwater retention methods. These measures and practices would be incorporated at applicable component sites and would serve to promote infiltration.

The LID Plan would identify the BMPs for post-construction design (i.e., operational characteristics to control/treat runoff). All project alternatives would include design elements that serve to capture and re-use stormwater in accordance with current LID requirements, thereby minimizing the potential for both on- and off-site erosion, siltation, and flooding. LID design features would slow (detain or retain) stormwater, which would reduce the runoff volume and would decrease the peak runoff discharge velocity for design storms—also ultimately reducing the amount of stormwater runoff burden into the City's stormwater conveyance systems. As a result, less flow with fewer pollutants would be transported through the conveyance systems, and ultimately into surface waters. Additionally, natural treatment of infiltrated runoff would occur, thereby improving exfiltrated water from LID and water quality additions to the groundwater table, including treatment for potential pollutants (e.g., petroleum products/lubricants, metals, paints, solvents, and other products) used or generated during operations.

All project alternatives are anticipated to require Industrial General Permit coverage for maintenance facilities, fueling operations, equipment cleaning/washing operations, and TPSSs. As such, an Industrial General Permit Stormwater Pollution Prevention Plan (SWPPP) would be prepared and submitted to the State Water Resources Control Board prior to operations. The SWPPP includes discharge prohibitions, effluent limitations, and receiving water limitations that must be adhered to during operations. SWPPP BMPs would include, but not be limited to good housekeeping, prevention and maintenance activities, material handling and waste management, erosion and sediment controls, training, and recordkeeping. Other BMPs may also be employed, as appropriate, such as indoor/covered areas for maintenance, approved flammable/hazmat storage lockers for lubricants and other industrial liquids, drip/spill protection in maintenance areas and similar BMPs when conducting maintenance, dry cleanup practices, and dedicated enclosed areas for metal working, painting, and welding.

Maintenance activities associated with system operation, such as lubrication, would occur at each of the proposed MSFs and TPSS locations for the alignment. Pollutants (e.g., petroleum products/lubricants, metals, paints, and solvents) used or generated during operations and maintenance would contribute to water pollution if not properly dispensed, stored or disposed. Uncontrolled discharge of runoff carrying these potential pollutants would result in impacts to water quality in waterways, including the Pacoima Wash, Encino Creek, Ballona Creek, and the Los Angeles River, violating water quality standards and waste discharge requirements if not appropriately managed.

The potential for different operational effects between the project alternatives related to surface water quality are minor due to the comprehensive permitting requirements associated with water quality. The

project alternatives with potential to generate the most surface runoff have the highest potential to impact water quality. These would be Alternatives 1 and 3 with Alternatives 4, 5, 6, and likely Modified Alternative 5 having less potential for surface water effects. However, the potential for adverse effects to water quality would be equally minimized for all project alternatives would with adherence to existing regulations and proper implementation of stormwater compliance requirements.

Construction Effects

Construction activities for all project alternatives such as demolition, excavation, and grading would temporarily expose bare soil, increasing the risk of erosion. Uncontrolled erosion and discharge of sediments and other potential pollutants, including the discharge of fill material, would affect water quality in receiving waters (e.g., the Pacoima Wash, Tujunga Wash, and Los Angeles River) if not appropriately managed by proper implementation of the construction SWPPP. In addition to sediments, trash, concrete waste, and petroleum products, such as fuels, solvents, and lubricants, would degrade water quality and contribute to water pollution. The use of construction equipment and vehicles during the Alternative 1 construction would result in spills of vehicle-related fluids that would contribute to water pollution. Improper handling, storage, or disposal of these materials or improper cleaning and maintenance of equipment would result in accidental spills and discharges that would contribute to water pollution.

Groundwater levels in the Project Study Area generally range from depths of approximately 16 to 115 feet bgs, with deeper groundwater at the base of the Santa Monica Mountains and shallower groundwater south of Victory Boulevard. Removal of nuisance groundwater that seeps into boreholes during construction may be required for pile installations. If dewatering is required during surface-based construction activities, dewatering activities would be conducted in compliance with the Los Angeles Regional Water Quality Control Board's NPDES dewatering permits, *Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties* (Order R4-2018-0125) and *Waste Discharge Requirements for Specified Discharges to Groundwater in the Santa Clara River and Los Angeles River Basins* (Order No. 93-010), as applicable. In such cases, temporary pumps and filtration systems would be used in compliance with the applicable NPDES permits. The temporary system would be required to comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. Water removed from the boreholes would be containerized and analyzed to determine the proper disposal method or possible treatment and re-use on-site. The treatment and disposal of the dewatered water would occur in accordance with the requirements of NPDES Order R4-2018-0125 and Order No. 93-010, as applicable. The WDRs require that waste be analyzed prior to being discharged in order to determine if it contains pollutants in excess of the applicable Basin Plan water quality objectives. Or if possible, the dewatered water would potentially be treated and reused on-site (e.g., for dust control or cleaning equipment) rather than being disposed.

There is potential for groundwater to be encountered during tunnel boring activities in areas where the tunnel invert is below groundwater level; however, proposed tunnel boring activities would not be expected to require dewatering because tunnel boring would involve a closed mode machine that would operate under the water table, and a precast concrete tunnel liner (designed for full hydrostatic pressure) would be installed post-excavation. Both of these features would substantially reduce (if not eliminate) groundwater ingress during construction. The watertight systems (e.g., secant pile, slurry wall) to be employed during station construction would minimize groundwater intrusion, and any residual impacts would be managed under the established regulatory framework.

Improper handling, storage, or disposal of construction materials used during construction activities of underground components, such as sediments, concrete waste, grouting materials, and petroleum products, would result in accidental spills and discharges that would contribute to groundwater pollution. Grouting operations, in particular, may involve the use of chemical additives and materials that, if not properly contained, could infiltrate groundwater or surface water systems. These materials may include bentonite, cement-based grouts, and chemical additives, which could alter water chemistry if discharged improperly. Uncontrolled discharge of groundwater carrying these potential pollutants would result in degradation of groundwater and surface water if it is not properly managed during construction activities. If groundwater containing contaminants are encountered during dewatering activities, additional treatment or special disposal methods would be required to comply with applicable regulatory requirements and prevent contamination of receiving waters. Best management practices would be implemented to ensure proper containment and disposal of grouting materials and wastewater, as well as regular monitoring and adaptive management.

All project alternatives would be required to comply with all applicable water quality protection laws and regulations at the federal, state, regional, and local levels, as well as commonly used industry standards. These include the CWA, Porter-Cologne Water Quality Control Act, State of California Antidegradation Policies, NPDES General Construction Permit requirements, the Municipal Separate Storm Sewer Systems (MS4) Permit, the NPDES Statewide Stormwater Permit and the *Construction Site Best Management Practices Manual*, and the City of Los Angeles LID Ordinance. In addition, all project alternatives would be required to comply with a Construction General Permit and/or Industrial General Permit to minimize potential effects to surface water bodies. These permitting programs were established by the State Water Resources Control Board in accordance with CWA Section 402(p), which regulates municipal and industrial stormwater discharges under the NPDES program, the State Water Resources Control Board adopted an Industrial General Permit.

In accordance with mandated permitting requirements, all project alternatives would be required to prepare and submit a construction SWPPP, which must be submitted to the SWRCB prior to construction, and adhered to during construction. The construction SWPPP would identify the BMPs that would be in place prior to the start of construction activities and during construction. BMP categories would include erosion control, sediment control, tracking control, wind erosion, stormwater and non-stormwater management, and materials management. Although specific temporary construction-related BMPs would be selected at the time of SWPPP preparation, potential BMPs would likely include fiber rolls, bonded-fiber matrix hydroseeding, soil furrowing, water bars, and check dams for erosion control, inlet protection (sand/gravel bags and geotextiles) silt fencing, sediment traps/basins for sediment controls, soil berms around disturbed areas, phasing of soil disturbance during the wet season (i.e., limiting widespread grading), and implementation of Rain Event Action Plans for effectively managing erosion and pollutant discharge during significant rainfall events.

The potential for different construction effects between the project alternatives related to surface water quality are minor due to the comprehensive permitting requirements associated with water quality. The project alternatives with potential to generate the most surface runoff have the highest potential to impact water quality. These would be Alternatives 1 and 3. However, the potential for adverse effects to water quality would be equally minimized for all project alternatives with adherence to existing regulations and proper implementation of stormwater compliance requirements.

Potential NEPA Avoidance, Minimization, and Control Measures

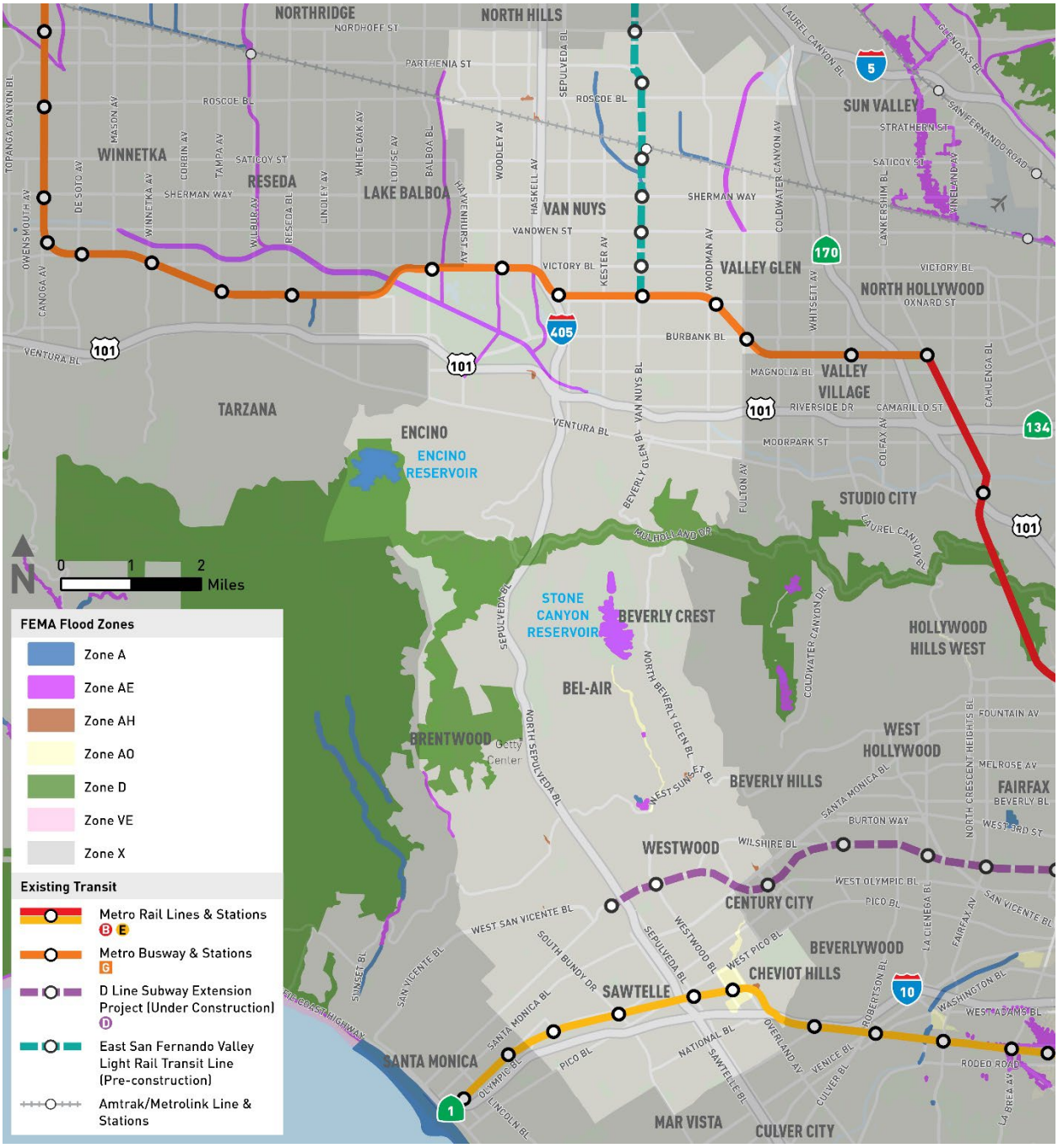
All project alternatives will be required to obtain an NPDES Construction Activities Stormwater General Permit from the Los Angeles Regional Water Quality Control Board. This permit requires preparation and implementation of a SWPPP that incorporates BMPs for erosion control.

All project alternatives will be required to obtain an MS4 Permit, also called storm drain systems, which covers the permittees for contributions to discharges of stormwater and urban runoff. MS4 permits impose basic programs, or minimum control measures, to mitigate stormwater quality issues. These programs include public information and participation, industrial/commercial inspection, planning and land development, development construction, public agency activities, and illicit connection/discharge abatement.

3.5.2 Floodplains

Under Executive Order 11988, all federal agencies are directed to avoid to the extent possible long-and short-term adverse impacts associated with the occupancy and modification of floodplains. In addition, federal agencies should avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The 100-year floodplain is defined as areas that will be inundated by the flood event having a 1 percent chance of being equaled or exceeded in any given year. The Federal Emergency Management Agency (FEMA) provides floodplain information to allow local jurisdictions to regulate development in and around floodplains through Flood Insurance Studies and their associated Flood Insurance Rate Maps. Figure 3-2 depicts all flood hazard zones within the Project Study Area with an overlay of each project alternative alignment.

Figure 3-2. FEMA Flood Zones



Source: Metro, 2025f

Operational Effects

All project alternatives, including ancillary facilities, would primarily operate outside of the FEMA-designated 100-year floodplain. A small segment of the Project Study Area for all project alternatives at the ridgetop of Santa Monica Mountains, located at Mulholland Drive, and open space areas owned by Los Angeles County is located in an area of undetermined flood hazard. Other small portions within the Study Area and east of Overland Avenue are subject to inundation by 1-percent-annual-chance of shallow flooding. There are no 500-year flood plains within the Project Study Area.

Los Angeles River and Ballona Creek are the major flood control measures for draining stormwater and directing it safely to the San Pedro Bay and Santa Monica Bay, respectively. The risk related to flooding is considered low because the project alternatives are located along well-developed areas that maintain storm drainage and water runoff control. The project alternatives would not alter the ability of floodways to convey the 100-year flows and there would be negligible change to the floodplain extents.

The Encino Reservoir is located on the west side of the Project Study Area approximately 2.1 miles west of the Alternatives 1 and 3 alignments, and the Stone Canyon Reservoir is located on the eastern side of the Project Study Area approximately 1.3 miles east of the Alternatives 1 and 3 alignments. Both reservoirs are in the Santa Monica Mountains. These reservoirs have a risk of inundation with a 1 percent annual chance of flooding since they retain a significant amount of water. However, given the distance of Alternatives 1 and 3 from the reservoirs, any oscillation and subsequent release of water in the reservoir as part of a seiche would not inundate Alternative 1 or 3. Alternatives 4, 5, 6, and Modified Alternative 5 would be subterranean alignments and would not be subject to flooding from these reservoirs.

The potential for different operational effects between the project alternatives related to flooding are minor because the alignments would primarily operate outside of the FEMA-designated 100-year floodplain. The potential for adverse effects to flooding would be minimal for all project alternatives.

Construction Effects

Similar to operational impacts, all project alternatives, including ancillary facilities, would primarily be constructed outside of the FEMA-designated 100-year floodplain. The potential risk related to flooding is low because the project alternatives are located along well-developed areas that maintain storm drainage and water runoff control. Related to Alternative 6, construction activities during construction of the Stone Canyon Reservoir vent shaft and other ancillary facilities near the reservoir may temporarily increase the potential for a release of construction-related pollutants during inundation. However, the risk related to flooding would be considered low as the Project alignment extends along well-developed areas that maintain storm drainage and water runoff control.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.5.3 Groundwater

The Project Study Area is within the San Fernando Valley Groundwater Basin and Santa Monica Subbasin within the Coastal Plain of Los Angeles. The Sustainable Groundwater Management Act designated the Santa Monica Subbasin as medium priority, and the San Fernando Valley Groundwater Basin as very low priority based on the basin prioritization. Sources of water supply in Los Angeles County include groundwater. Figure 3-3 depicts the Project Study Area groundwater basins with an overlay of each Alternative alignment.

Figure 3-3. Groundwater Basins Underlying the Project Study Area



Source: Metro, 2025f

Operational Effects

Surface-based operations for the project alternatives would not result in groundwater extraction or use of groundwater supply. The project alternatives would not decrease groundwater supplies or interfere substantially with groundwater recharge to the extent that they may impede sustainable groundwater management. Depending on final design features, exfiltration from LID/treatment BMPs may improve groundwater recharge characteristics in the Project Study Area.

Specific to Alternatives 4, 5, 6, and Modified Alternative 5, operation of underground stations and tunnels would not be expected to impact groundwater supplies or groundwater recharge. A precast concrete tunnel liner designed for full hydrostatic pressure would be installed post-excavation, which would substantially reduce (if not eliminate) groundwater ingress during operations. Groundwater intrusion into underground facilities is not anticipated. These alternatives would be designed to incorporate several sustainability features, such as pervious pavement, native landscaping/soil improvements, landscaped stormwater conveyance, on-site retention, and other appropriate and applicable design features that serve to capture, treat, and re-use stormwater in compliance with current LID requirements, promoting infiltration and groundwater recharge (after treatment). These measures and practices would be incorporated at applicable component sites. The project alternatives would be required to comply with all applicable federal, state, regional, and local agency water quality protection laws and regulations, and water quality control and/or sustainable groundwater management plans. Additionally, operation of the underground stations would not involve the extraction of any groundwater and would not be expected to impact groundwater supplies or groundwater recharge. Therefore, these project alternatives would not be expected to result in a decrease in groundwater supplies or interfere substantially with groundwater recharge to the extent that they may impede sustainable groundwater management. Depending on final design features, exfiltration from LID/treatment BMPs is anticipated to improve groundwater recharge characteristics of the area. Additionally, natural treatment of infiltrated runoff would occur, thereby improving exfiltrated water from LID and water quality additions to the groundwater table.

Construction Effects

Groundwater levels in the Project Study Area generally range from depths of approximately 20 to 110 feet below ground surface, with deeper groundwater depths occurring at the base of the Santa Monica Mountains. Construction depths associated with Alternative 1 range just below surface level to 80 feet below pile depth. Construction depths associated with Alternative 3 range between 6 and 300 feet below ground surface. Construction depths associated with Alternatives 4 and 5 range between 6 and 500 feet below ground surface. Construction depths associated with Alternative 6 range between 6 and 255 feet below ground surface.

Temporary pumps and filtration systems would be used for dewatering in compliance with the NPDES permit. This includes the removal of nuisance water from the Stone Canyon Vent Shaft constructed for Alternative 6. Dewatering activities have the potential to lower the groundwater table and contaminate groundwater resources. Contaminated groundwater may contain pollutants listed for Reach 5 of the Los Angeles River and Ballona Creek on the 2020 - 2022 303(d) list. Dewatering activities, including those associated with grouting, would be conducted in accordance with applicable regulations. Nuisance seepage water removed from the boreholes would be conducted in compliance with relevant NPDES requirements related to construction and discharges from dewatering operations. Nuisance water would be containerized and analyzed consistent with existing applicable regulations to determine the proper disposal method. The treatment and disposal of the dewatered water would occur in accordance with the requirements of the Los Angeles Regional Water Quality Control Board Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. The potential for impacts to groundwater would be minimized with adherence to existing regulations.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.6 Visual Resources

Refer to the *Sepulveda Transit Corridor Visual Quality and Aesthetics Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2024g).

3.6.1 Scenic Vista

The term "scenic vista" refers to visual access to, or the visibility of, a particular sight from a given vantage point or corridor. The subjects of valued or recognized views may be focal (meaning of specific individual resources), or panoramic (meaning broad geographic area). Panoramic views are typically associated with scenic vistas that provide a sweeping geographic orientation.

Scenic views within the Project Study Area include the Santa Monica Mountains, hillsides, and the Los Angeles River. Sweeping views of the Santa Monica Mountains and hillsides are considered panoramic and can be seen from designated vantage points, public hiking trails, and public right-of-way. Panoramic views from the "flatlands" are not readily available, due to the existing street grid pattern and built environment. Rather, panoramic vantage points are primarily located within hilly areas. The Stone Canyon Overlook is located on the south side of Mulholland Drive and provides panoramic south-facing views of the Santa Monica Mountains and the Stone Canyon Reservoir. In addition, the Johnson Overlook is located north of the Stone Canyon Reservoir on the north side of Mulholland Drive. Visitors can take in north-facing views of the Valley, and the Santa Susana and San Gabriel Mountains. These views represent the scenic views available from various publicly accessible locations in the Santa Monica Mountains, and other hilly areas within the Project Study Area. The perspective and visibility may change depending on various factors, such as the viewer location, elevation, bad air pollution days, or weather. Limited focal views of the Santa Monica Mountains and the hillsides within the lower areas are available along various north-south streets and I-405. However, most of the views to the Santa Monica Mountains and the hillsides are blocked by intervening buildings, street trees, and, on some streets, overhead utility lines. In summary, public panoramic and focal scenic views are currently available in the Project Study Area, but the quality of the views can vary significantly.

Operational Effects

The aerial components associated with Alternatives 1, 3, and 4 would present new vertical features in the landscape that would be highly visible. However, views of the San Gabriel Mountains and Santa Monica Mountains would not be substantially obscured and would continue to be limited by the surrounding urban development. As such, views of scenic vistas would not be substantially affected with implementation of Alternatives 1, 3, and 4. Alternative 4 components that would primarily be located underground would not block views of scenic vistas. The primary visual elements of Alternatives 5, 6, and Modified Alternative 5 would be station entrances and the MSF sites. Views of the proposed stations would be limited, and the low-rise structures would not be visually obtrusive. Views of scenic vistas would not be obstructed. Alternative 6 would also construct a mid-mountain vent shaft facility within the Santa Monica Mountains and would be visible from limited vantage points in the surrounding residential areas. Although the proposed mid-mountain vent shaft facility is a large structure that would be introduced into the visual environment, the mid-mountain vent shaft would not change the natural topography or obstruct views of the Santa Monica Mountains as a whole.

Construction Effects

Construction activities generally cause a contrast to and disruption in the general order and aesthetic character of an area. Although temporary in nature, construction activities may create a visually unappealing quality in a community. Construction of each of the project alternatives would introduce

visually disruptive elements, including excavation, roadway/bridge demolition and reconstruction, structural falsework, tree removal, security fencing, stockpiled building materials, safety and directional signage, station platforms and plazas, and ancillary facilities. Large, heavy equipment may include cranes, bulldozers, scrapers, and trucks. These construction activities could be visible to pedestrians and motorists on adjacent streets, as well as to viewers within nearby buildings. Construction activities, while a visual nuisance, would not substantially obstruct views of the Santa Monica Mountains or San Gabriel Mountains because activities would be temporary and intermittent and limited to the immediate area.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that any project alternative will require control measures to avoid, minimize, or mitigate potential adverse effects.

3.6.2 Scenic Resources

Scenic resources include striking or unusual natural features, the Pacific Ocean, Santa Monica Mountains, and San Gabriel Mountains, and unique urban or historic features as seen from designated scenic highways. No California-designated scenic highways or scenic parkways (or proposed state scenic highways or parkways) are located within the Project Study Area. Additionally, no State of California-designated scenic highways provide views of the Project Study Area. The closest eligible state scenic highway is SR-1 (the Pacific Coast Highway in Southern California), which is approximately 2 miles west of the Project Study Area, and the closest officially designated state scenic highway is SR-27 (Topanga Canyon Boulevard), which is approximately 6 miles west of the Project Study Area.

Operational Effects

The aerial guideway for Alternatives 1, 3, and 4 would travel through designated scenic portions of Sepulveda Boulevard, Santa Monica Boulevard, Sherman Way, and Mulholland Drive. The aerial guideways would not travel through the designated scenic portion of Beverly Glen Boulevard or Sunset Boulevard. Sepulveda Boulevard provides views of the old cross mountain road with a tunnel that travels under Mulholland Drive, as well as views of mountains and the valley. Sherman Way provides views of scenic resources, such as a wide street and landscaped median, as well as the Sherman Way Street Trees historical resource located along Sherman Way between Woodley Avenue and Sherman. No specific scenic features or resources are listed for Santa Monica Boulevard. The proposed aerial guideway has been designed to travel along or parallel to I-405, and it is expected that visual change associated with the aerial guideway at these locations would not be readily noticeable given the existing structures associated with I-405 and background conditions.

In addition, the aerial guideway for Alternatives 1 and 3 would travel beneath the designated scenic Mulholland Drive Bridge, which provides opportunities for multiple scenic views as it winds up the Santa Monica Mountains. Specifically, the *City of Los Angeles Mobility Plan 2035* (DCP, 2016) states that Mulholland Drive provides panoramic views and a “ribbon of park.” Development near Mulholland Drive is also subject to design review guidelines pursuant to the Mulholland Scenic Parkway Specific Plan. The Mulholland Scenic Parkway Specific Plan has designated 14 major vista points along Mulholland Drive that are maintained by the Bureau of Street Maintenance of the LADPW. The inner corridor of the Mulholland Scenic Parkway Specific Plan area is designated as part of the Santa Monica Mountains National Recreation Area, and the Mountains Recreation and Conservation Authority (MRCA) also maintains seven scenic overlooks along Mulholland Drive. The nearest major vista point (also the nearest overlook) is the Johnson Overlook, which is located approximately 0.9 miles east of the Alternatives 1 and 3 alignments. The nearest MRCA-maintained scenic overlook is The Groves Overlook,

which is located approximately 1 mile west of the Alternatives 1 and 3 alignments. The alignments for Alternatives 1 and 3 would not be visible from the Johnson Overlook or the Groves Overlook due to distance, vegetation, existing structures (i.e., I-405), and background conditions.

For Alternatives 1 and 3, the proposed aerial guideways have been designed to travel along or parallel to I-405, and it is expected that visual change associated with the aerial guideway would not be readily noticeable given the existing structures associated with I-405 and background conditions. In addition, the aerial guideways would not be located on Mulholland Highway, which provides protection to potential views of scenic resources. Alternatives 1 and 3 would also meet all of the requirements and obligations of the City of Los Angeles in ensuring preservation of a number of important values related to the Mulholland Highway.

For Alternatives 3 and 4, the aerial guideway would travel through the City of Los Angeles-designated scenic highway along Sunset Boulevard, which provides views of the mountains, estates, and the UCLA campus. However, this portion of the alignment would be located underground and any potential views of the station entrance of the UCLA Gateway Plaza Station would be minimal from Sunset Boulevard.

Alternative 4 would travel beneath designated scenic portions of Sepulveda Boulevard, Santa Monica Boulevard, Sunset Boulevard, and Mulholland Drive. Alternative 4 does not travel through the designated scenic portion of Beverly Glen Boulevard. Sepulveda Boulevard provides views of the old cross mountain road with a tunnel that travels under Mulholland Drive, as well as views of mountains and the valley. Sunset Boulevard provides views of the mountains, estates, and the UCLA campus. No specific scenic features or resources are listed for Santa Monica Boulevard.

Construction Effects

No scenic highways, scenic parkways, or proposed state scenic highways or parkways are located within the Project Study Area. The project alternatives would require tree removal during construction, which would create noticeable changes, exposing previously screened views of infrastructure and construction sites. However, these changes would be temporary and would not be located within a state scenic highway.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that any project alternative will require control measures to avoid, minimize, or mitigate potential adverse effects.

3.6.3 Visual Character and Quality

Visual character may include the following defined attributes and is used to describe, not evaluate, the following: form, line, color, texture, dominance, scale, diversity, and continuity. Visual quality refers to the aesthetics of the landscape, which is based in part on the viewer's values and notions about what constitutes a quality setting. Table 3-17 lists six generalized landscape units, or landscapes within the Project Study Area, and the summaries of the visual characters. The visual descriptions are based on public views, meaning what is visible from a sidewalk, roadway, or other public right-of-way. Figure 3-4 illustrates the boundaries of the areas assessed for visual character and quality.

Table 3-17. Landscape Unit Visual Character

Landscape Unit	Extent	Key Views	Summary
1	National Boulevard to Ohio Avenue	Views of Century City, Interstate 405 (I-405) freeway	The primary viewers consist of motorists, pedestrians, residents, transit commuters, and patrons of commercial businesses. Visual impacts are assessed based on changes to views from publicly accessible locations or public views.
2	Ohio Avenue to Sunset Boulevard	Views of Century City, Santa Monica Mountains, Federal Building, Westwood Recreation Center, Bad News Bears Field, Los Angeles National Cemetery, buildings along Wilshire Boulevard, University of California, Los Angeles campus, I-405	The primary viewers consist of motorists, pedestrians, patrons of commercial businesses, and patrons of University of California, Los Angeles (UCLA). Distant north-facing views of the Santa Monica Mountains are from north–south oriented streets. UCLA patrons also have background views of Century City from certain areas of the main campus.
3	Sunset Boulevard to Mulholland Drive	Views of Santa Monica Mountains, Getty Center, Scenic Mulholland Drive, Stone Canyon Reservoir, undeveloped land	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. A portion of the scenic Mulholland Drive is located in this area. Views consist of the Santa Monica Mountains, Century City, the Valley, and the Stone Canyon Reservoir. On clear days, it may be possible to see the Pacific Ocean.
4	Mulholland Drive to U.S. Highway 101 (US-101)	Views of Santa Monica Mountains, Scenic Mulholland Drive, Stone Canyon Reservoir, undeveloped land	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. A portion of the scenic Mulholland Drive is also located in this area. Looking north from Mulholland Drive, views consist of the Santa Monica Mountains in the foreground and middle ground and Van Nuys in the background. In addition, long-range views of the San Gabriel Mountains to the north are also visible from certain portions of Mulholland Drive where there is limited vegetation.

Landscape Unit	Extent	Key Views	Summary
5	US-101 to Victory Boulevard	Views of San Gabriel Mountains, Los Angeles River, I-405, US-101	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. Views in the southern portion of the area looking south are predominately of the elevated segment of US-101. Long-range views of the Santa Monica Mountains are also visible in some areas, but they are few because of the relatively flat topography and intervening urban development. Public views of the Los Angeles River from the surrounding Project Study Area are obscured by existing development and are generally not available except on Hazeltine Avenue just south of the US-101 overpass. Typical views include the Van Nuys Boulevard and Sepulveda Boulevard commercial corridors and views of I-405 are also visible from Sepulveda Boulevard. Traveling north along Van Nuys Boulevard and Sepulveda Boulevard, long-range views of the San Gabriel Mountains are visible. In addition, traveling south, long-range views of the Santa Monica Mountains are visible.
6	Victory Boulevard to Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor right-of-way	Views of San Gabriel Mountains, Los Angeles River, I-405, LOSSAN rail corridor (right-of-way)	Primary viewer groups generally include residents, employees and patrons of commercial uses, motorists, and pedestrians. Typical views include the Van Nuys Boulevard commercial corridor, which is bordered by parking areas, sidewalks, street trees, commercial buildings, and additional buildings visible in the background. Traveling north along Van Nuys Boulevard, long-range views of the San Gabriel Mountains are visible. Traveling south, long-range views of the Santa Monica Mountains are visible; however, views of the Santa Monica Mountains are dominated by other features in the landscape.

Source: Metro, 2024g

Figure 3-4. Visual Areas of Analysis



Source: Metro, 2024g

Operational Effects

The project alternatives would be located in an urbanized area. The zoning ordinances governing scenic quality of each jurisdiction do not directly regulate the design of transportation infrastructure elements. However, the zoning ordinances, general plans, community plans, and specific plans contain overarching policies that govern the aesthetics of the area. These policies ensure that new development aligns with the community's visual and architectural standards. Additionally, the jurisdictions do not have policies or

regulations that specifically govern visual quality during construction activities. The project alternatives would be designed to be consistent with all Metro policies related to visual resources, including the Metro Systemwide Station Design Standards Policy.

Aboveground Project elements would result in visual contrasts. These elements, including aerial guideways and soundwalls, would be relatively the same height as the existing transportation infrastructure (i.e., I-405 freeway, elevated freeway ramps) and commercial structures, which are already experienced in existing conditions. For example, Figure 3-5 shows the before and after simulation for Alternatives 1 and 3 looking south toward I-405 and the Skirball Center on the right. Because of the highly urban characteristics of the area, these railway structures are typically more visually tolerable. As such, these facilities would be similar to existing transportation infrastructure and commercial structures that already exist in the urban landscape and would not be visually disruptive or incompatible with existing public views. Therefore, the project alternatives would not substantially degrade the existing visual character or quality of public views of the site and surroundings.

Figure 3-5. Before and After Simulation View, View Looking South Toward I-405 and the Skirball Center on the Right



Source: HTA, 2024

For Alternative 1, the Federal Building, listed on the National Register of Historic Places, is located adjacent to the Wilshire Boulevard/Metro D Line Station. The aerial structure on the western side of I-405 would not substantially limit views of the Federal Building. The new aerial structure would introduce a new visual element but would not change the visual character of the building or materially impair its ability to convey its historic significance. The alteration of the setting with the new visual element of the aerial structure would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Due to the highly urbanized characteristics of the area, the aerial structures are generally more visually tolerable. As such, no impacts to the Federal Building are anticipated because these facilities would be similar in scale and appearance to existing transportation infrastructure and commercial structures within the urban landscape. They would not be visually disruptive or incompatible with existing public views of the Federal Building, and they would not impair its historic significance.

For Alternatives 3, 4, 5, 6, and Modified Alternative 5, the proposed UCLA Gateway Plaza Station would not be highly visible and would be complementary and appropriate to the scale and character of the existing buildings on the UCLA campus (Figure 3-6). The UCLA Physical Design Framework describes the approach for development of buildings, infrastructure, and landscape on the campus within the context of the physical planning objectives contained in the LRDP. The setting would be similar to existing infrastructure and commercial structures that already exist in the urban landscape and would not be visually disruptive or incompatible with the UCLA Design Framework. As such, the aboveground components would be similar to infrastructure that already exists in the urban landscape and would not be visually disruptive or incompatible.

Figure 3-6. Before and After Simulation View, View Looking Southeast Toward the Primary Station Entrance of the UCLA Gateway Plaza Station



Source: HTA, 2024

For Alternatives 4, 5, and 6, the tunnel portals would be rectangular-shaped passageway structures without a dissipative design that would blend into the natural topography of the hillside. The tunnel portals would not be visually obtrusive. The portal construction may leave the concrete structure surfaces, shotcrete surfaces, and freshly cut rock surfaces at the portal site permanently exposed. However, these exposed surfaces may be treated to appear naturally formed and weathered to help blend into the surrounding environment.

Alternative 6 would operate underground; however, the Mid-Mountain Vent Shaft structure would be a new visible aboveground structure (Figure 3-7). 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. Although the proposed Mid-Mountain Vent Shaft would be a large structure that would be introduced into the visual environment, the Mid-Mountain Vent Shaft would not change the natural topography of the Project Study Area. The graded access road would be distantly visible. In addition, the Mid-Mountain Vent Shaft structure and associated graded access road would not obstruct views of or alter the visual character and quality of the Santa Monica Mountains, because the Mid-Mountain Vent Shaft structure and the associated access road would be largely obstructed by existing trees and other dense vegetation within the Santa Monica Mountains. Modified Alternative 5 would not include this Mid-Mountain Vent Shaft structure.

Figure 3-7. Before and After Simulation View, View Looking South Toward the Vent Shaft and Stone Canyon Reservoir



Source: HTA, 2024

Construction Effects

Construction activities would include similar equipment to other construction projects in the city, such as mid-rise buildings and other transportation infrastructure. Certain areas may be fenced off with construction barriers and sound walls, resulting in a contrast and change in visual character from the existing conditions. MM AES-1 would include temporary privacy screens to minimize impacts from construction barriers and sound walls. In addition, the designated construction areas along the alignment would experience additional truck traffic compared to existing conditions, with trucks moving materials on- and off-site, and work crews and construction equipment moving around the alignment and between Project components. A portion of the Alternatives 1 and 3 alignments includes a line of mature trees presently between I-405 and Firmament Avenue, which would be removed to accommodate the placement of the proposed aerial guideway infrastructure. Implementation of MM BIO-11 would minimize potential impacts associated with Alternatives 1 and 3 by requiring the preparation and implementation of a tree removal and replacement plan, ensuring that removed trees are replaced with appropriate vegetation to maintain visual connectivity and minimize long-term visual disruption caused by tree removal. MM BIO-12 is similar to MM BIO-11, although specific to Alternatives 4 and 5. MM BIO-13 is similar to MM BIO-11, although specific to Alternative 6. It is anticipated that Modified Alternative 5 would require a similar measure to MM BIO-11.

Potential NEPA Avoidance, Minimization, and Control Measures

MM AES-1: *Privacy screens shall be placed in high visibility areas that have construction-related structures or activities. Privacy screens shall be used in areas requiring tree removal activities adjacent visually sensitive areas, including but not limited to residential areas.*

Refer to MM BIO-11 (Alternatives 1 and 3), MM BIO-12 (Alternatives 4 and 5), and MM BIO-13 (Alternative 6) listed in Section 3.4 and MM AES-1.

3.6.4 Light and Glare

North of US-101, the Project Study Area is generally located within the Sherman Oaks and Van Nuys neighborhoods of the City of Los Angeles, and encompasses commercial, industrial, and residential development with ambient nighttime lighting typical of urbanized settings. Common light sources include the streetlights, vehicle lights, building entrance lighting, parking structure lighting, illuminated signage/billboards, and general illumination from lights shining through windows of structures lining the corridor.

South of US-101, nighttime lighting is more limited in the Santa Monica Mountains. In the developed portions of the Santa Monica Mountains, lighting sources include pedestrian-scaled streetlights, security and decorative wall lighting at residential homes, vehicle headlights, and interior building illumination. By contrast, the undeveloped portions of the Santa Monica Mountains have little to no light or glare sources, other than vehicle headlights.

South of Sunset Boulevard, the Project Study Area is generally located within Westwood and West Los Angeles neighborhoods of the City of Los Angeles, as well as within the City of Santa Monica. The adjacent commercial, industrial, and residential development, as well as cultural and institutional facilities, such as the UCLA campus, contribute to ambient nighttime lighting typical of urbanized settings. As mentioned in the preceding paragraphs, light sources include the streetlights, vehicle lights, building entrance lighting, parking structure lighting, illuminated signage/billboards, and general illumination from lights shining through windows of structures lining the corridor.

Operational Effects

Each of the project alternatives would include several elements (e.g., glass or metal surfaces) that would create new sources of glare at proposed station areas during the day. For all project alternatives, new nighttime light would primarily emanate from station areas (e.g., station plazas, TPSSs, entryways, platforms, and parking facilities), which would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights, and parking facilities) currently exist. For Alternatives 1 and 3, lighting from monorail vehicles on aerial structures is not expected to extend beyond the aerial guideway or roadway right-of-way. In accordance with Metro's Rail Design Criteria, or equivalent, all light sources at the proposed surface parking lots and stations would be directed downward to minimize potential spillover onto surrounding properties, including light-sensitive uses. In addition, according to Metro's Rail Design Criteria and the Systemwide Station Design Standards Policy, Metro's design principles aim to keep illumination and glare from striking adjacent properties, where feasible. Compliance with these requirements would ensure that permanent operations-related light sources at the proposed station areas would be directed downward or feature directional shielding to minimize spillover onto adjacent properties, including residential uses and other light-sensitive uses.

Construction Effects

Construction activities associated with each of the project alternatives would primarily occur during daytime hours, with nighttime construction a possibility for I-405. Nighttime and weekend construction, if any, would comply with local ordinance restrictions. Such activities may include, but are not limited to, tunneling, columns and trackwork, and stockpiling materials. Construction lighting would be directed toward the construction areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. In addition, construction-related illumination would be temporary and limited to safety and security purposes. Construction of the aerial guideway, freeway modifications, and aerial stations as part of the project alternatives would not be a substantial source of light and glare as several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination).

Potential NEPA Avoidance, Minimization, and Control Measures

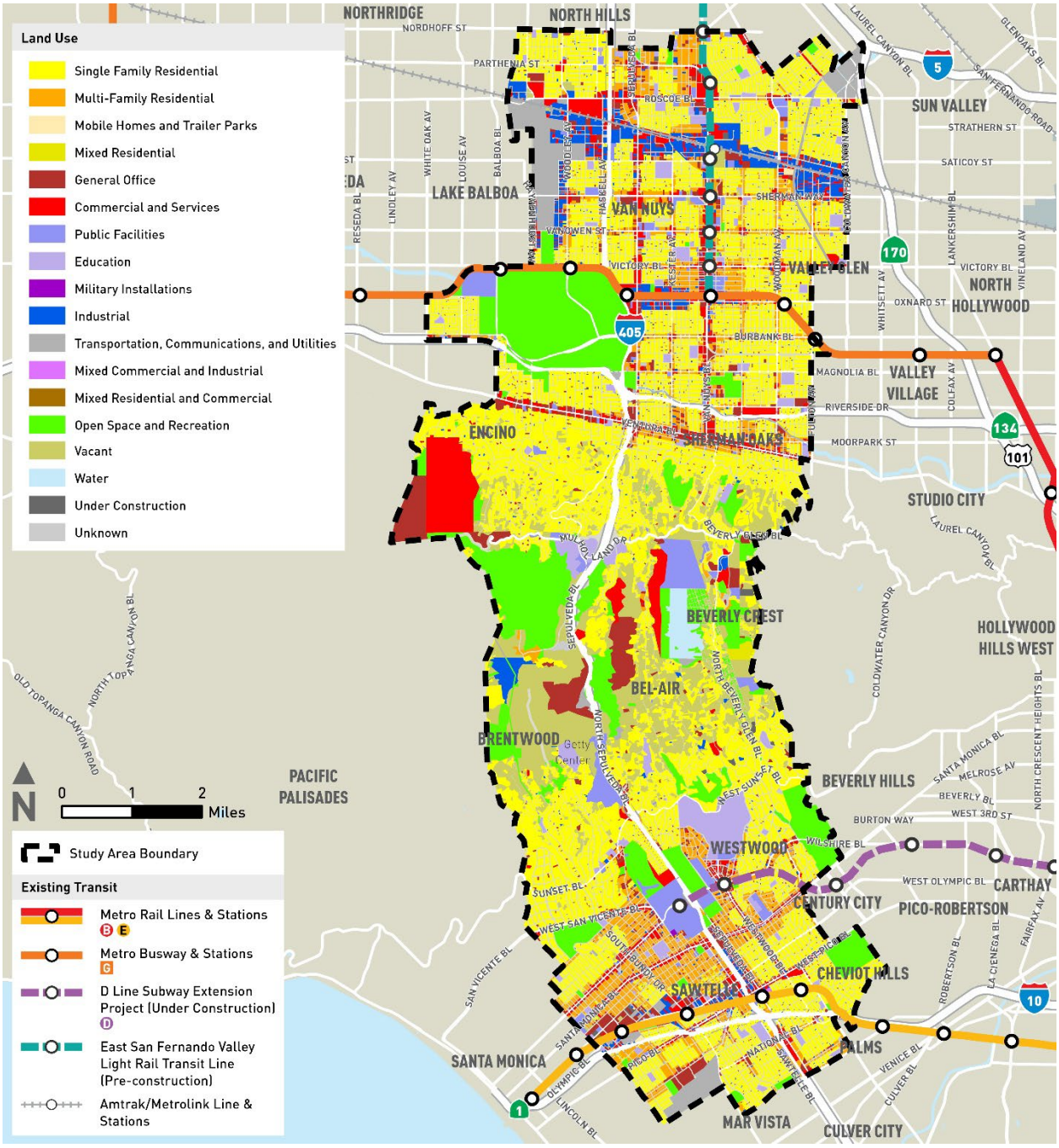
It is not anticipated that any project alternative will require control measures to avoid, minimize, or mitigate potential adverse effects.

3.7 Land Use

Refer to the *Sepulveda Transit Corridor Land Use and Development Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025h). While residential land uses are spread throughout the Project Study Area, commercial land uses (both retail and office) that support high levels of employment tend to be clustered in a limited number of geographic areas, primarily in the Westside area. This type of land use pattern can result in frequent travel by residents outside of their communities for work, leisure, or educational purposes. Patterns of population and employment density follow from the distribution of land uses: areas with high concentrations of residential land uses, particularly multi-family residential uses, have high population densities; similarly, areas with high concentrations of commercial land uses, particularly office uses, have high employment densities. Existing land uses within the Project Study Area are shown on Figure 3-8. They include single- and multi-family residential, commercial and services, industrial, open

space and recreation, facilities, general office, mixed commercial and industrial, and mixed residential and commercial.

Figure 3-8. Existing Land Use within the Project Study Area



Source: Metro, 2025h

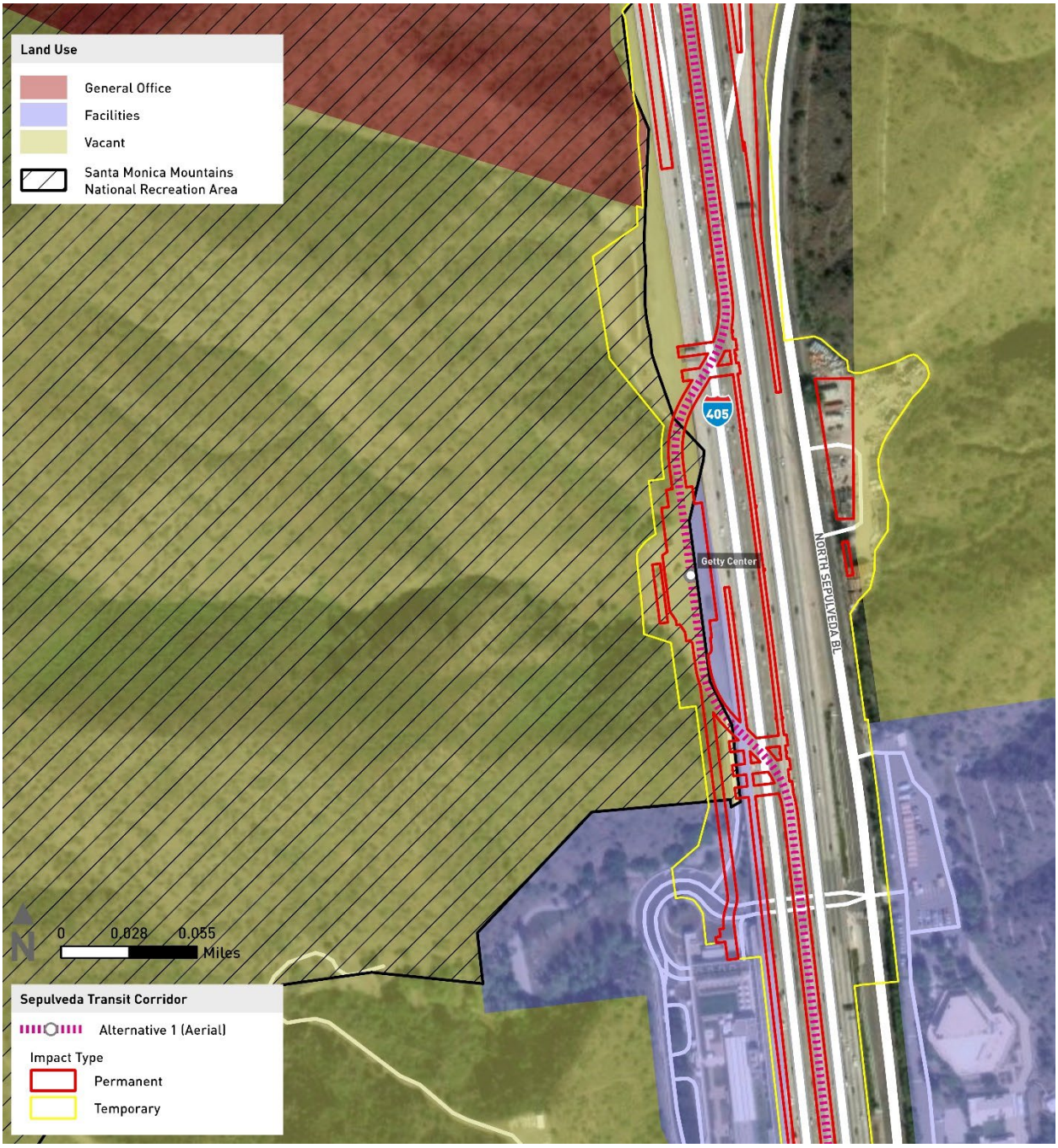
Operational Effects

Each of the project alternatives support goals and policies identified in local land use plans that prioritize public transportation improvements and reductions of vehicle trips. The Project is identified in SCAG's 2024-2050 RTP/SCS Project List (SCAG, 2024). The Project supports the 2024-2050 RTP/SCS goal to provide a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern.

The Project would support the public transportation Goal 10 to "*develop a public transit system that improves mobility with convenient alternatives to automobile travel*" and Objective 10-2 to "*increase the work trips and non-work trips made on public transit*" in accordance with the *Brentwood-Pacific Palisades Community Plan* (DCP, 1998a). Furthermore, the Project would support Objective 11-1 in the *Van Nuys-North Sherman Oaks Community Plan* (DCP, 1998b), which is "*to encourage…rail facilities*." Additionally, Policy 11-2.1 intends to "*develop an intermodal mass transportation plan to implement linkages to future rail service*." Related to the *Bel Air-Beverly Crest Community Plan* (DCP, 1996), the Project would be supportive of the community's objective to "*proposed a public transportation corridor in the vicinity of the San Diego Freeway and Sepulveda Boulevard. This corridor should be utilized for appropriate public transportation. There is a need, through continuing studies, for finding means of facilitating cross-mountain transportation."* Related to the *West Los Angles Community Plan* (DCP, 1999a), the Project would be supportive of the community's Goal 11 to "encourage alternative modes of transportation over the use of single occupant vehicles to reduce vehicular trips." Additionally, Policy 11-1.4 seeks to "promote the development of transportation facilities and services that encourage transit ridership, increase vehicle occupancy, and improve pedestrian and bicycle access."

Alternatives 1 and 3 would conflict with plans that prioritize the preservation of open space such as the *Santa Monica Mountains Conservancy Comprehensive Plan* (Santa Monica Mountains Comprehensive Planning Commission, 1979), and the *Brentwood-Pacific Palisades and Van Nuys-North Sherman Oaks Community Plans* (DCP, 1998a and 1998b, respectively). Alternatives 1 and 3 would acquire open space properties within the Santa Monica Mountains, which would conflict with Policy 4-1.1 which states that "*natural resources should be preserved… on state parkland*" as presented in the *Brentwood-Pacific Palisades Community Plan* (DCP, 1998b). Figure 3-9 shows the open space land that would be acquired for the Getty Center Station under Alternatives 1 and 3.

Figure 3-9. Open Space Acquired for Getty Center Station for Alternatives 1 and 3



Source: Metro, 2025h

Specific to Alternatives 1 and 3, the acquisition of open space for the proposed aerial guideway and stations, TPSS site locations, and retaining walls in the Santa Monica Mountains would not be consistent with the *Santa Monica Mountains Comprehensive Plan* (Santa Monica Mountains Comprehensive Planning Commission, 1979). The priority for the Resource Protection Policy within the Conservation Element of the *Santa Monica Mountains* Comprehensive Plan sets forth that: "*the natural resources of the Santa Monica Mountains should be protected. To the extent possible, all development should be*

compatible with this goal. Conflicts between development and natural resource values should be resolved by giving priority to protecting the resource unless benefits of overriding regional importance would otherwise be lost." The proposed aerial alignment, stations, and TPSS site locations for Alternative 1 would conflict with the Resource Protection Policy of protecting natural resources of the Santa Monica Mountains. Alternative 1 would require a partial acquisition of the Teichman Family Magnolia Park in Sherman Oaks, which is designated and preserved as open space and recreational. Implementation of Alternative 1 would conflict with Objective 5-1 of the *Van Nuys-North Sherman Oaks Community Plan* that seeks "*to preserve existing open space resources and where possible develop new open space.*" The conversion of land uses proposed by Alternative would conflict with the applicable City of Los Angeles Municipal Code requirements.

The Alternative 4 alignment would travel west of Sepulveda Boulevard for approximately 1,680 feet between Del Gado Drive just south of the I-405 northbound Sepulveda Boulevard off-ramp and Greenleaf Street. This portion of the alignment of Alternative 4 would acquire single-family residences and the Highland at Sherman Oaks apartment building that the City of Los Angeles designates as single- and multi-family residential, respectively, and public facilities to accommodate the proposed footprint where the underground tunnel transitions to an aerial guideway and straddle bents to support the Ventura Boulevard Station. Alternative 4 would support Objective 11-1 in the *Van Nuys-North Sherman Oaks Community Plan*, which is "*to encourage…rail facilities,*" and Policy 11-2.1, which seeks to "*develop an intermodal mass transportation plan to implement linkages to future rail service*."

All project alternatives include an MSF that conflicts with LADWP plans that identify the site for the Mid-Valley Water Facility project. The Mid-Valley Water Facility project would replace outdated buildings and trailers currently situated at various locations throughout the San Fernando Valley. Due to the conflict with the proposed facility, the proposed MSFs may result in the need to relocate or construct a new facility. Metro has been in coordination with LADWP, and continued coordination is required to identify a solution to the conflict and determine if a new or relocated facility is required. However, because no alternative site has been identified and the conflict remains unresolved, this analysis assumes that a new LADWP facility would need to be constructed at a different location. For Alternatives 1 and 3, the location proposed for MSF Design Option 1 would avoid this conflict. The MSF for Modified Alternative 5 would also avoid this conflict.

Specific to Alternatives 4 and 5, the existing pedestrian bridge (the "Willis Avenue Pedestrian Overhead", Federal Railroad Administration crossing ID 921721T) is west of Van Nuys Boulevard and connects Willis Avenue to Raymer Street. The removal of the pedestrian bridge would conflict with *City of Los Angeles Mobility Plan 2035*, the state-mandated circulation element of the *City of Los Angeles General Plan* (DCP, 2016). The plan includes a Neighborhood Enhanced Network, which highlights a selection of streets that provide comfortable and safe routes for localized travel of slower-moving modes such as walking, bicycling, or other slow speed motorized means of travel. The Willis Avenue Pedestrian Bridge directly connects Willis Avenue and Raymer Street, which are identified as part of the Neighborhood Enhanced Network. Implementation of MM TRA-7 would minimize potential impacts by replacing the pedestrian bridge with another pedestrian bridge or pedestrian undercrossing.

Specific to Alternative 5, some areas of the alignment would acquire land uses designated as industrial and public facility located along Bentley Avenue between Santa Monica Boulevard and Missouri Avenue. This portion of the Alternative 5 alignment would acquire the Bentley Monica Apartments that the City of Los Angeles designates as multi-family residential, to accommodate the proposed Santa Monica Boulevard Station. Although Alternative 5 would require acquisition of the Bentley Monica Apartments, the Project would advance the goals of promoting public transit use, reducing dependence on private

vehicles and encouraging sustainable development patterns. Furthermore, Metro would comply with the California Relocation Assistance Act, which requires relocation assistance to displaced persons.

Specific to Alternative 6, the land use identified for the proposed access road and ventilation shaft located east of the Stone Canyon Reservoir is designated as restricted public open space (Santa Monica Mountains Comprehensive Planning Commission, 1979) and open space (SCAG, 2024). However, the areas surrounding the Stone Canyon Reservoir include built up features including the access road and supporting building, therefore, Alternative 6 would not conflict with existing land uses or policies for preserving open space resources located within the Santa Monica Mountains. The proposed belowground UCLA Gateway Plaza Station would be consistent with the *UCLA Long Range Development Plan* (UCLA, 2017) in providing better pedestrian access for its students, staff, and visitors, including closer access to the hospital facilities.

Each of the project alternatives would generally be consistent with regional and local transportation goals and policies of providing enhanced transportation access and reducing pollutant emissions. While Alternatives 1 and 3 would conflict with the *Brentwood-Pacific Palisades and Van Nuys-North Sherman Oaks Community Plans*, and the *Santa Monica Mountains Comprehensive Plan*, which prioritize protecting natural resources and open space. The property acquisitions located within the Santa Monica Mountains for the proposed alignment, stations, and TPSS sites in Alternatives 1 and 3 would not be consistent with applicable land use plans, policies, or regulations.

Alternatives 1 and 3 would be required to implement MM LUP-1, requiring Metro to coordinate with the Santa Monica Mountains Conservancy and City to amend the applicable plans, and work with the City to amend the Los Angeles Municipal Code to bring the project into conformity with those planning and zoning requirements. However, the impact would remain because Metro cannot guarantee that the Santa Monica Mountains Conservancy and the City would adopt the necessary amendments, and Alternatives 1 and 3 necessitate the acquisition of open space in the Brentwood and Van Nuys-North Sherman Oaks communities, as well as in the Santa Monica Mountains. These acquisitions inherently conflict with local land use plans, policies, and regulations designed to protect and preserve open space.

Construction Effects

Each of the project alternatives would require construction easements and encroachment permits for construction. Construction easements and encroachment permits would vary along the guideway alignments and proposed stations depending on the type of construction and adjacent land use. The properties under construction easements would retain their original land use designation and zoning classifications. The construction easements would consist of properties with land use designated as commercial, public facilities, residential, industrial, vacant, and institutions. Construction activities would be temporary and would not alter the distinct residential character and integrity of the affected communities.

Specific to Alternative 5, properties located in land uses designated as industrial and public facility near the intersection of Raymer Street and Burnet Avenue in the Van Nuys Community would be utilized to accommodate the proposed tunnel portal footprint, facilitating the alignment's transition from an underground to an aerial configuration. However, development of acquisitions is not part of this Project and would be subject to local jurisdiction development plans. Alternative 5 would not conflict with the applicable City of Los Angeles Municipal Code requirements with approval of zoning code amendments.

Potential NEPA Avoidance, Minimization, and Control Measures

PM LU-1 is applicable to Alternatives 1 and 3. MM TRA-7, explained in Section 3.1, is applicable to Alternatives 4 and 5. This mitigation measure was included in the CEQA documentation and may be included in NEPA documentation.

***MM LUP-1**:* *Metro shall coordinate with the Santa Monica Mountains Conservancy and City to amend the Santa Monica Mountains Conservancy Comprehensive Plan and the Brentwood-Pacific Palisades and Van Nuys-North Sherman Oaks Community Plans, and work with the City to amend the Los Angeles Municipal Code to bring the project into conformity with those planning and zoning requirements.*

3.8 Parks and Recreational Facilities

Refer to the *Sepulveda Transit Corridor Project Parklands Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025i).

The Project Study Area is approximately 5,091 acres and includes approximately 72 parks and recreational facilities and open space areas, which accounts for approximately 19 percent of the land uses in the Project Study Area. The 72 park and recreational facilities include 44 parks; 22 nature/wildlife preserves and regional open spaces; 4 public golf courses; 1 botanical garden; and 1 amusement park. Of the identified facilities, 54 are located in the City of Los Angeles, 9 are in the City of Santa Monica, 1 is in the City of Beverly Hills, and the botanical garden is located at UCLA. Several agencies own and manage the park and recreational facilities identified, including the U.S. Army Corps of Engineers, Los Angeles County, City of Los Angeles, City of Santa Monica, Mountains Recreation and Conservation Authority, Santa Monica Mountains Conservancy, Mountains Restoration Trust, National Park Service, Los Angeles Neighborhood Land Trust, California Department of Parks and Recreation, UCLA, and the Colorado Center.

The existing bicycle facilities in the Project Study Area consist of a network of approximately 117 miles of Class I, Class II, and Class III bicycle facilities, including approximately 18 miles of Class I bicycle facilities, approximately 57 miles of Class II bicycle facilities, and approximately 42 miles of Class III bicycle facilities. There are no Class IV bicycle facilities within the Project Study Area. Future planned bicycle facilities in the Project Study Area would comprise approximately 180 miles of additional bicycle facilities, including approximately 21.1 miles of Class I bike paths, 51.3 miles of Class II bike lanes, 80.6 miles of Class III bike routes, and 26.9 miles of Class IV separated bikeways. Refer to the Section 3.15, Transportation, of the Draft Environmental Impact Report for additional information on active transportation facilities. Off-road bicyclists also have access to unpaved roads and trails in the Santa Monica Mountains, including Getty View Park and Trailhead, which spans several ridges and canyons within the Project Study Area. Approximately 13 miles of recreational hiking trails are identified in the parklands and open space areas within the Project Study Area.

Operational Effects

All project alternatives would provide a new mode of transportation, accessibility, and connectivity in the surrounding communities. As a transportation infrastructure project that does not include housing, the project alternatives would not directly generate permanent residences or increase the existing residential population of the surrounding communities that would increase the use of existing parks and recreational facilities or result in substantial adverse physical effects associated with the provision of new or physically altered parks or other recreational facilities. The Project would improve accessibility to nearby parks and recreational facilities located within 0.5-miles of the stations. Project alternatives

would also help achieve Metro's *First/Last Mile Guidelines* (Metro, 2021) objectives to facilitate bicyclists' accessibility, provide connectivity to the station areas and surrounding communities, and enhance the existing active transportation corridors for the cities.

Occasional large community events typically increase the use of parks, recreational facilities, and bicycle facilities such that recreational users may originate beyond the surrounding communities. During such events, the use of parks, recreational facilities, and bikeways may potentially increase. However, the increased use would be occasional and specific to the community event. Thus, the project alternatives would provide improved connections to such community events and would not directly accelerate or result in a substantial deterioration of existing parks, recreational facilities, or bicycle facilities.

Alternatives 1 and 3 would cross over portions of Sherman Oaks Castle Park and Teichman Family Magnolia Park. Alternative 1 would cross over portions of the following Class I bike paths: Exposition Corridor Bikeway and the Metro G Line Bikeway. Alternatives 1 and 3 would require partial property acquisitions of land designated as open space or recreational land. The potential permanent acquisition of these open space and recreational areas would not affect existing buildings or change the primary function of the existing use. No permanent acquisition of parkland or recreational facilities would be required under Alternative 4, 5, 6, or anticipated under Modified Alternative 5.

The potential partial acquisitions associated with Alternatives 1 and 3 would not cause physical deterioration of the parks to occur or be accelerated because parks and open space land to be acquired would consist of small strips of land along the property boundaries of the affected resources where there are no recreational facilities. Alternatives 1 and 3 would comply with all applicable federal and state requirements, including the Uniform Relocation Assistance and Real Property Acquisition Act of 1971 and Public Park Preservation Act of 1971. USDOT environmental review would trigger the requirements of Section 4(f) of the USDOT Act of 1966, including review of these open space and parkland resource property acquisitions.

Construction Effects

Construction of all project alternatives would be temporary and would not generate permanent residences that would increase the use of existing parks and recreational facilities resulting in accelerated physical deterioration of the facilities or require the expansion of existing recreational facilities. While construction workers may utilize nearby parks and recreational facilities during lunchtime breaks, such use would be temporary and nominal.

Construction of all project alternatives would require temporary street detours at Sepulveda Boulevard. Bicycle movements would be maintained during construction, but lane reductions and street closures would inhibit the flow of bicycle traffic and may require detours. Additionally, the existing bike lane along Sepulveda Boulevard in the Sepulveda Pass would be removed and rebuilt under Alternatives 1 and 3. As a result, the sidewalk would be relocated and temporarily decommissioned, and bicycle routes would be temporarily disrupted during construction and would require detours to maintain continuity with other portions of the bike lanes. Construction activities would not affect access or use of surrounding recreational hiking trails.

Implementation of MM TRA-4 would minimize potential effects by requiring a TMP that specifies measures to lessen disruption during construction and to maintain access to parks and recreational and bicycle facilities during construction. The TMP would also identify detour routes, and bicyclists would be informed of such closures and detours through signage.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that any project alternative will require control measures to avoid, minimize, or mitigate potential adverse effects.

3.9 Communities and Neighborhoods Impacts

Refer to the *Sepulveda Transit Corridor Land Use and Development Technical Report* (Metro, 2025h) and *Sepulveda Transit Corridor Project Communities and Neighborhoods Technical Report* (Metro, 2025j) for information related to existing conditions and the applicable regulatory environment. The following analysis addresses if the Project would physically divide an established community. A physical division would occur if construction or operation of the Project results in the creation of physical barriers within an established community or neighborhood or the disruption of access to community assets.

Operational Effects

Each of the project alternatives would operate within or parallel to existing transportation corridors that are designated as public facilities. While the Project would introduce new physical elements to the existing setting, these elements would be located within or adjacent to I-405 and the LOSSAN rail corridor right-of-way, or City of Los Angeles roadway right-of-way. Importantly, all project alternatives would improve transit accessibility. None of the proposed MSF designs would require the closure of any primary vehicle routes critical to circulation within a community or between communities, and it would be located primarily on existing parcels designated for industrial uses. Surrounding land uses would continue to have access to the surrounding roadway, bicycle, and sidewalk network, and would continue to be accessible to users.

The aerial guideways associated with Alternatives 1, 3, and 4 would be consistent with the surrounding public facilities land uses and would not cause physical division of existing neighborhoods, communities, or land uses to the extent they would be disrupted or isolated. The height of the proposed aerial guideway and stations would be sufficient to maintain access to surrounding uses at pedestrian and vehicle crossings and nearby intersections, thereby maintaining connection and access to existing land uses. Additionally, the proposed aerial guideways and stations would provide sufficient clearance between supporting columns to maintain access to surrounding uses for motor vehicle and pedestrian traffic. At signalized intersections, left-turning traffic would be maintained, and pedestrian access would be maintained via crosswalks. The aerial segment of the proposed alignments and stations located in the Van Nuys community would be located adjacent and parallel to the LOSSAN rail corridor right-of-way. Alternatives 1, 3, and 4 would not preclude the existing accessibility for vehicle and non-vehicle users at signalized intersections, undercrossings, and the Metrolink Van Nuys Station. Furthermore, the existing pedestrian bridge at Raymer Street would be left in place. The height of the proposed aerial guideway and stations would be sufficient to maintain access to surrounding uses at pedestrian and vehicle crossings and nearby intersections, thereby maintaining connection and access to existing land uses. Therefore, communities located north and south of the aerial guideway, where it is parallel to the LOSSAN rail corridor right-of-way, would not be physically divided at this area. Communities would maintain access to local businesses and amenities by traveling along Sepulveda Boulevard, which is parallel to I-405. Additionally, I-405, Sepulveda Boulevard, and Ventura Boulevard would maintain access to existing communities during operations at signalized intersections and crosswalks located along Sepulveda Boulevard and Van Nuys Boulevard, thus, implementation of the proposed stations and MSF sites would not physically divide an established community. The aboveground Project elements of Alternatives 1, 3, and 4 would not restrict access within established communities and would not cause division of communities to the extent they would be disrupted or isolated.

Alternative 1 would permanently close Dickens Street between Ventura Boulevard and Sepulveda Boulevard to vehicle traffic for the construction of a bus loop and transit plaza and would require the closure of the existing I-405 southbound on-ramp from Sunset Boulevard.

Portions of Alternative 4 aerial guideway would be placed along the center median lane of Sepulveda Boulevard, which is currently a two-way left-turn lane. In addition, the aerial guideway would require installation of a raised median or similar barrier along the length of Sepulveda Boulevard to provide protection for the aerial guideway support columns and limit vehicle movements across the center of the roadway due to sight distance conflicts. As a result, all midblock left-turn movements along Sepulveda Boulevard would be eliminated thus diminishing access to businesses and residential development with driveway access from Sepulveda Boulevard. In addition, proposed straddle bents would be situated within existing sidewalks affecting pedestrian circulation and affecting driveway access. Approximately 50 commercial driveways and 22 residential driveways would be affected by the physical presence of the aerial guideway and associated median/column protection, by restricting left-turn in/left-turn out movements. The restriction on left turns along Sepulveda Boulevard would result in inconvenient vehicle circulation, particularly for local residents seeking access to community-serving business and residences along Sepulveda Boulevard. However, the proposed aerial guideway and stations would provide sufficient clearance between the support columns to maintain access to surrounding uses for motor vehicles. While the center left-turn lane along Sepulveda Boulevard would be removed to accommodate the columns, motorists would still be able to make left turns at major intersections, thereby ensuring access to surrounding land uses. Additionally, pedestrian access would be maintained via the sidewalk network through crossings at signalized intersections located along Sepulveda Boulevard. The neighborhoods west of Sepulveda Boulevard share a similar development pattern to those east of Sepulveda Boulevard. The proposed aerial guideway, stations, raised median, and other Project elements associated with Alternative 4 would introduce new vertical structures that could alter the visual character of the Sepulveda commercial corridor. However, Alternative 4 incorporates Project Measures (PM) LU-1 and LU-2, which aim to enhance urban design and maintain community cohesion along Sepulveda Boulevard. PM LU-1 would provide circulation improvements, such as left-turn breaks in the median where feasible, to help maintain accessibility and connectivity for businesses and residents. PM LU-2 would introduce urban design enhancements, including landscaping, decorative lighting, wayfinding improvements, and streetscape elements that could help soften the visual presence of the new infrastructure and integrate it more harmoniously into the community setting.

Specific to Alternatives 4 and 5, an existing pedestrian bridge located west of Van Nuys Boulevard that connects Willis Avenue to Raymer Street over the LOSSAN rail corridor would be removed to accommodate the Project. Removal of this pedestrian bridge would still enable communities located north of the LOSSAN rail corridor right-of-way and south of Keswick Street to have access to school on either side of the tracks via alternative roadways including Van Nuys Boulevard, Sepulveda Boulevard, and Saticoy Street. Surrounding land uses would continue to be accessible to vehicle and non-vehicle users via the surrounding roadway, bicycle, and sidewalk network through crossings at signalized intersections located along Van Nuys Boulevard. Travel across Sepulveda Boulevard at major intersections and access to all land uses within the Van Nuys community would be maintained.

Alternatives 5 6, and Modified Alternative 5, being primarily underground, would maintain access to surrounding uses at pedestrian and vehicle crossings and nearby intersections, thereby maintaining connection and access to existing communities and businesses. This also pertains to the underground portion of the Alternative 4 alignment south of the Valley. Alternatives 5 6, and Modified Alternative 5

would not restrict access within established communities that would cause a division of communities to the extent they would be disrupted or isolated. In addition, the Project would not conflict with the predominant uses present in the surrounding areas and would provide a transportation option to the surrounding community. Overall, the project alternatives would not physically divide an established community through their operation.

Construction Effects

Each of the project alternatives would require temporary street detours to accommodate the proposed aerial guideway and stations, retaining wall, and I-405 on- and off-ramp construction. The proposed aerial guideway and stations would be constructed within or adjacent to I-405, within city streets, and within the existing LOSSAN rail corridor right-of-way. In locations where the alignment is adjacent to the I-405 corridor or the LOSSAN rail corridor or where I-405 widening is necessitated for the Project, temporary street detours and encroachment permits would be required, which would temporarily limit access to established communities. Additional street and sidewalk closures may limit property access between established communities. However, these closures would be temporary and periodic and would not permanently restrict access to or from an established community because alternative routes would be provided as needed. The Project would follow Metro standard practices that include scheduling of lane and/or road closures to minimize disruptions and require preparation of a construction TMP to reduce the disruption caused by construction work zones (MM TRA-4). Metro and the contractor would notify and work with surrounding communities regarding the construction schedule and would use wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways.

Alternatives 1 and 3 would permanently close Dickens Street between Ventura Boulevard and Sepulveda Boulevard to vehicle traffic for the conversion of a bus loop and transit plaza. In addition, the existing I-405 southbound on-ramp from Sunset Boulevard would be closed. Construction of Alternative 4 would require a raised median along Sepulveda Boulevard in the San Fernando Valley (Valley) to accommodate aerial guideway columns, resulting in the removal of left turns along Sepulveda Boulevard to and from La Maida Street, Valleyheart Drive South, Hesby Street, Hartsook Street, Archwood Street, Hart Street, Leadwell Street, Covello Street, and several driveways. Alternative 5 would require the closure of Cabrito Road and at-grade LOSSAN rail corridor near Extra Space Storage off of Raymer Street for the aerial guideway. Street and sidewalk closures associated with all project alternatives during construction would temporarily limit property access between established communities. However, these closures would be temporary and periodic and would not permanently restrict access to or from an established community because alternative routes would be provided as needed. Nevertheless, without mitigation, temporary closures could result in impact related to access or from an established community. To address these potential impacts, all project alternatives would be required implement of MM TRA-4, which would require preparation and implementation of a TMP to reduce the impacts of construction work zones, provide wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways, and require Metro and the contractor to notify and coordinate with surrounding communities regarding the construction schedule.

Alternatives 4 and 5 require the removal of the Willis Avenue Pedestrian Overhead, which during construction would temporarily affect pedestrian connectivity across the LOSSAN corridor. However, alternative roadways, including Van Nuys Boulevard, Sepulveda Boulevard, and Saticoy Street, would maintain access during this period. Surrounding land uses would remain accessible to vehicle and non-vehicle users via the surrounding roadway, bicycle, and sidewalk network at signalized intersections. Access across the LOSSAN corridor would be maintained during removal of the bridge via alternative

routes. In addition, a construction TMP required by MM TRA-4 would minimize any potential access and circulation impacts caused by construction activities.

Potential NEPA Avoidance, Minimization, and Control Measures

PM LU-1 and PM LU-2 are applicable to Alternative 4. These measures are included in the CEQA documentation and may be included in NEPA documentation.

The Alternative 4 aerial guideway structural elements (i.e. center column and straddle bent supports) would require installation of a raised median or similar barrier along the length of Sepulveda Boulevard as well as sidewalk alterations. As a result, coordination with the Los Angeles Department of Transportation and urban design strategies would be required in later phases of design to address the altered circulation pattern of the street. The following project measures would be implemented for Alternative 4:

PM LU-1: ***Circulation Improvement.*** *To address changes in circulation along Sepulveda Boulevard, the Project shall develop a circulation improvement strategy in coordination with the Los Angeles Department of Transportation. The circulation improvement strategy shall include any combination of the following design features:*

- *Midblock straddle bents in preference to median support columns.*
- *Median breaks to allow left-turn movements where safe and effective.*
- *Midblock, signalized pedestrian crossings.*
- *Curb bump outs around straddle bent supports.*
- *Pursuit of new or innovative technologies for guideway support that allow for longer spans.*

PM LU-2: ***Urban Design and Cohesion Enhancement.*** *The Project shall develop an urban design strategy to enhance and improve the Van Nuys community's cohesion along Sepulveda Boulevard. The urban design strategy shall include any combination of the following design features:*

- *Median design shall reduce the height of the median barrier between columns to the greatest extent practicable.*
- *Median design shall include landscaping consistent with the applicable City of Los Angeles landscape design guidance.*
- *A lighting plan inclusive of decorative lighting along the proposed median and functional day/night lighting along proposed guideway.*
- *Signage and wayfinding improvement strategy that would provide wayfinding to transit stations as well as Sepulveda Boulevard crossings. Monument signage, wayfinding, and other improvements that provide a sense of place are encouraged.*
- *Streetscape design improvements including sidewalk treatments, roadway markings, and street furniture.*
- *Columns and straddle bent supports shall be finished with graffiti-resistant materials.*

3.10 Cultural Resources and Tribal Cultural Resources

Refer to the *Sepulveda Transit Corridor Project Cultural Resources and Tribal Cultural Resources Technical Report* for information related to existing conditions, applicable regulatory environment, methodology, and regional setting (Metro, 2025k).

3.10.1 Built Historic Resources

The RSA for built historic resources includes area necessary to construct, operate, and maintain the project alternatives. It includes all proposed right-of-way acquisition and construction areas, all parcels adjacent to permanent site improvements and facilities, including TBM launch sites, stations, and power substations; parking facilities; and maintenance yards and buildings. Where proposed infrastructure is constructed or would require above-grade elements, such as the overhead contact system, elevated structures, sound walls, stations, or other equipment, the RSA for historic resources includes the first tier of parcels, which is one parcel out from the footprint, or buildings adjacent to the alignment footprint within a reasonable viewshed of the new construction. The RSA for historic resources extends out from the project footprint because the introduction of new infrastructure would have the potential to cause new visual, audible, or atmospheric intrusions on the setting of nearby historical resources. It also includes property acquisitions and adjacent areas where the Project has the potential to indirectly affect historical resources. Typically, it extends out from the alignment from one to three parcels, depending on parcel sizes, the intervening landscape and buildings, and whether the historic land use is sensitive to the proposed change in setting. The RSA for historic resources does not include underground elements of the Project because they would not result in construction impacts or permanent visual impacts to historical resources. However, it includes areas around the aboveground elements associated with the underground alignments (such as vent shafts and station elements).

Historic and archival research was undertaken to determine the presence of previously identified historic properties that may be affected by the Project. Archival research and field surveys identified 68 historical resources that may be affected by Alternative 1. Research also identified 64 historical resources associated with Alternative 3, 65 historical resources associated with Alternative 4, 54 historical resources associated with Alternative 5, and 53 historical resources associated with Alternative 6. The historical resources associated with Modified Alternative 5 will be determined during the upcoming design process and are anticipated to be similar to Alternatives 4, 5, and 6. The resources include residential, commercial, institutional, government, and industrial properties primarily along existing transportation corridors. There are five historic districts, two historic linear landscapes, and three historic structures.

To date, a Section 106 consultation process has not been initiated; thus, key Section 106 consultation with the State Historic Preservation Officer (SHPO) has not occurred to establish the eligibility of newly identified historic properties. The identification of historic properties will be revisited when there is federal involvement.

Operational Effects

Operation and maintenance of the project alternatives would not physically demolish, destroy, relocate, or alter any identified historical resources. Activities would be limited to the operation and maintenance of the alignment, and these would not cause direct impacts to historical resources. Potential operational impacts on historical resources would be indirect (i.e., visual, audible, or atmospheric intrusions) and related to operation and maintenance, and new pedestrian traffic within the environs of the station locations. Specific to Alternative 1, operations include a potential visual impact to the West Los Angeles

VA Historic District and its setting. MM CUL-2 would be implemented to address design treatments to avoid alterations to the West Los Angeles VA Historic District during the construction stage that could result in permanent visual impacts during operation.

Construction Effects

Construction activities would include property acquisitions, demolition of historical resources, and new construction of permanent features. Construction impacts on historical resources could be direct and indirect. Direct impacts include the physical demolition, destruction, relocation, or alteration of historical resources. Indirect impacts during construction could include temporary visual, audible, or atmospheric intrusions affecting the surroundings of historical resources. This assessment also considers the permanent impacts of new infrastructure, such as its visual and physical presence within the setting of historical resources. These impacts are treated as construction-related impacts, rather than operational impacts, because these project changes are directly tied to the introduction of the infrastructure during the construction phase. For historical resources where construction activities would not result in physical demolition, destruction, relocation, or alteration, and where the setting would remain unaffected by the new infrastructure, impacts are not considered significant. Similarly, where visual and physical changes would not materially impair the historical significance of a resource, the impacts are not considered significant. Table 3-18 provides a summary of impacts from each of the project alternatives, including potential significant effects to the built environment. Discussion of historical resources with significant impacts is provided below. The potential impacts associated with Modified Alternative 5 will be determined during the upcoming design process. Discussion of historical resources with significant impacts is provided in the following information.

Table 3-18. Summary of Potential Impacts to Built Historic Resources

Map #	Resource Name	Location	Alt 1 Impact	Alt 3 Impact	Alt 4 Impact	Alt 5 Impact	Alt 6 Impact
7	14746 Raymer Street	14746 Raymer Street	**Potential Impact**	**Potential Impact**	**Potential Impact**	**Potential Impact**	NA
8	The Performing Arts Center	7735 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
9	Valley Animal Hospital	7721 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
10	Lancer Lion II Apartments	7657 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
11	Air Raid Siren No. 110	Northeast corner of Covello Street and Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
12	Sherman Way Street Trees	Along either side of Sherman Way between Woodley Avenue and Sherman Circle	**Potential Impact**	**Potential Impact**	**Potential Impact**	**Potential Impact**	NA
13	6833 Sepulveda Boulevard	6833 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
14	Van Nuys Boulevard Street Trees	Between Sherman Way along Sherman Circle and Hamlin Street on Van Nuys Boulevard	**Potential Impact**	**Potential Impact**	No Impact	**Potential Impact**	No Impact
17	6160 Sepulveda Boulevard	6160 Sepulveda Boulevard	NA	NA	**Potential Impact**	No Impact	NA
18	Air Raid Siren No. 117	South side of Oxnard Street, west of Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
19	Cabana Motel	5764 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
20	El Cortez Motel	5746 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
21	5724 Sepulveda Boulevard	5724 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
22	Kauai Surf	15232 Martha Street	NA	No Impact	**Potential Impact**	No Impact	NA
23	5450 Sepulveda Boulevard	5450 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA

Map #	Resource Name	Location	Alt 1 Impact	Alt 3 Impact	Alt 4 Impact	Alt 5 Impact	Alt 6 Impact
24	Cathedral of St. Mary Church	5335 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
25	Lt. Patrick H. Daniels United States Army Reserve Center	5161 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	**Potential Impact**	NA
27	4700 Sepulveda Boulevard	4700 Sepulveda Boulevard	NA	No Impact	**Potential Impact**	No Impact	NA
30	15233 Ventura Boulevard	15233 Ventura Boulevard	No Impact	No Impact	**Potential Impact**	NA	NA
31/33	15300 Ventura Boulevard	15300 Ventura Boulevard	**Potential Impact**	**Potential Impact**	**Potential Impact**	No Impact	NA
35	Da Siani Ristorante (Sherwood Coiffeurs)	4511 Sepulveda Boulevard	**Potential Impact**	**Potential Impact**	**Potential Impact**	No Impact	NA
36	4506 Saugus Avenue	4506 Saugus Avenue	NA	No Impact	No Impact	**Potential Impact**	NA
44	Bill's Valley Car Wash	7530 Van Nuys Boulevard	NA	NA	NA	NA	**Potential Impact**
55	5958 Van Nuys Boulevard	5958 Van Nuys Boulevard	NA	NA	NA	NA	**Potential Impact**
68	10811 Ambazac Way	10811 Ambazac Way	NA	**Potential Impact**	NA	NA	NA
72	UCLA Historic District (P-19-175802)	encompasses the east-west axis of the campus and is bounded by Westwood Boulevard and Circle Drive	No Impact	No Impact	No Impact	No Impact	**Potential Impact**
73	UCLA Ackerman Hall (P-19-190591)	308 Westwood Plaza	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**	**Potential Impact**
86	West Los Angeles Veterans Affairs Historic District (P-19-173043)	11301 Wilshire Boulevard	**Potential Impact**	**Potential Impact**	NA	NA	NA
87	UCLA Veterans Rehabilitation Services (P-19-189982)	1000 Veteran Avenue	No Impact	**Potential Impact**	No Impact	No Impact	No Impact
93	10940 Weyburn Avenue	10940 Weyburn Avenue	No Impact	**Potential Impact**	No Impact	No Impact	No Impact
94	Chatam Restaurant	10930 Weyburn Avenue	No Impact	**Potential Impact**	No Impact	No Impact	No Impact

Map #	Resource Name	Location	Alt 1 Impact	Alt 3 Impact	Alt 4 Impact	Alt 5 Impact	Alt 6 Impact
103	Gayley Center	1101 Gayley Avenue	No Impact	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**
104/105	Linde Medical Building	10921 Wilshire Boulevard	No Impact	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**
106	Tishman Building	10950 Wilshire Boulevard	No Impact	No Impact	**Potential Impact**	**Potential Impact**	**Potential Impact**
108	Westwood Federal Building	11000 Wilshire Boulevard	No Impact	**Potential Impact**	NA	NA	NA
122	Photo Electronics Corp. Building	1944 Cotner Avenue	**Potential Impact**	**Potential Impact**	NA	NA	NA
123/124	Dual Ultimate Pharmacy	2020 Cotner Avenue	**Potential Impact**	**Potential Impact**	NA	NA	NA
125	2114 Cotner Avenue	2114 Cotner Avenue	**Potential Impact**	**Potential Impact**	NA	NA	NA
132	Laemmle Theater	11521 Santa Monica Boulevard	NA	NA	NA	NA	**Potential Impact**

Source: Metro, 2025k

Alt = Alternative
NA = not applicable

14746 Raymer Street (Map Reference #7) – Alternatives 1, 2, 3, 4, and 5

The property at 14746 Raymer Street is a large industrial building constructed in 1967. It is significant for its Modern design. Under Alternatives 1, 3, 4, and 5, the proposed aerial guideway would be constructed approximately 40 feet from the north elevation of the building. The aerial structure would be over Raymer Street, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the north elevation's current viewshed is of Raymer Street and the existing SPRR alignment. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building or its setting to materially impair its significance. However, construction of the guideway, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

The Performing Arts Center (Map Reference #8) – Alternative 4

The Performing Arts Center at 7735 Sepulveda Boulevard is a commercial property. It is significant for its 1961 Googie design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 40 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Valley Animal Hospital (Map Reference #9) – Alternative 4

The Valley Animal Hospital building at 7721 Sepulveda Boulevard is significant for its 1968 Modern design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 70 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and

lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact this historical resource. The construction activities adjacent to this resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Lancer Lion II Apartments (Map Reference #10) – Alternative 4

The Lancer Lion II Apartments located at 7657 Sepulveda Boulevard is a multi-family apartment building significant for its association with the Live Better Electrically and Medallion Homes program and the electrical history of Los Angeles. Under Alternative 4, the proposed aerial guideway columns and roadway improvements approximately 37 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Air Raid Siren No. 110 (Map Reference #11) – Alternative 4

The Air Raid Siren No. 110 is a pole-mounted structure installed in 1940 that is significant for its association with World War II and Cold War military infrastructure. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 50 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Sherman Way Street Trees (Map Reference #12) – Alternatives 1, 3, 4, and 5

The Sherman Way Street Trees comprise a linear historical resource. The trees are significant for their associations with the street planting plan for Sherman Way (paved between 1911 and 1913), a major streetcar and automobile route that was the main corridor from central Los Angeles to Van Nuys. Under Alternatives 1, 3, 4, and 5, the proposed aerial Sherman Way Station would be constructed within the boundary of this linear historical resource. The proposed aerial station would introduce a new visual element but would not change the defining characteristics of this resource, such as its linear alignment, continuity, or the presence the street trees along the corridor. The overall historic character and visual aesthetic of the linear resource would be preserved and its ability to convey its historical significance would not be materially impaired. However, construction of the alignment, station, and construction staging areas has the potential to alter or destroy existing contributing street trees associated with this historical resource at this location if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

6833 Sepulveda Boulevard (Map Reference #13) – Alternative 4

The multiple-family building at 6833 Sepulveda Boulevard is significant for its association with the post-World War II housing crisis and for its 1967 Modern and Stucco Box/Dingbat design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 40 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or

altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Van Nuys Boulevard Street Trees (Map Reference #14) – Alternatives 1, 3, and 5

The Van Nuys Boulevard Street Trees comprise a linear historical resource. They are significant for their association with the street planting plan for Sherman Way (paved between 1911 and 1913; parts of which were renamed Van Nuys Boulevard and Chandler Boulevard), which was the main automobile and streetcar corridor from central Los Angeles to Van Nuys. Under Alternatives 1, 3, and 5, the proposed aerial guideway would be constructed at the western boundary of the resource, on Victory Boulevard. The aerial guideway structure would be sited on the eastern side of the I-405 freeway and would introduce a new visual element into the resource's setting. However, the linear resource's key defining characteristics, including its alignment, continuity, and relationship to its surroundings would remain intact. The resource's visual presence as a continuous linear corridor would remain discernible, and its historical association with transportation infrastructure would not be materially impaired. However, the alignment construction and the construction staging areas have the potential to alter or destroy existing contributing street trees associated with this historical resource at this location if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

6160 Sepulveda Boulevard (Map Reference #17) – Alternative 4

The industrial property at 6160 Sepulveda Boulevard is a large industrial building constructed in 1953. It is significant for its association with the post-World War II industrial development of Van Nuys. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 45 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical

resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Air Raid Siren No. 117 (Map Reference #18) – Alternative 4

The Air Raid Siren No. 117 is a pole-mounted structure installed in 1940 that is significant for its association with World War II and Cold War military infrastructure. Under Alternative 4, the proposed aerial Metro G Line Sepulveda Station and roadway improvements would be constructed approximately 100 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The siren would not be physically demolished, destroyed, relocated, or altered. The proposed aerial station and elevated alignment adjacent to the resource would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed aerial station and elevated alignment would introduce permanent visual elements directly in front of the siren, the relative height (approximately 30 feet) of the station and alignment would not block significant views of the historical resource. The existing setting would be left largely intact. Because the setting of the siren is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibrations, equipment activities, and utility modifications adjacent that could impact the historical resource. The construction adjacent to the resource also has the potential to inadvertently impact character-defining features (e.g., design elements) if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Cabana Motel (Map Reference #19) – Alternative 4

The Cabana Motel at 5764 Sepulveda Boulevard is a 1946 commercial property. It is significant for its association with Los Angeles's post-World War II car culture and for its Modern design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 25 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative

height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

El Cortez Motel (Map Reference #20) – Alternative 4

The El Cortez Motel at 5746 Sepulveda Boulevard is a 1949 commercial property. It is significant for its association with Los Angeles's post-World War II car culture and for its Modern design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements approximately 20 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

5724 Sepulveda Boulevard (Map Reference #21) – Alternative 4

The multiple-family property at 5724 Sepulveda Boulevard is significant for its association with the post-World War II housing crisis and for its 1949 Modern and Stucco Box/Dingbat design. Under Alternative 4, aerial guideway columns and roadway improvements would be constructed approximately 60 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible,

and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Kauai Surf (Map Reference #22) – Alternative 4

The multiple-family property at 15232 Martha Street is significant for its association with the post-World War II housing crisis and for its 1962 Modern and Stucco Box/Dingbat design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 70 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

5450 Sepulveda Boulevard (Map Reference #23) – Alternative 4

The residential building at 5450 Sepulveda Boulevard is significant for its 1953 Monterey design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 100 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or

altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Cathedral of St. Mary Church (Map Reference #24) – Alternative 4

The Cathedral of St. Mary Church at 5335 N Sepulveda Boulevard is significant for its 1961 Byzantine Revival design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 50 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to this resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Lt. Patrick H. Daniels United States Army Reserve Center (Map Reference #25) – Alternatives 4 and 5

The Lt. Patrick H. Daniels United States Army Reserve Center at 5161 Sepulveda Boulevard is a governmental property constructed in 1959. It is significant for its association with the Army Reserves in Los Angeles during the Vietnam War and for its Modern design. Under Alternatives 4 and 5, a partial property acquisition would occur, and the proposed aerial guideway columns and roadway

improvements would be constructed approximately 60 feet east of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce permanent visual elements directly in front and to the side of the building, the relative height (approximately 30 feet) of the elements would not block significant views of the historical resource, such as the view of the façade from the sidewalk or northbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

4700 Sepulveda Boulevard (Map Reference #27) – Alternative 4

The multiple-family property at 4700 Sepulveda Boulevard is significant for its 1952 Eclectic Streamline Moderne design. Under Alternative 4, the proposed aerial guideway columns and roadway improvements would be constructed approximately 80 feet west of the resource. The construction would include elevated structures, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The proposed elevated alignment adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elevated alignment would introduce a permanent visual element directly in front of the building, the relative height (approximately 30 feet) of the element would not block significant views of the historical resource, such as the view of the façade from the sidewalk or southbound Sepulveda Boulevard, and the building itself would be left intact, and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the alignment and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

15233 Ventura Boulevard (Map Reference #30) – Alternative 4

The commercial property at 15233 Ventura Boulevard is significant for its 1964 International Style design. Under Alternative 4, the proposed aerial Ventura Boulevard/Sepulveda Boulevard Station and aerial guideway would be constructed approximately 500 feet from the west elevation of the building. The aerial structure would be sited on the east side of I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is residential, and the west elevation's current viewshed includes I-405 and Sepulveda Boulevard. The proposed aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, construction of the guideway, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

15300 Ventura Boulevard (Map Reference #31/33) – Alternatives 1, 3 and 4

The commercial building and its associated parking garage at 15300 Ventura Boulevard is significant for its 1964 International Style design. Under Alternatives 1, 3, and 4, the proposed aerial Ventura Boulevard/Sepulveda Boulevard Station would be constructed approximately 20 feet from the rear (west elevation) of the commercial building. The building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the rear elevation's current viewshed includes I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. Therefore, although the proposed aerial structure would introduce a new visual element, it would not change the historic character of the building or its setting in a manner that material impairs its significance. However, construction of the station, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features, including the associated parking garage, if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Da Siani Ristorante (Sherwood Coiffeurs) (Map Reference #35) – Alternatives 1, 3, and 4

The Da Siani Ristorante building is a one-story commercial building significant for its 1950 Modern design. Under Alternatives 1, 3, and 4, the property would be acquired and demolished for the construction of an aerial structure parallel to I-405. Physical demolition would materially impair the significance of the historical resource. Implementation of MM CUL-4 and MM CUL-5 would reduce this impact by ensuring archival documentation and public interpretation of the resource's historical significance. However, because these measures cannot prevent the demolition itself, they cannot reduce the significant impact.

4506 Saugus Avenue (Map Reference #36) – Alternative 5

The multiple family building at 4506 Saugus Avenue is eligible for listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources under Criterion C/3 for its Contemporary design. Under Alternative 5, the proposed aerial Van Nuys Metrolink Station would be constructed approximately 40 feet from the west elevation of the building. The proposed aerial station would introduce a new visual element but would not change the historic character of the resource. The alteration of the setting with the new visual element of the aerial structure would not materially impair its ability to convey its significance. The proposed station adjacent to the building would introduce new visual, audible, and atmospheric elements within the building's immediate surroundings. Although the proposed elements would introduce permanent visual elements to the west of the building, these elements would not block significant views of the historical resource. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the station and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent to the building that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Bill's Valley Car Wash (Map Reference #44) – Alternative 6 and potentially Modified Alternative 5

The Bill's Valley Car Wash building at 7530 Van Nuys Boulevard is a commercial property. It is significant for its role in the commercial and industrial development of Van Nuys and for its 1962 Googie design. Under Alternative 6, the property would be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. Modified Alternative 5 could also potentially demolish this resource; however, ongoing design development could reduce or avoid this impact. Physical demolition would materially impair the significance of the historical resource. Implementation of MM CUL-4 and MM CUL-5 would reduce this impact by ensuring archival documentation and public interpretation of the resource's historical significance. However, because these measures cannot prevent the demolition itself, they cannot reduce the impact to a less than significant level.

5958 Van Nuys Boulevard (Map Reference #55) – Alternative 6

The building located at 5958 Van Nuys Boulevard is a commercial building significant for its One-Part Commercial Block design. Under Alternative 6, the proposed TPSS 15 and 16 would be located along Van Nuys Boulevard between Emelita Street and Califa Street. The TPSS would be underground and located immediately under the commercial building. The building would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Van Nuys Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, construction of the station and roadway improvements, as well as the potential use of pile driving at this location, has the potential to cause construction vibration adjacent to the building that could impact the historical resource. The construction activities adjacent to the resource also has the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM

CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

10811 Ambazac Way (Map Reference #68) – Alternative 3

The residential building at 10811 Ambazac Way is significant for its 1931 Monterey Revival design. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, construction of the station and construction staging areas have the potential to cause construction vibration adjacent that could impact this historical resource. The construction activities adjacent to this resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

UCLA Historic District (Map Reference #72) – Alternative 6

The UCLA Historic District includes 15 contributing resources and landscape features, and two non-contributing resources. The district is significant as the first public institution of higher education in Southern California, and for its design. Under Alternative 6, the proposed UCLA Gateway Plaza Station would be built within the boundaries of the historic district. The station would be underground, and none of the contributing buildings or landscape elements would be physically demolished, destroyed, relocated, or altered. The historical resource's setting is the UCLA campus and roadways. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historic district or its setting are anticipated from the addition of the station or the underground alignment. However, construction of the station and construction staging areas have the potential to cause construction vibration that could impact the historical district. The construction activities within the district also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

UCLA Ackerman Hall (Map Reference #73) – Alternatives 3, 4, 5, and 6

The UCLA Ackerman Hall building is a multi-story education property. It is significant for its association with the history of UCLA and for its 1961 Modern design. Under Alternative 3, 4, 5, and 6, the proposed underground UCLA Gateway Plaza Station and roadway improvements would be constructed approximately 30 feet west of the resource. The construction would include excavation of the station box, building construction, roadway restriping, curb-and-gutter/sidewalk reconstruction, roadway improvements, and lighting and traffic signal modifications. The building would not be physically demolished, destroyed, relocated, or altered. The station portal adjacent to the building would introduce new visual, audible, and atmospheric elements within its immediate surroundings. Although the proposed elements would introduce a permanent visual element adjacent to the building, these elements would not block significant views of the historical resource, would be smaller scale in nature

compared to the proposed station, and the building would not be obscured from view. Further, existing trees and vegetation between the proposed station and the building itself would be left intact and the building's key vantage points would be preserved. The existing setting would be left largely intact. Because the setting of the building is already compromised by modern development and activities, the significance of the historical resource would not be materially impaired. However, construction of the station, potential use of pile driving at this location, roadway improvements, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

West Los Angeles Veterans Affairs Historic District (Map Reference #86) – Alternatives 1 and 3

The West Los Angeles Veterans Affairs Historic District is significant for its association with the government's development of health care and for its distinctive architecture. The district includes 66 contributing resources and 44 noncontributing resources. Under Alternatives 1 and 3, the proposed aerial guideway and the proposed aerial Wilshire Boulevard/Metro D Line Station would be constructed within roughly 20 to 150 feet of the historic district, east of Dowlen Drive. Construction methods may use heavy equipment, including excavators, cranes, tractor trailer rigs, loaders, earthmovers, asphalt milling machines, asphalt paving machines, loaders, bulldozers, dump trucks, compactors/rollers, and concrete trucks. During construction of Alternative 1, the historic district would not be physically demolished, destroyed, relocated, or altered. However, due to the aerial nature of the project components, permanent visual impacts on this historic district and its setting are anticipated from the guideway and station. For Alternative 1, implementation of MM CUL-1, MM CUL-2, and MM CUL-3 would reduce this potentially significant impact by ensuring that project design is compatible with the Secretary of the Interior's Standards, protecting contributing landscape elements, and incorporating construction monitoring and vibration controls to minimize physical and visual impacts to the historic district. For Alternative 3, implementation of MM CUL-1 would reduce this potentially significant impact to a less than significant level by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

UCLA Veterans Rehabilitation Services (Map Reference #87) – Alternative 3

The UCLA Veterans Rehabilitation Services building is a commercial property. It is significant for its 1960 Contemporary design and as a work of a master, Welton Beckett and Associates. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, construction of the station and construction staging areas have the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments,

implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

10940 Weyburn Avenue (Map Reference #93) – Alternative 3

The commercial building at 10940 Weyburn Avenue is significant for its 1934 Spanish Colonial Revival design. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, construction of the station and construction staging areas have the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Chatam Restaurant (Map Reference #94) – Alternative 3

The Chatam Restaurant building at 10930 Weyburn Avenue is significant for its 1940 One Part Commercial Block design. Under Alternative 3, a partial underground property acquisition and temporary construction easement would be required. The building would not be physically demolished, destroyed, relocated, or altered. Due to the underground nature of the improvements, no permanent visual impact on the historical resource or its setting is anticipated. However, construction of the station and construction staging areas have the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Gayley Center (Map Reference #103) – Alternatives 4, 5, and 6

The Gayley Center located at 1101 Gayley Avenue is a larger commercial property. It is significant for its Late Modern commercial architecture and as work of noted architects Krisel Shapiro & Associates. Under Alternatives 4, 5, and 6, the proposed Wilshire Boulevard/Metro D Line Station would be constructed approximately 4 to 5 feet east from the west elevation of the building. The station would be underground, and the Gayley Center would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Gayley Avenue. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, construction of the station and construction staging areas have the potential to cause construction vibration that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective

measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Linde Medical Building (Map Reference #104/105) – Alternatives 4, 5, and 6

The Linde Medical Building located at 10921 Wilshire Boulevard is a large commercial property. It is significant for its 1962 International Style design. As designed, affected portions of the property entrance will be restored in accordance with the California Historical Building Code and all applicable requirements. Under Alternatives 4, 5, and 6, the proposed Wilshire Boulevard/Metro D Line Station would be constructed adjacent to the west elevation of the building. The station would be underground, and the Linde Medical Building tower would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Gayley Avenue and Wilshire Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, construction of the station and construction staging areas have the potential to cause construction vibration that could impact the historical resource. The construction adjacent to the resource also has the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Tishman Building (Map Reference #106) – Alternatives 4, 5, and 6

The Tishman Building located at 10950 West Wilshire Boulevard is a large commercial property. It is significant for its Corporate Modern high-rise architecture and as the work of master architect Welton Becket. Under Alternatives 4, 5, and 6, the proposed Wilshire Boulevard/Metro D Line Station would be constructed approximately 60 feet north from the north elevation of the building. The station would be underground, and the Tishman Building would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the west elevation's current viewshed includes the commercial corridors along Wilshire Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, construction of the station and construction staging areas have the potential to cause construction vibration that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Westwood Federal Building (Map Reference #108) – Alternative 3

The Westwood Federal Building is multi-story office building. It is significant for its 1966 New Formalist design and association with master architects of Welton Becket and Associates with Paul R. Williams and A. C. Martin and Associates. Under Alternative 3, the proposed underground Wilshire Boulevard/Metro

D Line Station and a TPSS site would be constructed approximately 420 feet northeast from the side (east elevation) of the building, at the corner of Wilshire Boulevard and Veteran Avenue. An additional TPSS site would be constructed about 178 feet southeast of south elevation. The building would not be physically demolished, destroyed, relocated, or altered. The new station and TPSS sites would introduce a new visual element but would not change the historic character of the building because its character defining features, such as its architectural design, materials, and fenestration, would not be altered or obscured. The distance of the new elements from the building minimizes their effect on its immediate setting, and the new features would not fundamentally alter the existing urban context of the area. The building's primary elevations and overall historic integrity would remain visible and intact. However, construction of the station and construction staging areas have the potential to cause construction vibration adjacent that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Photo Electronics Corp. Building (Map Reference #122) – Alternatives 1 and 3

The Photo Electronics Corp. Building at 1944 Cotner Avenue is an industrial building. It is significant for its 1967 Modern design. Under Alternatives 1 and 3, the proposed aerial guideway would be constructed approximately 50 feet from the west elevation of the building. The aerial structure would be sited along the west side of Cotner Avenue and I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the west elevation's current viewshed includes I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, construction of guideway, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Dual Ultimate Pharmacy (Map Reference #123/124) – Alternatives 1 and 3

The Dual Ultimate Pharmacy at 2020 Cotner Avenue is a commercial building. It is significant for its 1966 Modern design. Under Alternatives 1 and 3, the proposed aerial guideway would be constructed approximately 60 feet from the west elevation of the building. The aerial structure would traverse Cotner Avenue, east of I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the west elevation's current viewshed includes Cotner Avenue and I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair

its significance. However, construction of the guideway, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

2114 Cotner Avenue (Map Reference #125) – Alternatives 1 and 3

The industrial building at 2114 Cotner Avenue is significant for its 1969 Modern design. Under Alternatives 1 and 3, the proposed aerial guideway would be constructed approximately 100 feet from the west elevation (façade) of the building. The aerial structure would be sited along the east side of I-405, and the building itself would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is industrial, and the west elevation's current viewshed includes I-405 and Cotner Avenue. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building. The alteration of the setting with the new visual element of the aerial structure would not materially impair its significance. However, construction of the guideway, potential use of pile driving at this location, and the construction staging areas have the potential to cause construction vibration that could impact this historical resource. Construction vibration adjacent to this resource also has the potential to inadvertently damage character-defining features if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Laemmle Theater (Map Reference #132) – Alternative 6

The Laemmle Theater at 11521 Santa Monica Boulevard is a commercial property constructed in 1923. It is significant for its Italian Renaissance design. Under Alternative 6, the proposed Santa Monica Boulevard Station would be constructed approximately 20 feet from the south elevation of the building. The station would be underground, and the Laemmle Theater would not be physically demolished, destroyed, relocated, or altered. The historical resource's setting is commercial, and the north elevation's current viewshed includes the commercial corridor along Santa Monica Boulevard. Due to the underground nature of the proposed improvements, no permanent visual impacts on this historical resource or its setting are anticipated from the addition of the station or the underground alignment. However, construction of the station and construction staging areas have the potential to cause construction vibration that could impact the historical resource. The construction activities adjacent to the resource also have the potential to inadvertently impact character-defining features (e.g., design elements, fenestration, and architectural details) and landscape elements if protection measures are not put in place. Implementation of MM CUL-1 would reduce this potentially significant impact by establishing protective measures, requiring pre-construction assessments, implementing vibration-reducing construction techniques, and ensuring continuous monitoring to prevent damage to character-defining features of the historical resource.

Potential NEPA Avoidance, Minimization, and Control Measures

Under each of the project alternatives, there would be potential construction impacts to historical resources. Eight mitigation measures were developed to reduce impacts. MM CUL-1 requires a Cultural Resources Monitoring and Mitigation Plan, MM CUL-2 requires design treatments for the West Los Angeles Veterans Affairs Historic District (Alternative 1), MM CUL-3 requires pre-construction and construction protection measures, and MM CUL-4 and MM CUL-5 require historical resource archival documentation an interpretive program for certain impacted resources associated with Alternatives 1, 3, 4, and 6. These mitigation measures are included in the CEQA documentation and may be included in NEPA documentation. Significant impacts to the built environment would remain after mitigation. These unavoidable impacts affect Da Siani Ristorante (Sherwood Coiffeurs) under Alternatives 1 and 3, 15300 Ventura Boulevard under Alternative 4, and Bill's Valley Car Wash under Alternative 6. The application of mitigation measures to Modified Alternative 5 will be determined during the upcoming design process.

MM CUL-1: Cultural Resources Monitoring and Mitigation Plan

- *A project-wide Cultural Resources Monitoring and Mitigation Plan (CRMMP) shall be developed and implemented by Metro. The purpose of the CRMMP is to document the actions and procedures to be followed to ensure avoidance or minimization of impacts to cultural resources and to provide a detailed program of mitigation for direct and indirect impacts on cultural resources during Project construction. Preparation of the CRMMP shall necessitate the completion of a pedestrian survey of the private property parcels within the Resource Study Areas that were not accessible during the preparation of the Environmental Impact Report and the Sepulveda Transit Corridor Project Cultural Resources and Tribal Cultural Resources Technical Report; this shall occur only on parcels slated for acquisition and construction activities. Proposed ground disturbance for the Project shall be reviewed to make any necessary adjustments to archaeological sensitivity assessments as a result of ongoing project design.*
- *The Cultural Resources Monitoring and Mitigation Plan shall include a detailed prehistoric and historic context that clearly demonstrates the themes under which any identified subsurface deposits would be determined significant. Should significant deposits be identified during earth moving activities, the Cultural Resources Monitoring and Mitigation Plan shall address methods for evaluation, treatment, artifact analysis for anticipated artifact types, report writing, repatriation of human remains and associated grave goods, and curation.*
- *The Cultural Resources Monitoring and Mitigation Plan will be a guide for archaeological monitoring activities as defined in MM CUL-7. The Cultural Resources Monitoring and Mitigation Plan shall require that a Secretary of the Interior-qualified archaeologist in prehistoric and historical archaeology (36 Code of Federal Regulations Part 61) be retained prior to ground disturbing activities.*
- *The Cultural Resources Monitoring and Mitigation Plan shall include recommended treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation.*

- *The Cultural Resources Monitoring and Mitigation Plan shall include that, in the event, as a result of the resource evaluation and tribal consultation process, a resource is considered to be eligible for inclusion in the California Register of Historical Resources and/or a local register of historical resources or is determined to be a Tribal Cultural Resource through eligibility listing or determination of significance by the California Environmental Quality Act lead agency (Metro), an archaeological monitor and Native American monitor shall monitor all remaining ground disturbing activities in the area of the resource. If, during cultural resources monitoring, the Secretary of the Interior-qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the Secretary of the Interior qualified archaeologist can specify that monitoring be reduced or eliminated.*
- *The Cultural Resources Monitoring and Mitigation Plan shall outline the content and process for implementing pre-construction Cultural Resource training, as discussed in MM CUL-6.*
- *The Cultural Resources Monitoring and Mitigation Plan shall require a pre-construction baseline survey to identify building protection measures for historical resources in relation to TBM launch/TBM extraction, construction staging, and construction vibration and cut and cover activities adjacent to historical resources. The Project shall conduct a pre-construction survey to establish baseline, pre-construction conditions and to assess the potential for damage related to improvements adjacent to these historical resources.*
- *The Cultural Resources Monitoring and Mitigation Plan shall include building protection measures such as fencing, sensitive construction techniques based on final project design, dust control measures, underpinning, soil grouting, or other forms of ground improvement, as well as lower vibration equipment and/or construction techniques (refer to MM VIB-1.1, MM-VIB-3.1, MM VIB-4.2, MM VIB-5.2, and MM VIB-6.1. In scenarios where a historical resource would be impacted by differential settlement caused by the TBM construction method, the Project shall require the use of an earth pressure balance or slurry shield tunnel boring machine. An architectural historian or historic architect who meets the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations [CFR] Part 61) shall review proposed protection measures.*
- *The Cultural Resources Monitoring and Mitigation Plan shall require that a post construction survey be undertaken to ensure that no significant impacts had occurred to historical resources. An architectural historian or historic architect who meets the Secretary of Interior Professional Qualification Standards (36 CFR Part 61) shall prepare an assessment of the implementation of the mitigation measures. If the post-construction survey identifies damage to historical resources, the Project shall require that repairs be made in accordance with the SOI Standards for the Treatment of Historic Properties. The assessment shall confirm that such repairs have been completed to restore the resource's integrity and avoid any permanent material impairment to the resource.*

- *MM CUL-1 applies to following historical resources:*
  - *Sherman Way Street Trees (Alternatives 1, 3, 4, and 5)*
  - *Van Nuys Boulevard Street Trees (Alternatives 1, 3, and 5)*
  - *15300 Ventura Boulevard (Alternatives 1 and 3)*
  - *West Los Angeles Veterans Affairs Historic District (Alternatives 1 and 3)*
  - *Westwood Federal Building (Alternative 3)*
  - *10811 Ambazac Way (Alternative 3)*
  - *UCLA Ackerman Hall (Alternatives 3, 4, 5, and 6)*
  - *10940 Weyburn Avenue (Alternative 3)*
  - *Chatam Restaurant (Alternative 3)*
  - *Performing Arts Center (Alternative 4)*
  - *Valley Animal Hospital (Alternative 4)*
  - *Van Nuys Boulevard Street Trees (Alternative 4)*
  - *6833 Sepulveda Boulevard (Alternative 4)*
  - *6160 Sepulveda Boulevard (Alternative 4)*
  - *Air Raid Sire No. 110 (Alternatives 4 and 5)*
  - *Air Raid Siren No. 117 (Alternatives 4 and 5)*
  - *Cabana Motel (Alternative 4)*
  - *El Cortez Motel (Alternative 4)*
  - *5724 Sepulveda Boulevard (Alternative 4)*
  - *5450 Sepulveda Boulevard (Alternative 4)*
  - *Cathedral of St. Mary Church (Alternative 4)*
  - *Lt. Patrick H. Daniels United States Army Reserve Center (Alternatives 4 and 5)*
  - *4700 Sepulveda Boulevard (Alternative 4)*
  - *Air Raid Siren No. 110 (Alternative 5)*
  - *4506 Saugus Avenue (Alternative 5)*
  - *UCLA Historic District (Alternative 6)*
  - *Linde Medical Building (Alternative 4, 5, 6)*
  - *Tishman Building (Alternative 4, 5, 6)*
  - *Laemmle Theater (Alternative 6)*
  - *14746 Raymer Street (Alternatives 1, 3, 4, 5)*
  - *Photo Electronics Corp. Building (Alternatives 1 and 3)*
  - *Dual Ultimate Pharmacy (Alternatives 1 and 3)*
  - *2114 Cotner Avenue (Alternatives 1 and 3)*
  - *Lancer Lion II Apartments (Alternative 4)*
  - *15233 Ventura Boulevard (Alternative 4)*
  - *Da Siani Ristorante (Sherwood Coiffeurs) (Alternative 4)*
  - *Gayley Center (Alternatives 4, 5, 6)*
  - *5958 Van Nuys Boulevard (Alternative 6)*
  - *UCLA Veterans Rehabilitation Services (Alternative 3)*

MM CUL-2: Design Treatments

- *To ensure that new construction does not adversely affect the setting and character of a historic district, the Project shall be designed to be compatible with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Rehabilitating Historic Buildings and for the Treatment of Cultural Landscapes at the following historical resources that would be altered by proposed aerial guideway elements, station entrances, towers, and retaining walls:*
  - *West Los Angeles Veterans Administration Historic District*
- *The project elements shall be designed to conform to the Secretary of the Interior Standards. To ensure the elements meet Secretary of the Interior Standards, the Project shall retain an architectural historian or historic architect who meets the Secretary of the Interior Professional Qualification Standards (36 CFR Part 61) (qualified professional) to consult on and assess project construction plans and/or design sets at 30 percent, 60 percent, and 90 percent design review phases. The qualified professional shall assess each design set for conformance with the Secretary of the Interior Standards and shall prepare memoranda to Metro. Metro shall incorporate any project changes into the subsequent design sets to conform to the Secretary of the Interior Standards. Metro shall approve a memorandum prepared by a qualified professional stating that the final (90 percent) construction plans conform to the Secretary of the Interior Standards prior to the start of construction.*

MM CUL-3: Pre-Construction and Construction Protection Measures

- *The Project shall retain a qualified historic architect or architectural historian to conduct a pre-construction survey of the contributing landscape elements of the West Los Angeles Veterans Affairs Historic District. This survey shall document the location, dimensions, and condition of all contributing landscape elements within the area of potential impact prior to the start of construction. This documentation shall establish a baseline against which potential construction impacts shall be evaluated. The results of this survey shall be provided to Metro and the California Office of Historic Preservation (OHP) for review.*
- *Following completion and review of the pre-construction survey, a construction monitoring plan shall be prepared by a qualified historic architect or qualified architectural historian ("Qualified Architect"). The plan shall specify that all contributing landscape elements identified in the survey shall be avoided during construction. Protective measures, including fencing, ground covers, and temporary supports, shall be installed around contributing landscape elements prior to construction activities occurring within 10 feet of the resource.*
- *Construction activities involving heavy equipment or other vibration-producing activities shall not exceed a recommended vibration threshold at the location of any contributing landscape element, as determined by a qualified vibration consultant. Vibration monitoring equipment shall be used during construction to ensure compliance with this threshold.*

- *The Qualified Architect shall document compliance with the construction monitoring plan weekly during active construction and provide written reports to Metro. Any deviations from the approved plan shall be addressed immediately.*
- *Following construction, a post-construction survey shall be conducted to verify that no significant impacts occurred to contributing landscape elements. The results of this post-construction survey shall be documented in a report submitted to Metro and the OHP.*
- *MM CUL-3 applies to the following historical resources:*
  - *West Los Angeles Veterans Affairs Historic District (Alternative 1)*

MM CUL-4: Historical Resource Archival Documentation

- *The Project shall complete historical resource archival documentation of historical resources that will be demolished or substantially altered. The archival documentation shall follow the guidelines of the National Park Service's Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey program to create Historic American Building Survey-like documentation. At a minimum, the documentation shall consist of the following:*
  - *Large-format photographs including negatives and archival prints*
  - *Written narrative following the Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey short format*
  - *Site plan*
- *The Project shall provide copies of the documentation to the City of Los Angeles Office of Historic Resources for archival purposes. Large-format photographs shall be verified prior to any demolition activities that would affect the Da Siani Ristorante (Sherwood Coiffeurs) building located at 4511 Sepulveda Boulevard. The documentation shall be prepared so that the original archival-quality documentation could be donated for inclusion in the Los Angeles Public Library (LAPL). Copies of documentation shall be offered to the Los Angeles Public Library (LAPL) and local historical societies upon request.*
- *MM CUL-4 applies to following built-environment resources:*
  - *Da Siani Ristorante (Sherwood Coiffeurs) (4511 Sepulveda Boulevard) (Alternatives 1 and 3)*
  - *15300 Ventura Boulevard (Alternative 4)*
  - *Bill's Valley Car Wash (Alternative 6)*

MM CUL-5: Interpretive Program

- *The Project shall prepare interpretive programs for historical resources that will be demolished or substantially altered. The Project shall provide interpretive materials in the form of a pamphlet, website, or similar, that describes and/or*

illustrates the historic significance of these properties. Interpretive materials shall be provided to the City of Los Angeles for public education purposes. Copies of interpretive materials shall be offered to the Los Angeles Public Library and local historical societies upon request.

- *MM CUL-5 applies to following historical resources:*
  - *Da Siani Ristorante (Sherwood Coiffeurs) (4511 Sepulveda Boulevard) (Alternatives 1 and 3)*
  - *15300 Ventura Boulevard (Alternative 4)*
  - *Bill's Valley Car Wash (Alternative 6)*

MM CUL-6: Cultural Resource Training

- *Prior to any ground disturbing activities, all construction personnel involved in ground disturbing activities shall be provided with appropriate cultural and Tribal Cultural Resources training in accordance with the Cultural Resources Monitoring and Mitigation Plan detailed in MM CUL-1.*
- *The training shall be prepared by a Secretary of the Interior-qualified archaeologist to instruct the personnel regarding the legal framework protecting cultural resources and Tribal Cultural Resources, typical kinds of cultural resources and Tribal Cultural Resources that may be found during construction, artifacts that would be considered potentially significant, and proper procedures and notifications if cultural resources and/or Tribal Cultural Resources are discovered. The training shall be presented by, or under the supervision of, a Secretary of the Interior-qualified archaeologist, who shall review types of cultural resources and artifacts that would be considered potentially significant to support operator recognition of these materials during construction. Contingent upon the results of Assembly Bill 52 consultation, Native American representatives shall be solicited to attend the Worker Environmental Awareness Program training and contribute to the course material to provide guidance on tribal perspectives on working in areas sensitive for Tribal Cultural Resources.*

3.10.2 Archaeological Resources

The archaeological sensitivity of the areas to be disturbed by the project alternatives is considered to range from low to moderate for Alternatives 1, 3, 4, and 5, and low to high for Alternative 6. The degree and depth of previous ground disturbance across the RSA are not known, but most of the area has been subject to prior construction and development. While the exact depth and degree of previous subsurface ground disturbances are not known, grading for roads, rails, and parking lots, and previous construction activities for utilities and building foundations found across the RSA are likely to have impacted approximately 5 feet below ground surface. The archaeological sensitivity associated with Modified Alternative 5 will be determined during the upcoming design process.

Areas with low potential for archaeological resources include older geologic deposits (such as where project components would be constructed at great depth or where near-surface project components would be in areas with older surficial deposits) and areas with well-documented, high levels of previous subsurface ground disturbance. Areas with moderate potential to encounter archaeological resources include portions of the Project Study Area within Late Pleistocene to Holocene alluvial deposits,

particularly those with limited previous ground disturbance, and areas near previously recorded archaeological resources.

A total of 10 previously identified archaeological resources were identified within the RSA through a combination of archival and field research. Of those previously identified resources, the South Central Coastal Information Center (SCCIC) records search identified one previously recorded archaeological resource (P-19-003803) within the RSA. This archaeological resource was also the only previously identified resource that has been determined eligible for listing in the NRHP.

Operational Effects

Operation and maintenance of the project alternatives would not physically destroy, relocate, or alter any previously recorded archaeological resources. Any post review discovery archaeological resources encountered during construction of any project alternatives would be evaluated, and impacts would be mitigated as needed during the construction phase. Operation and maintenance would not result in the destruction, relocation, or alteration of post review discoveries mitigated during construction.

Construction Effects

Under Alternative 1,3, 4, and 5, an assessment of archaeological sensitivity for the RSA indicates construction activities associated with the alignments would have low to moderate potential to encounter previously unidentified archaeological resources below ground surface. No portion of the RSA was determined to have high potential because no intact significant archaeological resources have been identified within or directly adjacent to the RSA. Construction activities associated with the Alternative 6 alignment would have low to high potential to encounter previously unidentified archaeological resources below ground surface. Portions of the RSA in proximity to P-19-000382 were determined to have high potential because intact significant archaeological resources have been identified directly adjoining to the RSA.

No prehistoric archaeological sites and only one historic-age archaeological site has been identified directly within or adjacent to the RSA. The one resource documented within the RSA (P-19-003803) has been determined to no longer be present within the footprint of the alignment. However, the sediments present across the alignments consist of younger and older quaternary alluvium, which have potential to contain archaeological deposits. Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as where components would be constructed at great depth, and those in areas with high levels of previous subsurface ground disturbance. Locations considered to have moderate potential to encounter archaeological deposits are those in younger soils, such as components constructed in shallower depths and with low or unknown levels of previous disturbance. Proximity to previously recorded archaeological resources, important prehistoric resource areas, and water sources also increases sensitivity.

Archival research and field survey determined that one recorded historic-age resource (P-19-003803) was previously recorded in the RSA but has likely been removed as a result of prior construction activity in the area. Archaeological resources of prehistoric and historic age have been documented in the RSA and within a 0.5-mile radius of the RSA. They were often encountered in the context of subsurface construction activity, indicating there is potential in the area to encounter additional resources in a similar manner. Alternative 3 activities during construction of the alignment would include property acquisitions, demolition of historical resources, and new construction of permanent features.

Buried archaeological resources may exist within the RSA, and it is possible these resources could be unearthed during excavation activities. The proposed alignments are largely within the public right-of-

way that has already been disturbed with utility and street construction, but those disturbances were relatively shallow. Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as tunnel locations where project components would be constructed at great depth. Shallow construction work associated with the alignments would have limited potential to encounter intact archaeological resources. Other proposed construction activities, such as mass excavation required for new stations, footings, at-grade alignment segments, portions of tunnel construction, and ancillary facilities with excavation depths greater than 5 feet have the potential to encounter intact archaeological deposits below the shallow previous ground disturbance and are considered to have moderate archaeological sensitivity.

Based on this analysis, construction has the potential to cause a substantial adverse change in the significance of an archaeological resource. MM CUL-6 includes cultural resource training for personnel involved in ground disturbing activities and implementation of MM CUL-7 would minimize potential impacts by requiring archaeological monitoring to protect any previously unidentified archaeological resources.

Construction activities have the potential to encounter and disturb paleontological resources. To address this significant impact, MM GEO-6 through MM GEO-9 would be implemented. These measures include the use of onsite paleontological monitors who can quickly identify and protect resources until any discovered localities can be safely removed. These mitigation measures are designed to minimize impacts to paleontological resources by ensuring that any discoveries are properly documented, evaluated, and protected during construction activities

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6. These mitigation measures were included in the CEQA documentation and may be included in NEPA documentation.

MM CUL-7: ***Archaeological Monitoring***

- *Project related ground disturbing activities conducted in locations determined to have moderate to high archaeological sensitivity, or other locations determined appropriate through Assembly Bill 52 consultation, shall be monitored by, or under the supervision of, a Secretary of the Interior-qualified archaeologist, in accordance with the Cultural Resources Monitoring and Mitigation Plan detailed in MM CUL-1. If monitoring does not reveal any archaeological artifacts, then there would be no impact to archaeological resources. If archaeological artifacts are discovered, then work shall be halted in the immediate vicinity of the find, and a Secretary of the Interior-qualified archaeologist shall assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation.*

MM GEO-6: *The potential to avoid impacts to previously unrecorded paleontological resources shall be avoided by having a qualified paleontologist or archaeologist cross-trained in paleontology, meeting the Society of Vertebrate Paleontology Standards retained as the project paleontologist, with a minimum of a bachelor's degree (Bachelor of Science/Bachelor of Arts) in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation. A paleontological monitor, under the*

guidance of the project paleontologist, shall be present as required by the type of earth-moving activities in the Project, specifically in areas south of Ventura Boulevard that have been deemed areas of high sensitivity for paleontological resources. The monitor shall be a trained paleontological monitor with experience and knowledge of sediments, geologic formations, and the identification and treatment of fossil resources.

MM GEO-7: *A Paleontological Resources Impact Mitigation Program shall be prepared by a qualified paleontologist. The Paleontological Resources Impact Mitigation Program shall include guidelines for developing and implementing mitigation efforts, including minimum requirements, general fieldwork, and laboratory methods, threshold for assessing paleontological resources, threshold for excavation and documentation of significant or unique paleontological resources, reporting requirements, considerations for the curation of recovered paleontological resources into a relevant institution, and process of documents to Metro and peer review entities.*

MM GEO-8: *The project paleontologist or paleontological monitor shall perform a Workers Environmental Awareness Program training session for each worker on the project site to familiarize the worker with the procedures in the event a paleontological resource is discovered. Workers hired after the initial Workers Environmental Awareness Program training conducted at the pre-grade meeting shall be required to take additional Workers Environmental Awareness Program training as part of their site orientation.*

MM GEO-9: *To prevent damage to unanticipated paleontological resources, a paleontological monitor shall observe ground-disturbing activities including but not limited to grading, trenching, drilling, etc. Paleontological monitoring shall start at full time for geological units deemed to have "High" paleontological sensitivity. Geological units deemed to have "Low" paleontological sensitivity shall be monitored by spot checks. No monitoring is required for geologic units identified as having "No" paleontological sensitivity. "Unknown" paleontological sensitivity is assigned to the less metamorphosed portions of the Santa Monica Slate, as detailed below:*

- *The monitor shall be empowered to temporarily halt or redirect construction efforts if paleontological resources are discovered. The paleontological monitor shall flag an area 50 feet around the discovery and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant, it shall be quickly removed, and the area cleared. In the event paleontological resources are discovered and deemed by the project paleontologist to be scientifically important, the paleontological resources shall be recovered by excavation (i.e., salvage and bulk sediment sample) or immediate removal if the resource is small enough and can be removed safely in this fashion without damage to the paleontological resource. If the discovery is significant, the qualified paleontologist shall notify Metro immediately. In consultation with Metro, the qualified paleontologist shall develop a plan of mitigation, which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to*

identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

- *Recovered paleontological resources shall be prepared, identified to the lowest taxonomic level possible, and curated into a recognized repository (i.e., Natural History Museum of Los Angeles County). Bulk sediment samples, if collected, shall be "screen-washed" to recover the contained paleontological resources, which will then be identified to the lowest taxonomic level possible, and curated (as above). The report and all relevant field notes shall be accessioned along with the paleontological resources.*

3.10.3 Human Remains

The Los Angeles National Cemetery is located within the Project Study Area. In addition, the Gabrieliño Village site of Koruuvanga is located approximately 0.03 to 0.8 miles west of the project alternatives. At least two burials have been identified at the site, along with grave goods and other Native American material culture.

Operational Effects

Project activities during operations would be limited to the operation and maintenance of the alignment. These types of operational activities would not involve excavation and would not have the potential to disturb any human remains, including those interred outside of dedicated cemeteries.

Construction Effects

Project activities during construction would include property acquisitions, demolition of historical resources, and new construction of permanent project features. Potential construction impacts on human remains, including those interred outside of dedicated cemeteries, would be related to ground-disturbing activities. It is possible burials could be unearthed during project excavation activities. One known cemetery, the Los Angeles National Cemetery, is located within the RSA. However, the probability of encountering human remains during construction is low because the Los Angeles National Cemetery is located outside of the proposed project footprint, and no construction activities would occur within the cemetery grounds. While unlikely, because of the age of the cemetery and the documentation of at least one interment in the area prior to the official founding of the cemetery, there is potential for unmarked and forgotten graves to lie outside of the existing cemetery footprint. At least two indigenous burials have been encountered within the previously recorded site of P-19-000382, located near the RSA. The ethnographic village site provides evidence that there is potential to encounter Native American human remains in the vicinity. While no evidence of human remains has been previously identified within the Project alignments, unknown human burials may exist within the RSA, and it is possible these burials could be unearthed during project excavation activities. Implementation of MM CUL-8 would minimize potential impacts by requiring the suspension of work should human remains be discovered and the mandatory contact of the Los Angeles County Coroner.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measure is applicable to Alternatives 1 through 6. This mitigation measure was included in the CEQA documentation and may be included in NEPA documentation.

MM CUL-8: Unanticipated Discovery of Human Remains

- *If human remains are discovered, work in the immediate vicinity of the discovery shall be suspended and the Los Angeles County Coroner shall be contacted*

immediately. If the remains are deemed Native American in origin, the coroner shall contact the State of California Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resource Code Section 5097.98 and California Code of Regulations Section 15064.5. The Most Likely Descendants may inspect the site within 48 hours of being notified and may issue recommendations for scientific removal and nondestructive analysis. If the Most Likely Descendant fails to make recommendations, then Metro and/or the landowner may rebury the remains in a location not subject to further disturbance, at their discretion. Work may be resumed at Metro's discretion but shall commence only after consultation and treatment have been concluded. Work may continue on other parts of the Project while consultation and treatment are conducted.

3.10.4 Tribal Cultural Resources

The specialized Resource Study Area for tribal cultural resources was delineated based on the proposed physical configuration of the project alternatives and MSF sites. The Tribal Cultural Resource (TCR) Study Area is defined as the geographic area where the Project has potential to have direct and indirect impacts to tribal cultural resources. The TCR Study Area includes areas where temporary or permanent ground disturbance may occur, such as all proposed right-of-way, acquisition and construction areas, TBM launch sites; stations; power substations; parking facilities; and MSF sites. Where new above-grade elements, such as the overhead contact system or elevated structures, are proposed in landscapes identified as significant to tribal representatives through consultation, the TCR Study Area includes a buffer adjoining the alignment within a reasonable viewshed of the new construction. The buffer is included because the introduction of new infrastructure would have the potential to cause new visual, audible, or atmospheric intrusions on the setting of adjacent tribal cultural resources.

There are no federally recognized Native American tribes in Los Angeles County. The TCR sensitivity is considered to range from low to high in the TCR Study Area related to Native American tribes recognized by the State of California. While no TCRs have been formally documented in the TCR Study Area, there may be ethnohistoric villages, burials, important prehistoric travel routes, and natural resource areas nearby. In addition, the region contains Native American cultural resources, Traditional Cultural Properties, and/or tribal cultural resources. The site of a sacred spring associated with an ethnohistoric village is located less than 200 feet from Alternative 6 and has potential to encompass previously undisturbed, buried, cultural deposits in the area. Tribal representatives indicated the importance of the landscape to their cultural heritage during the California-required consultation process for the Project. A literature review of ethnographic and historic sources, historic maps, and reporting on contemporary Native American knowledge and connection to the landscape resulted in the identification of two features, the Sepulveda Pass and the Los Angeles River, that exhibit potential to be tribal cultural resources. In addition, confidential information shared by tribal representatives and review of cultural resource management gray literature suggest a portion of the TCR Study Area may encompass a sacred location. In addition, the Gabrieliño Village site of Koruuvanga is located within 1 mile of the project alternatives. At least two burials have been identified at the site, along with grave goods and other Native American material culture. Tribal cultural resources associated with Modified Alternative 5 will be determined during the upcoming design process.

Operational Effects

None of the project alternatives would have direct operational impacts to TCRs within the Sepulveda Pass or the Los Angeles River. However, operational and maintenance activities and increased pedestrian traffic at station locations associated with Alternatives 1, 3, and 4 would result in visual, audible, or atmospheric intrusions on the Sepulveda Pass and Los Angeles River. The *Sepulveda Transit Corridor Project Final Visual Quality and Aesthetics Technical Report* (Metro, 2025k) assessed the potential for visual and aesthetic impacts to the Santa Monica Mountains, including the Sepulveda Pass, and Los Angeles River. The existing view of the Sepulveda Pass and Los Angeles River would not be substantially affected by the aerial guideway constructed near these resources and none of the project alternatives would impact these scenic vistas. Based on the current assessment of existing conditions and potential visual impacts, operational impacts would not change in the significance of tribal cultural resources.

Construction Effects

The alignments for each project alternative are largely within the public right-of-way that has already been disturbed during utility and street construction, but these disturbances were relatively shallow. Shallow construction work, such as for the at-grade portions of the alignment, has limited potential to encounter intact TCR archaeological deposits because of the prior shallow disturbances. In addition, the tunnels are likely too deep to encounter deposits. However, other proposed construction activities, such as mass excavation required for new stations, MRT or HRT footings, at-grade alignment segments, TBM launch and extraction sites, and ancillary facilities, have the potential to encounter deeper, intact archaeological deposits. Furthermore, while an archaeologist may place greater importance on the intact nature of archaeological deposits, tribes may be concerned with the potential to identify and protect prehistoric resources, regardless of scientific value. Implementation of MM TCR-1 and MM TCR-2 would minimize potential impacts by requiring Native American monitoring during ground disturbance, work stoppage and consultation if Tribal Cultural Resources or human remains are encountered, and the implementation of protective measures to ensure culturally appropriate treatment and compliance with legal requirements. Additionally, MM CUL-1, MM-CUL-6, MM CUL-7 and MM CUL-8 require construction personnel training on identifying and responding to cultural and Tribal Cultural Resources, archaeological monitoring in sensitive areas, work stoppage and treatment protocols for discovered artifacts, and procedures for the respectful handling of human remains in accordance with legal and tribal requirements.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6. These mitigation measures are included in the CEQA documentation and may be included in NEPA documentation.

MM TCR-1: Native American Monitoring

- *Project-related ground-disturbing activities conducted in locations determined to have moderate to high archaeological sensitivity, or other locations determined appropriate through Assembly Bill 52 consultation, shall be monitored by a Native American representative from a consulting tribe, in accordance with the Cultural Resources Monitoring and Mitigation Plan detailed in MM CUL-1. The tribal monitor shall be qualified by his or her tribe to monitor tribal cultural resources.*
- *In the event that an archaeological resource discovered during project construction is determined to be potentially of Native American origin based on*

the initial assessment of the find by a Secretary of the Interior-qualified archaeologist pursuant to California Public Resource Code Section 21083.2(i), the Native American tribes that consulted on the Project pursuant to Assembly Bill 52 shall be notified. Those tribes also shall also be provided information about the find to allow for early input from the tribal representatives with regard to the potential significance and treatment of the resource. Resources shall be treated with culturally appropriate dignity, taking into consideration the tribal cultural values and meaning of the resource.

- *If, as a result of the inadvertent resource discovery evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource and determined, in accordance with California Public Resource Code Section 21074, to be eligible for inclusion in the California Register of Historical Resources or a local register of historical resources or is determined to be significant by the California Environmental Quality Act lead agency (the Los Angeles County Metropolitan Transportation Authority), the qualified archaeologist and Native American monitor shall monitor all remaining ground-disturbing activities in the area of the resource. The input of all consulting tribes shall be considered in the preparation of any required treatment plan activities prepared by the qualified archaeologist for any tribal cultural resources identified during project construction, as required in the Cultural Resources Monitoring and Mitigation Plan (MM CUL-1).*
- *Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.*

MM TCR-2: Unanticipated Discovery of Human Remains

- *If human remains are discovered, work in the immediate vicinity of the discovery shall be suspended and the Los Angeles County Coroner shall be contacted immediately. If the remains are deemed Native American in origin, the coroner shall contact the State of California Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resource Code Section 5097.98 and California Code of Regulations Section 15064.5. The Most Likely Descendants may inspect the site within 48 hours of being notified and may issue recommendations for scientific removal and nondestructive analysis. If the Most Likely Descendant fails to make recommendations, then the Los Angeles County Metropolitan Transportation Authority and/or the landowner may rebury the remains in a location not subject to further disturbance, at their discretion. Work may be resumed at the Los Angeles County Metropolitan Transportation Authority's discretion but shall commence only after consultation and treatment have been concluded. Work may continue on other parts of the Project while consultation and treatment are conducted.*

3.11 Geotechnical Considerations

Refer to the *Sepulveda Transit Corridor Project Geotechnical, Subsurface, Seismic, and Paleontological Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025l).

3.11.1 Seismicity

The entire Southern California region is seismically active. A network of major regional faults and minor local faults crisscrosses the region. The state passed the Alquist-Priolo Earthquake Fault Zoning Act of 1972 is "to regulate development near active faults so as to mitigate the hazard of surface fault rupture." State Geologists are required to delineate Earthquake Fault Zones around active and potentially active faults to reduce fault-rupture risks to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults. Cities and counties must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Typically, structures for human occupancy are not allowed within 50 feet of the trace of an active fault. All faults except for one are located more than 1 mile from the project alternatives. Each project alternative crosses the Santa Monica Fault in West Los Angeles.

Operational Effects

The potential for operational impacts associated with seismic events is similar for the project alternatives because there are known active faults near each of the alignments. The Alquist-Priolo Earthquake Fault Zoning Act prohibits the construction of structures for human occupancy (i.e., houses, apartments, offices, etc.) on the surface trace of active faults. However, the Alquist-Priolo Earthquake Fault Zoning Act does not prohibit the construction of non-habitable structures (i.e., not suitable to be lived in such as carport, roads, train tracks, bridges, etc.). The project alternatives would construct a fixed guideway within the Alquist-Priolo Earthquake Fault Zone. The project alternatives would be designed to comply with current seismic safety standards, including structural engineering measures to account for the potential impacts of seismic activity. As such, the operational components of the project alternatives would not exacerbate fault rupture risks or contribute to the potential for loss, injury, or death associated with known earthquake. Operational activities would not directly or indirectly cause strong seismic ground shaking including liquefaction. This is because operational activities, such as the movement of monorail vehicles along the guideway and electric bus operations, would not involve ground-disturbing activities or the application of forces that could affect geological processes. While operational activities of would not exacerbate fault rupture risks, the project alternatives would be constructed in a way to reduce the risk of loss, injury, or death as a result of a fault rupture through compliance and adherence to existing regulations incorporation of ant design recommendations that come from the final geotechnical engineering reports.

Construction Effects

The potential for construction impacts associated with seismic events is similar for the project alternatives because there are known active faults near each of the alignments. Construction activities would be carried out in compliance with the regulatory requirements as defined in PM GEO-1 to account for the potential effects of ground shaking and the portion of Alternative 1 within the Santa Monica Fault.

Potential NEPA Avoidance, Minimization, and Control Measures

The following project measures and mitigation measures are applicable to Alternatives 1 through 6. These measures are included in the CEQA documentation and may be included in NEPA documentation.

PM GEO-1: *The Project shall demonstrate to the County of Los Angeles and the City of Los Angeles that the design of the Project complies with all applicable provisions of the California Building Code with respect to seismic design. Compliance shall include the following:*

- *California Building Code Seismic Zone 4 Standards as the minimum seismic-resistant design for all proposed facilities*
- *Seismic-resistant earthwork and construction design criteria (i.e., for the construction of the tunnel below ground surface, liquefaction, landslide, etc.), based on the site-specific recommendations of a California Registered Geologist in cooperation with the Project Engineers.*
- *An engineering analysis to characterize site-specific performance of alluvium or fill where either forms part or all of the support.*

PM GEO-2: *A California-registered geologist and geotechnical engineer shall submit to and have approval by the Project a site-specific evaluation of unstable soil conditions, including recommendations for ground preparation and earthwork activities specific to the site and in conformance with City of Los Angeles Building Code, County of Los Angeles Building Code, the California Building Code, Metro Rail Design Criteria (as applicable), and Caltrans Structure Seismic Design Criteria.*

PM GEO-3: *The Project shall demonstrate that the design of the Project complies with all applicable provisions of the County of Los Angeles Building Code and City of Los Angeles Building Code.*

MM GEO-1: *The Project's design shall include integration and installation of early warning system to detect and respond to strong ground motion associated with ground rupture. Known active fault(s) (i.e., Santa Monica Fault) shall be monitored. Linear monitoring systems such as time domain reflectometers or equivalent or more effective technology shall be installed along fixed guideway in the zone of potential ground rupture.*

MM GEO-2: *Where excavations are made for the construction of the below surface tunnel, the Project shall either shore excavation walls with shoring designed to withstand additional loads or flatten or reduce the slope of the excavation walls by laying them back to a shallower gradient. Excavation spoils shall not be placed immediately adjacent to excavation walls unless the excavation wall is shored to support the added load. Spoils should be stored at a safe distance from the excavation site to prevent undue pressure on the walls.*

MM GEO-3: *The Project shall comply with the recommendations of the final soils and geotechnical report. These recommendations shall be implemented in the design of the Project, including but not limited to measures associated with site preparation, fill placement, temporary shoring and permanent dewatering, groundwater seismic design features, excavation stability, foundations, soil stabilization, establishment of deep*

foundations, concrete slabs and pavements, surface drainage, cement type and corrosion measures, erosion control, shoring and internal bracing, and plan review.

MM GEO-4: *In locations where soils have a potential to be corrosive to steel and concrete, the soils shall be removed, and buried structures shall be designed for corrosive conditions, and corrosion-protected materials shall be used in infrastructure.*

MM GEO-5: *Prior to construction, the Project shall prepare a Construction Management Plan that addresses geologic constraints and outlines strategies to minimize or avoid impacts to geologic hazards during construction. The plan shall address the following geological and geotechnical constraints/resources and incorporate standard mitigation (shown in parentheses):*

- *Groundwater withdrawal (using dewatering pumps and proper disposal of contaminated groundwater according to legal requirements)*
- *Risk of ground failure from unstable soils (retaining walls and inserting soil stabilizers)*
- *Subsidence (retaining walls and shoring)*
- *Erosion control methods (netting on slopes, bioswales, sediment basins, re-vegetation)*
- *Soils with shrink-swell potential (inserting soil stabilizers including chemical treatment of soils)*
- *Soils with corrosive potential (protective coatings and protection for metal, steel or concrete structures, soil treatment, removal of corrosive soils, and proper disposal of any corrosive soils)*
- *Impact to topsoils (netting, and dust control)*
- *The recommendations of the Construction Management Plan shall be incorporated into the project plans and specifications.*

3.11.2 Liquefaction

Liquefaction involves a sudden loss in strength of a saturated, cohesionless, uniformly particle-sized soil, typically caused by ground shaking activities, which causes temporary transformation of the soil to a fluid mass. In rare instances, groundborne vibrations can cause liquefaction from activities such as pile driving or tunnel boring. If the liquefying layer is near the ground surface, the effects may resemble those of quicksand. If the layer is deep below the ground surface, it may provide a sliding surface for the material above it and/or cause differential settlement of the ground surface, which may damage building foundations by altering weight-bearing characteristics. During a liquefaction event, soils behave similarly to liquids, losing bearing strength. Structures built on these soils may tilt or settle when the soils liquefy. Liquefaction more often occurs in earthquake-prone areas underlain by young sandy alluvium where the groundwater table is less than 50 feet below ground surface.

Operational Effects

The potential for operational impacts associated with liquefaction is similar for the project alternatives because they all traverse liquefaction zones. Liquefaction occurs when a mass of saturated soil loses significant strength and stiffness due to applied stress, usually from an earthquake. The project

alternatives could experience earthquake-induced ground shaking activity because of its proximity to known active faults. However, operational activities would not directly or indirectly cause strong seismic ground shaking including liquefaction. This is because operational activities, such as the movement of monorail vehicles along the guideway and electric bus operations, would not involve ground-disturbing activities or the application of forces that could affect geological processes. Further, the design and construction of the Project would comply with applicable seismic and geotechnical regulations, which require infrastructure in liquefaction-prone areas to incorporate engineering measures, such as reinforced foundations for the elevated guideway, to ensure that the design is capable of withstanding seismic forces during operation. Adherence to the provisions listed in the California Bulding Code and the Metro Rail Design Criteria (MRDC) or equivalent would substantially reduce potential structural damage and the risk to public safety from seismic events by ensuring that seismic-related ground failure and liquefaction would not cause potential substantial effects.

Construction Effects

While construction activities for the underground alignments of Alternatives 4, 5, 6, and Modified Alternative 5 would involve subsurface work at depths where liquefaction could potentially occur, these activities would not directly or indirectly cause seismic ground shaking or induce liquefaction because the construction processes would not be of sufficient intensity to cause geological processes such as faults or liquefaction. The construction of Alternative 3 would adhere to seismic and geotechnical regulations, which would require appropriate engineering measures to ensure that liquefaction risks do not exceed unacceptable levels.

Potential NEPA Avoidance, Minimization, and Control Measures

PM GEO-1 through PM GEO-3 and MM GEO-1 through MM GEO-5, defined previously, are applicable to Alternatives 1 through 6. These measures are included in the CEQA documentation and may be included in NEPA documentation.

3.11.3 Soil Stability

This analysis addresses impacts related to unstable soils as a result of subsidence, differential settlement, lateral spreading, or collapse. Subsidence involves a sudden sinking or gradual settling and compaction of soil and other surface material with little or no horizontal motion. Expansive soils have a significant amount of clay particles that can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils. The occurrence of these soils often is associated with geologic units having marginal stability. Expansive soils can be dispersed widely, found in hillside areas, as well as low-lying areas in alluvial basins.

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges where Holocene-age alluvial fan and wash sediments have been deposited during rapid runoff events. Soils prone to collapse are commonly associated with man-made fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods.

Lateral spreading is a phenomenon where large blocks of intact, non-liquefied soil move downslope riding on a liquefied substrate of large extent. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff and can occur on slope gradients as gentle as 1 degree.

Operational Effects

The potential for operational impacts associated with soil stability is similar for the project alternatives because of similarities in existing soil conditions along the alignments; however, specific impacts may

vary depending on whether the alignment is elevated or underground, as these configurations interact with soil stability in different ways. The project alternatives are not located on a geographic unit or soil that is unstable, or that would become unstable, potentially resulting in lateral spreading, subsidence, liquefaction, or collapse. Using unsuitable materials for fill and/or foundation support would have the potential to create future heaving, subsidence, spreading, or collapse problems leading to building settlement and/or utility line and pavement disruption. Structural engineering standards to address geological conditions are part of standard construction requirements and standard construction practices. The project alternatives would be designed in accordance with and equivalent to the Metro Rail Design Criteria Section 5, Structural; Metro's Supplemental Seismic Design Criteria (2017) or equivalent; and the California Seismic Hazards Mapping Act. Furthermore, the project alternatives would be designed in accordance with recommendations developed in a detailed geotechnical report prepared during final design, which would provide site-specific information pertaining to the depths and areal extents of lateral spreading, subsidence, or collapse. During the design process, if it is determined that these conditions identified in the geotechnical report could result in an unacceptable soil or structural response (to be defined during final design and dependent on the type of structure), the resulting final geotechnical engineering would include recommendations that would be incorporated into the final design plans consistent with standard practice to address any unstable geologic and related conditions present along the alignment. This may include deep foundations and/or ground improvements such as dynamic compaction, stone columns, jet grouting, and cement deep soil mixing and compaction grouting. Given compliance with these regulatory and design requirements, operational activities would not result in adverse effects related to soil stability.

Construction Effects

The potential for construction impacts associated with soil stability is similar for the project alternatives because of similarities in existing soil conditions along the alignments; however, specific impacts may vary depending on whether the alignment is elevated or underground, as these configurations interact with soil stability in different ways. Construction activities would involve foundation support installation and earthwork along the alignment. Certain construction activities, such as drilling for the aerial guideway (Alternatives 1, 3, and 4) or tunneling (Alternatives 4, 5, 6, and Modified Alternative 5), could affect soil stability leading to ground movements (both lateral movements and settlements) or subsidence. Additionally, the use of unsuitable materials for fill and/or foundation support could have the potential to create future heaving, subsidence, spreading, or collapse problems leading to foundation or roadway settlement. Implementation of MM GEO-1 through MM GEO-5 would reduce effects associated with the exposure of people or structures to hazards associated with unstable geologic units or soils.

Potential NEPA Avoidance, Minimization, and Control Measures

MM GEO-1 through MM GEO-5, defined previously, are applicable to Alternatives 1 through 6. These measures are included in the CEQA documentation and may be included in NEPA documentation.

3.12 Hazards and Hazardous Materials

Refer to the *Sepulveda Transit Corridor Project Hazards and Hazardous Materials Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025m).

3.12.1 Hazardous Materials Transport, Use, or Disposal

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined by federal regulations as "a substance or material

that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> *Hazardous material means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.*

Hazardous wastes are defined in California Health and Safety Code Section 25141(b) as wastes that:

> *…because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.*

Operational Effects

It is not anticipated that substantial quantities of hazardous materials would be routinely transported, used, stored, or disposed of during operation of any alternatives. Operation of stations and the guideway would involve the use of small amounts of hazardous substances such as oil, grease, solvents, paints, and common cleaning materials. Acutely hazardous materials are defined as waste containing such dangerous chemicals that it could pose a threat to human health and the environment even when properly managed. As mandated by PM HAZ-1, cleaning and maintenance products are required to be labeled with appropriate cautions and instructions for handling, storage and disposal, and do not represent a significant threat to human health and the environment. Staff would be required to use, store, and dispose of these materials properly in accordance with label directions.

Construction Effects

Construction of all project alternatives could expose the public or the environment to hazardous materials if the following situations occurred: improper handling or use of hazardous materials or hazardous wastes (particularly if used or handled by untrained personnel); transportation accident; environmentally unsound disposal methods; or fire, explosion, or other emergencies. The severity of potential effects would vary with the activity conducted, the concentration of and type of hazardous material or wastes present, and the proximity of sensitive receptors. The types and amounts of hazardous materials would vary according to the nature of the construction activity. Construction activities would require use of typical construction equipment (e.g., gasoline- or diesel-powered machinery) and vehicles containing fuel, oil, and grease, as well as use and transport of these materials. Limited quantities of certain hazardous materials such as paints, solvents, and glues would be used during construction. Construction staging and laydown would occur at multiple locations along the alignment and station sites and could include storage of excavated or demolished materials, construction offices, equipment storage, mechanical shops, and plants. There is low likelihood that substantial quantities of hazardous materials would be stored during construction. Moreover, these hazardous materials would not include acutely hazardous materials or substances listed in 40 CFR 355

Appendix A: Extremely Hazardous Substances and Their Threshold Planning Quantities that could harm construction workers or the general public.

There is an established, comprehensive federal, state, regional, and local framework that is intended to reduce the risks associated with the use, transport, and disposal of hazardous materials. Transportation of hazardous materials on area roadways is regulated by the CHP and Caltrans. The use and disposal of hazardous materials is heavily regulated at both the federal and state level. Metro would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. As mandated by PM HAZ-2, transportation of hazardous materials would comply with state regulations governing hazardous materials transport as stated in the California Vehicle Code (Title 13 of the California Code of Regulations), the State Fire Marshal Regulations (Title 19 of the California Code of Regulations), and Title 22 of the California Code of Regulations. Restrictions on haul routes can be incorporated into the construction specifications according to local permitting requirements. Contaminated soils and hazardous building materials and wastes would be disposed of in accordance with federal, state, and local requirements. Adherence to federal and state regulations stipulated by PM HAZ-2 reduces the risk of exposure to hazardous materials used during construction. Each of these regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a more coordinated, quicker response to emergencies.

Potential NEPA Avoidance, Minimization, and Control Measures

The following project measures are design features, BMPs, or other measures required by law and/or permits. These measures are components of the Project and are applicable to Alternatives 1 through 6. They are included in the CEQA documentation and may be included in NEPA documentation.

PM HAZ-1: *Operational (post Project) best management practices shall be implemented by the Project and include but not be limited to:*

- *Cleaning and maintenance products shall be required to be labeled with appropriate cautions and instructions for handling, storage, and disposal. Staff shall be trained and required to use, store, and dispose of these materials properly in accordance with label directions.*
- *If the quantity of hazardous materials used, handled, or stored on-site at the maintenance and storage facility exceeds the regulatory thresholds of 55 gallons for a hazardous liquid; 500 pounds of a hazardous solid; 200 cubic feet for any compressed gas; or threshold planning quantities of an extremely hazardous substance per Chapter 6.95 of the California Health and Safety Code, the Project shall prepare a Hazardous Materials Business Plan in accordance with all related requirements of the California Health and Safety Code (Chapter 6.95, Articles 1 and 2). The plan shall be reviewed and recertified every year and amended as required by the California Health and Safety Code (Chapter 6.95, Articles 1 and 2).*
- *Storage and disposal of hazardous materials and waste shall be conducted in accordance with all applicable federal and state regulatory requirements, such as the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act; the Hazardous Materials Release Response Plans and Inventory Law; and the Hazardous Waste Control Act, and if a spill does occur, it shall be remediated in accordance with all applicable federal*

and state regulatory requirements and in coordination with the Department of Toxic Substances Control and/or Los Angeles Regional Water Quality Control Board.

- *Compliance with applicable Los Angeles County and City of Los Angeles requirements pertaining to emergency vehicle access as well as the California Building Code and California Fire Code standards shall ensure that sufficient ingress and egress routes are maintained and provided to the new stations.*

PM HAZ-2: *Construction best management practices shall include but not be limited to:*

- *The Project shall be required to obtain permits before construction begins and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases in accordance with the U.S. Environmental Protection Agency, State Water Resources Control Board, Department of Toxic Substances Control, California Division of Occupational Safety and Health, and the South Coast Air Quality Management District.*
- *The Project shall develop a Stormwater Pollution Prevention Plan in accordance with the State Water Resources Control Board's Construction Clean Water Act Section 402 General Permit conditions, and subject to regular inspections by applicable jurisdiction(s) to ensure compliance. The Stormwater Pollution Prevention Plan shall include specifications for the following, but not be limited to, the following:*
  - *Maintain proper working conditions for vehicles and equipment to minimize potential fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials.*
  - *Conduct servicing, refueling, and staging of construction equipment only at designated areas where a spill would not flow to drainages. Conduct equipment washing, if needed, only in designated locations where water would not flow into drainage channels.*
  - *Implement drainage best management practices to protect water quality, (such as oil/water separators, catch basin inserts, storm drain inserts, media filtration, and catch basin screens).*
  - *Report hazardous spills to the designated Certified Unified Program Agency (i.e., Los Angeles County Fire Department Health Hazardous Materials Division or Santa Fe Springs Department of Fire and Rescue) and implement clean up immediately and proper disposal of contaminated soil at a licensed facility.*
  - *Establish properly designed, centralized storage areas to keep hazardous materials fully contained.*
  - *Keep spill cleanup materials (e.g., rags, absorbent materials, and secondary containment) properly stored and maintained at the work site when handling materials.*

  - *Implement monitoring program by the construction site supervisor that includes both dry and wet weather inspections.*

- *Transportation of hazardous materials by the Project shall comply with state regulations governing hazardous materials transport included in the California Vehicle Code (Title 13 of the California Code of Regulations), the State Fire Marshal Regulations (Title 19 of the California Code of Regulations), and Title 22 of the California Code of Regulations. These regulations include the following:*
  - *Require all motor carrier transporters of hazardous materials to have a Hazardous Materials Transportation license issued by the California Highway Patrol.*
  - *Require the transport of hazardous materials via routes with the least overall travel time.*
  - *Prohibit the transport of hazardous materials through residential neighborhoods.*
  - *Require transporters to take immediate action to protect human health and the environment in the event of spill, release, or mishap.*
  - *Incorporate restrictions on haul routes into the construction specifications according to local permitting requirements.*
- *Contaminated soils and hazardous building materials and wastes shall be disposed of in accordance with federal, state, and local requirements at landfills serving Los Angeles County. The removal and disposal of hazardous building materials shall be the responsibility of a California Division of Occupational Safety and Health certified contractor in accordance with South Coast Air Quality Management District Rule 1403 (Asbestos Emissions from Renovation/Demolition Activities).*
- *Traffic control during construction shall follow local jurisdiction guidelines. For specialized construction tasks, it may be necessary to work during nighttime hours to minimize traffic disruptions.*

PM HAZ-4: *Construction best management practices for demolition of existing structures shall include but shall not be limited to, the following:*

- *Both the federal Occupational Safety and Health and California Division of Occupational Safety and Health agencies regulate worker exposure during construction activities that disturb lead-based paints. Any asbestos-containing materials, if present, shall require appropriate abatement of identified asbestos prior to demolition pursuant to the South Coast Air Quality Management District Rule 1403.*
- *Polychlorinated biphenyl- (PCB) containing fluorescent light fixtures and electrical transformers that are not labeled "No PCBs" shall be assumed to contain polychlorinated biphenyls and shall be removed prior to demolition activities and shall be disposed of by a licensed and certified polychlorinated biphenyl removal contractor, in accordance with local, state, and federal regulations. The removal*

and disposal of the electrical transformers shall be the responsibility of the utility owner in accordance with all standards and practices.

PM HAZ-5: *Construction best management practices for the areas with known or previously undiscovered hazardous materials shall include but not be limited to, the following:*

- *The Project shall hire a qualified professional to sample soil suspected of contamination (obvious signs of contamination include indicators such as odors, stains, or other suspect materials) for the purpose of classifying material and determining disposal requirements before construction begins. If excavated soil is suspected or known to be contaminated, the Project shall:*
  - *Segregate and stockpile the excavated material in a way that shall facilitate measurement of the stockpile volume.*
  - *Spray the stockpile with water or a South Coast Air Quality Management District approved vapor suppressant and cover the stockpile with a heavy-duty plastic (i.e., Visqueen) to prevent soil volatilization in the atmosphere or exposure to nearby workers per South Coast Air Quality Management District Rule 1166.*
- *Existing groundwater monitoring wells shall remain under ongoing groundwater investigations associated with off-site sources.*

3.12.2 Hazardous Sites

Operational Effects

The hazardous site conditions for all project alternatives related to Government Code Section 65962.5, commonly known as the Cortese List, are associated with contaminated soils and groundwater. Any health risks to the public and/or the environment associated with release of hazardous materials would be mitigated during construction and not occur after construction is complete. During operations, no ground-disturbing activities would occur at the Cortese-listed hazardous materials sites such that hazardous releases of contaminated soils could create a significant hazard to the public or the environment.

Construction Effects

A search of various regulatory databases identified several sites in the surrounding area as being contaminated or having the potential to become contaminated from the release of hazardous substances (e.g., leaking underground storage sites). Ground-disturbing construction activities could disturb undocumented soil or groundwater contamination. Impacts could result if construction activities inadvertently disperse contaminated material into the environment. Potential hazards to human health include ignition of flammable liquids or vapors, and skin contact with contaminated soil or water. These risks are possible during the entire course of ground disturbance with construction workers most at risk. However, is it possible that the nearby public could be affected if the impacts are of a sufficient volume. Additional effects could include the potential exposure of construction workers and/or the public to chemical compounds in soils (e.g., lead and polychlorinated biphenyls), soil gases, and groundwater; potential localized spread of contamination; potential exposure of workers, the public, and the environment to airborne chemical compounds migrating from the construction or demolition areas (e.g., asbestos); and potential accidents during transportation of contaminated slurry or soils or groundwater.

Specifically, regarding existing hazardous sites, the following two open sites are within 100 feet of Alternative 6 and potentially Modified Alternative 5:

- Miller Infinity Site located at 5455 Van Nuys Boulevard. The site (GeoTracker T0603702402) is listed as a gasoline-impacted soil and groundwater site with an Open-Remediation status under the leaking underground storage tank database. The site is the location of a former commercial petroleum fueling facility. An unauthorized release was reported in April 1989 following the removal of eight gasoline underground storage tank. Remediation has been on-going. According to the information reviewed, the petroleum release is limited to the soil and shallow groundwater. The Los Angeles Regional Water Quality Control Board approved a revised Remedial Action Plan on December 23, 2021. The plan involves "over-purging" to remove remaining free product in selected monitoring wells. Depth to water ranges from 59 to 62 feet below ground surface. Groundwater flow is toward the northeast. Several monitoring wells appear to be in or adjacent to the Alternative 6 footprint. As of August 2022, the site does not qualify for closure under the Low-Threat Underground Storage Tank Case Closure Policy.
- Winall Station #17 located at 4441 Van Nuys Boulevard. The site (GeoTracker T0603702422) is listed as gasoline-impacted soil, soil vapor and groundwater contamination with a remediation plan status. The site first reported the release in April of 1990. Soil and groundwater remediation and monitoring have been on-going since then. Groundwater impacts are both on- and off-site. According to a Los Angeles Regional Water Quality Control Board April 2022 letter, off-site groundwater impacts extend to the north and northeast, in the direction of groundwater flow. However, off-site impacts to the north have not been adequately delineated. Depth to groundwater has varied between 11 and 21 feet below ground surface. Four monitoring wells appear to be located in or adjacent to the Alternative 6 footprint. A Remedial Action Plan was submitted on August 27, 2021. Remedial activities will be conducted on soil vapor and groundwater.

The San Fernando Valley (Area 4) Pollock Operable Unit Superfund site is a 5,860-acre area with areas of contaminated groundwater near the LADWP Pollock Well Field in Los Angeles. Historical manufacturing work in the Valley groundwater basin, dating back to World War II, contaminated the groundwater in the region with volatile organic compounds, including trichloroethylene, and tetrachloroethylene. The regional plume of the Area 4 Pollock Operable Unit of the Valley Superfund Site could potentially affect the northern portions of all alternatives north of Saticoy Street. Contaminated groundwater poses the greatest risk at this site during construction activities such as excavation, tunneling, dewatering and grouting operations. The Valley Area 4 groundwater contamination is being addressed through the coordination of federal, state and municipal agencies. EPA conducted rounds of indoor sampling in the Atwater Village area (outside of the Project Study Area) and determined that the pollutants migrating from the groundwater did not impact the area. Based on these results, it can be inferred that pollutants would not affect proposed stations.

Polychlorinated biphenyls were commonly used through 1979 in the small capacitor within fluorescent light ballasts. These florescent light bulbs would be of concern if they are leaking as they may expose workers handling the fixtures to a variety of adverse health effects. As set forth in PM HAZ-4, identification and remediation of polychlorinated biphenyls-containing transformers would be the responsibility of the utility owner.

Implementation of MM HAZ-1 through MM HAZ-5 would ensure that workers have a clear understanding of hazardous materials that may occur in the construction area as well as procedures and plans for safely handling, transporting, and disposing of hazardous materials, and would minimize

potential exposure to construction workers and the public to hazardous conditions through the disturbance or improper handling and/or disposal of hazardous building materials during demolition activities.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures are applicable to Alternatives 1 through 6. These measures are included in the CEQA documentation and may be included in NEPA documentation.

MM HAZ-1: ***Phase I Environmental Site Assessment.*** *Prior to the issuance of a grading permit and before any substantial ground disturbance occurs on or near the properties with documented releases, the Project shall hire a qualified environmental professional to conduct a Phase II Environmental Site Assessment to determine the potential presence of petroleum hydrocarbons, metals, and volatile organic compounds in soil and/or groundwater.*

- *If the Phase I Environmental Site Assessment identifies any recognized environmental conditions or other indicators of potential contamination, a Phase II Environmental Site Assessment shall be conducted. The Phase II Environmental Site Assessment shall include sufficient soil and groundwater sampling and laboratory analysis to identify the types of chemicals and their respective concentrations. The Phase II Environmental Site Assessment shall compare soil and groundwater sampling results against applicable environmental screening levels developed by the Los Angeles Regional Water Quality Control Board and/or Department of Toxic Substances Control. If the Phase II Environmental Site Assessment identifies contaminant concentrations above the screening levels, a site-specific Soil and Groundwater Management Plan shall be prepared and implemented as described in MM HAZ-2. The Project shall consult with the Department of Toxic Substances Control, California Environmental Protection Agency, and/or other appropriate regulatory agencies to ensure sufficient minimization of risk to human health and the environment is completed.*

MM HAZ-2: ***Soil and Groundwater Management Plan.*** *Prior to the issuance of a grading permit, a site-specific Soil and Groundwater Management Plan shall be prepared by a qualified professional environmental contractor to address handling and disposal of contaminated soil and groundwater prior to demolition, excavation, and construction activities.*

- *The Project shall implement the Soil and Groundwater Management Plan during construction activities. The Soil and Groundwater Management Plan shall specify all necessary procedures to ensure the safe handling and disposing of excavated soil, groundwater, and/or dewatering effluent in a manner that is protective of human health and in accordance with federal and state hazardous waste disposal laws, and with state and local stormwater and sanitary sewer requirements. At a minimum, the plan shall include the following:*
  - *Identification and delineation of contaminated areas and procedures for limiting access to such areas to properly trained personnel.*
  - *Step-by-step procedures for handling, excavating, characterizing, and managing excavated soils and dewatering effluent, including procedures for*

containing, handling, and disposing of hazardous waste; procedures for containing, handling, and disposing of groundwater generated from construction dewatering; the method used to analyze excavated materials and groundwater for hazardous materials likely to be encountered at specific locations; appropriate treatment and/or disposal methods. Removal of soil and materials shall be performed by a licensed engineering contractor with a Class A license and hazardous-substance removal certification.

- *Requirements to water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, and staging.*
- *Requirements to cover or maintain at least 2 feet of free board space on haul trucks transporting soil or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.*
- *Requirements to use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry powered sweeping is prohibited.*
- *Procedures for handling volatile organic compound-contaminated soil, including, but not limited to, segregating volatile organic compound-contaminated stockpiles from non-volatile organic compound-contaminated stockpiles, spraying volatile organic compound-contaminated soil stockpiles with water and/or approved vapor suppressant and covering them with plastic sheeting for all periods of inactivity lasting more than 1 hour, conducting a daily visual inspection of all covered volatile organic compound-contaminated soil stockpiles to ensure the integrity of the plastic covered surfaces, and removing contaminated soil from an excavation or grading site within 30 days from the time of excavation to a licensed facility.*
- *Procedures for notification and reporting, including notifying and reporting to internal management and to local agencies.*
- *Minimum requirements for site-specific Health and Safety Plans to protect the general public and workers in the construction area. Prior to the issuance of grading permits, the Soil and Groundwater Management Plan and the results of environmental sampling shall be provided to contractors who shall be responsible for developing their own construction worker Health and Safety Plan and training requirements, per MM HAZ-4.*
- *The Project shall hire a qualified environmental professional to sample groundwater suspected of contamination. If any suspected groundwater contamination is encountered during construction, the contractor shall stop work in the vicinity, cordon off the area, and contact the Los Angeles County Metropolitan Transportation Authority who shall immediately notify the Los Angeles Regional Water Quality Control Board. In coordination with the Los Angeles Regional Water Quality Control Board, an investigation and remediation plan shall be developed by a qualified environmental*

professional in order to protect public health and the environment. Any hazardous or toxic materials shall be disposed of according to local, state, and federal regulations.

- *Trucking operations shall comply with the California Department of Transportation and any other applicable regulations, and all trucks shall be licensed and permitted to carry the appropriate waste classification. The tracking of dirt by trucks leaving the project site shall be minimized by cleaning the wheels upon exit and cleaning the loading zone and exit area as needed.*

MM HAZ-3: ***Contractor Specifications.*** *The Project shall include in its contractor specifications the following requirement relating to hazardous materials:*

- *During all ground-disturbing activities, the contractor(s) shall inspect the exposed soil and groundwater for obvious signs of contamination, such as odors, stains, or other suspect materials. Qualified personnel shall monitor for volatile organize compounds and other subsurface gases for concentrations exceeding South Coast Air Quality Management District levels with a photoionization detector. Should signs of unanticipated contamination be encountered, work shall be suspended, and the Los Angeles County Department of Public Health shall be notified, and the area secured. Contaminated soil and/or groundwater shall be segregated and characterized, and a site-specific Soil and Groundwater Management Plan, as described under MM HAZ-2, shall be prepared and implemented.*

MM HAZ-4: ***Worker Health and Safety Plan.*** *The contractor shall prepare site-specific Worker Health and Safety Plan to protect the general public and workers in the construction area. The Health and Safety Plan shall be prepared in accordance with California and federal Occupational Safety and Health Administration regulations. Copies of the Health and Safety Plan shall be made available to construction workers for review during their orientation and/or regular health and safety meetings. The Health and Safety Plan shall identify chemicals of concern, potential hazards, worker training requirements, personal protective equipment and devices, decontamination procedures, the need for personal or area monitoring, and emergency response procedures. The Health and Safety Plan shall be amended, as necessary, if new information becomes available that could affect implementation of the plan.*

MM HAZ-5: ***Hazardous Building Survey and Abatement.*** *Prior to demolition activities of any structures, the Project shall retain a California Division of Occupational Safety and Health-certified contractor to determine the presence or absence of building materials or equipment that contains hazardous materials, including asbestos, lead-based paint, and polychlorinated biphenyl-containing equipment. If such substances are found to be present, the contractor shall prepare and submit a workplan to the relevant oversight agency to demonstrate how these hazardous materials would be properly removed and disposed of in accordance with federal and state law, including South Coast Air Quality Management District Rule 1403 (Asbestos Emissions from Renovation/Demolition Activities). The removal and disposal of hazardous building materials shall be the responsibility of a California Division of Occupational Safety and Health--certified contractor. Following completion of removal activities, the*

Project shall submit documentation to the relevant oversight agency verifying that all hazardous materials were properly removed and disposed of.

3.12.3 Methane Zones

Operational and Construction Effects

Methane and other flammable or toxic gases (notably hydrogen sulfide) are often associated with naturally occurring petroleum deposits, or from former or active oil fields. In such areas there is a potential for methane and other volatile gases to occur in the subsurface. In high concentration, methane and hydrogen sulfide can be an explosion hazard to the public. In the City of Los Angeles, there are two types of methane hazard zones: methane zones and methane buffer zones. A methane zone is closer to the source of the subsurface methane gas and/or hydrogen sulfide. Whereas a methane buffer zone surrounds the outer limits of a methane zone. These zones are mostly a result of naturally surfacing tar and crude oil.

Figure 3-10 through Figure 3-14 show the location of the methane zones in relation to the alternatives. The Santa Monica Boulevard Station and the Wilshire/Metro D Line Station would be within the methane hazard zone. Under Alternative 1, all stations would be above street level and there would be no potential hazards associated with methane and/or hydrogen sulfide. The tunnel alignments for Alternatives 3, 4, 5, 6, and Modified Alternative 5 would encounter the methane and methane buffer zones. In addition, for Alternative 6 and Modified Alternative 5, the methane zones map shows a small methane and methane buffer zone at the location of an abandoned oil exploration well (Leadwell Well No. 1) that is very near the tunnel alignment. Pursuant to Section 91.7104.1 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619) and as outlined in PM HAZ-3, all construction would implement the City's methane mitigation measures to reduce the potential impacts. These measures include subsurface testing of geological formations, compliance with Methane Mitigation Standards established by the Superintendent of Building, and installation of methane and/or hydrogen sulfide mitigation systems for all underground structures, such as stations and tunnels. During tunneling, monitoring for methane and/or hydrogen sulfide concentrations, maintaining ventilation systems to minimize accumulation of gas.

Potential NEPA Avoidance, Minimization, and Control Measures

The following design feature is a component of the Project and applicable to Alternatives 1 through 6. It was included in the CEQA documentation and may be included in NEPA documentation.

PM HAZ-3: *Construction best management practices for activities within methane hazard zones, including tunneling operations and underground station construction shall include but not be limited to, the following:*

- *Pursuant to Section 91.7104.1 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619), site testing of subsurface geological formations shall be conducted by a Project-approved testing agency under the supervision of a licensed architect or registered engineer or geologist. Testing shall address, but necessarily be limited to, methane concentrations and surface conditions along tunneling routes and at underground stations locations. The licensed architect or registered engineer or geologist shall indicate the testing instruments used and testing procedure followed. The testing procedure shall meet the Methane Mitigation Standards established by the Superintendent of Building.*

- *All paving work and building construction within the methane zone or methane All paving work, building construction, tunneling and underground station construction within the methane zone or methane buffer zone as defined by Los Angeles Department of Building and Safety shall be required to comply with Methane Mitigation Standards established by the Superintendent of Building as well as the requirements outlined in Sections 91.7103 and 91.7104 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619).*
- *All buildings and underground structures, including tunneling and stations, located in the Methane Zone shall provide a methane mitigation system as required by Los Angeles Municipal Code Table 71 in Section 91.7104.2 of the City of Los Angeles Methane Code (Ordinance Nos. 175790 and 180619) based on the appropriate Site Design Level. The Superintendent of Building may approve an equivalent methane mitigation system designed by an architect, engineer, or geologist.*

Figure 3-10. Alternative 1: Methane Hazard Zones



Source: Metro, 2025m

Figure 3-11. Alternative 3: Methane Hazard Zones



Source: Metro, 2025m

Figure 3-12. Alternative 4: Methane Hazard Zones



Source: Metro, 2025m

Figure 3-13. Alternative 5: Methane Hazard Zones



Source: Metro, 2025m

Figure 3-14. Alternative 6: Methane Hazard Zones



Source: Metro, 2025m

3.12.4 Airport Hazards

Operational Effects

Alternatives 1 and 3 are located 0.9 miles from the Van Nuys Airport at the nearest Project component, Alternatives 4, 5, 6, and likely Modified Alternative 5 are located 1.3 miles from the Van Nuys Airport at the nearest Project component. The Santa Monica Municipal Airport is not considered because the Santa Monica City Council approved a plan in 2023 to formally close the airport in 2028 (City of Santa Monica, 2023). Figure 3-15 through Figure 3-19 show the location of Airport Influence Area in relation to the alternatives (Los Angeles County Airport Land Use Commission, 2023a, 2023b). Both the Van Nuys Airport Plan and Los Angeles County Airport Land Use Plan indicate that all alternatives are located outside each Airport Influence Area, which is the area where current or future airport-related noise, overflight, safety, or airspace protection factors may substantially affect land uses or necessitate restrictions on those uses. Because the alignments and MSFs would be outside of each Airport Influence Area, there are no airport land use plans applicable to Alternatives 1, 3, 4, 5, or 6.

Construction Effects

Alternatives 4, 5, and possibly Modified Alternative 5 potentially include a 55-acre temporary staging area located north of the Van Nuys Airport, north of Roscoe Boulevard, and within the Airport Influence Area and a 7-acre temporary staging area would potentially be located north of the Santa Monica Airport runway and within the Airport Influence Area. Staging areas are used principally for the operation of contractors' equipment, receipt of deliveries and storage of materials, site offices as well as other construction activities such as maintenance, parking, and removal of spoils. There would be no other construction equipment or activities that could penetrate the Airspace Protection Zone or create visual, electronic, or wildlife hazards. There are no safety compatibility policies related to temporary construction staging.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

Figure 3-15. Alternative 1: Airport Influence Area



Source: Metro, 2025m

Figure 3-16. Alternative 3: Airport Influence Area



Source: Metro, 2025m

Figure 3-17. Alternative 4: Airport Influence Area



Source: Metro, 2025m

Figure 3-18. Alternative 5: Airport Influence Area



Source: Metro, 2025m

Figure 3-19. Alternative 6: Airport Influence Area



Source: Metro, 2025m

3.13 Safety and Security

Refer to the *Sepulveda Transit Corridor Project Safety and Security Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025n).

3.13.1 Fire Protection

The Los Angeles Fire Department (LAFD) is the Authority Having Jurisdiction and has primary responsibility for fire and emergency services within the City of Los Angeles. The Los Angeles County Fire Department is the Authority Having Jurisdiction within the U.S. Department of Veterans Affairs (VA). The City of Los Angeles would provide essential emergency and non-emergency services to the VA under mutual aid. Figure 3-20 shows fire protection facilities relative to each project alternative.

Operational Effects

The project alternatives would introduce elements to the existing setting that could affect fire services. For alternatives with aerial components, the height of the proposed aerial guideway and clearance between supporting columns would be sufficient to maintain access for fire and emergency vehicle crossings. At signalized intersections, left-turning traffic would be maintained. Operation of the aerial alignments and stations would not materially impact fire protection response times because those segments include elevated heights that would not affect emergency vehicles traveling on the roadway network.

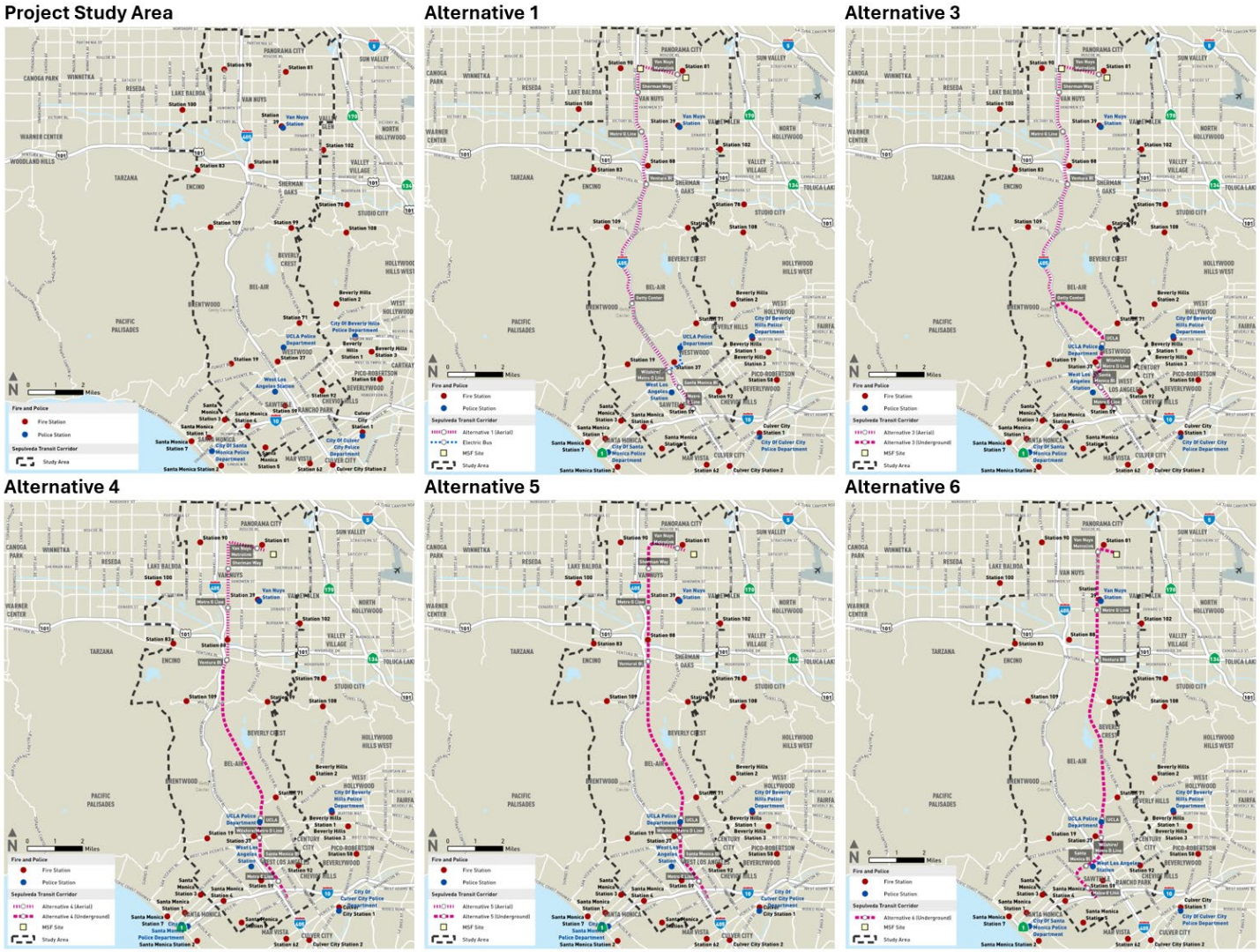
During operations of all project alternatives, there would be low potential for increased demand on fire response services due to incidents or emergencies, which could result in an increase in overall response calls within the local jurisdictions. The City of Los Angeles has a duty under the California Constitution to provide adequate fire and emergency service (Cal. Const., art. XIII, § 35, subd. (a)(2)). Funds are allocated to these services during the annual monitoring and budgeting process to ensure that fire protection services are responsive to changes in the City of Los Angeles. Similarly, the LAFD evaluates staffing levels during the annual budgetary process, and personnel are hired, as needed, to ensure that adequate fire protection and emergency response services are maintained.

Adequate fire flows would be required by the fire code prior to construction. Sufficient water supply and hose systems would be provided protection to suppress fire hazards for all project elements. Stations would be equipped with a fire alarm control system in each station facility, and meeting Americans with Disabilities Act requirements, as well as signaling and fire detection systems, fire alarm panels, and sprinkler systems.

The proposed alignments and stations would be designed in accordance with the Metro Rail Design Criteria or equivalent criteria, including the Fire/Life Safety Criteria to ensure safety and minimize potential hazards at all locations. Metro's Fire/Life Safety Criteria outlines specific requirements for fire protection at stations, along the alignments, and within rail vehicles. Metro's standard fire/life safety certification process ensures that stations are designed and constructed to ensure safe and secure operation, including use of non-combustible construction materials, adequate emergency ventilation in below-grade portions, emergency lighting, emergency egress, emergency access, emergency backup power, fire detection and suppression, and communications. Train vehicles would be built using vehicle specifications to minimize fire hazards that include use of materials with minimum burning rates, smoke generation, and toxicity characteristics. Further, compliance with code requirements pertaining to emergency vehicle access and building standards also ensures that response times are maintained at acceptable levels.

While fires are not anticipated, there is the potential that a fire could occur at a station, along the alignment, at the MSF, or at a TPSS location. In the event of an emergency situation, LAFD personnel would respond, and the fire station to respond would be dependent on the location of the emergency along the alignment. The authority responsible for the safe and efficient operation of a fixed guideway transit or passenger rail system would anticipate and plan for emergencies that could involve the system. Per guidance set forth by the National Fire Protection Association, the authority responsible for the safe and efficient operation of a fixed guideway transit or passenger rail system would anticipate and plan for emergencies that could involve the system. An *Emergency Procedure Plan* would be followed in the event of a fire. The risk of fire would be minimized within the station locations and along the alignment by adhering to the requirements of National Fire Protection Association (NFPA) 130 and the Los Angeles City Fire Code or design equivalent. In addition, as typically done by Metro, PM SAF-2 would ensure that LAFD evaluates Project designs so that emergency access for fire protection services is maintained at acceptable levels.

Figure 3-20. Existing Fire and Police Station Locations Within or Serving the Project Study Area by Project Alternative



Source: Metro, 2025n

Alternative 4 would require a partial take of an existing fire protection response facility at the LAFD Fire Station Number 88 at 5101 Sepulveda Boulevard, Sherman Oaks, CA 91403. Roadway improvements would widen the back of sidewalk by 4 feet and the aerial guideway would place three straddle-bent columns within the existing station's property. While Alternative 4 would necessitate physical alterations of the outer limits of the LAFD's property where landscaping exists, the LAFD Fire Station Number 88 building itself would not require physical alteration and would not affect the access or egress for LAFD vehicles during operations. Alternative 4 would install aerial guideway columns and protective raised medians on Sepulveda Boulevard in the San Fernando Valley, between Ventura Boulevard and Raymer Street. The existing center lane along Sepulveda Boulevard is primarily striped as a two-way left-turn lane. The installation of the viaduct's supporting columns and raised medians would affect the sight distance for emergency vehicles when making left turns on or onto Sepulveda Boulevard and potentially increase response times. However, design standards set forth by state and local agencies establish roadway engineering criteria to ensure that minimum sight distances are maintained for motorists (including emergency response vehicles) to pass other vehicles safely and comfortably. Alternative 4 roadway design would conform to geometric design standards set forth by the Caltrans Highway Design Manual and the LADOT so that the line of sight would not be impaired for emergency vehicles making turn movements on Sepulveda Boulevard. The raised medians would also prohibit left turns on or onto Sepulveda Boulevard from Hartsook Street, Hesby Street, Archwood Street, Hart Street, Leadwell Street, La Maida Street, South Valleyheart Drive, and Covello Street. The removal of left turns would have the potential to increase response times for fire protection. Pursuant to PM SAF-2, LAFD would evaluate the design of Alternative 4 to ensure that emergency access and fire protection response times remain at acceptable levels.

Construction Effects

Construction of any of the project alternatives would potentially temporarily increase demands on fire protection as a result of new workers, construction equipment, and construction materials in the Project Study Area, and periodic construction-related street closures or detours. Although temporary lane closures could interfere with fire service response times, this temporary condition would not necessitate the construction of new or physically altered governmental facilities. A TMP would be prepared and approved in coordination with local fire and police departments prior to construction, including the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic movement. The nearest local first responders would be notified, as appropriate, of traffic control measures in the plan during construction to coordinate emergency response routing.

Alternative 4 would require partial property acquisition at LAFD Fire Station Number 88 to widen the back of the sidewalk by 4 feet to accommodate the aerial guideway's columns and foundations. Construction of the aerial guideway would require roadway detours on Sepulveda Boulevard to support drilling of the cast-in-drilled-hole foundations, forming and pouring bent columns and bent caps, and placing the precast guideway elements. Additionally, Alternative 4 would install three columns within the existing LAFD Fire Station Number 88 property currently dedicated for landscaping. While the station building would not be physically altered, the sidewalk would be widened and require improvements of two existing driveways serving LAFD Fire Station Number 88. Such construction work has the potential to be disruptive to the operations of LAFD Fire Station Number 88 and can result in an increase in response times. However, construction work would be temporary and intermittent and would not necessitate the construction of new or physically altered governmental facilities. ATMP would be prepared and approved in coordination with local fire departments prior to construction, including the development of detour routes and notification procedures to facilitate and ensure safe and efficient

traffic movement. The nearest local first responders would be notified, as appropriate, of traffic control measures in the TMP during construction to coordinate emergency response routing. Therefore, Metro and the contractor would coordinate with LAFD Fire Station Number 88 when working in proximity.

The project alternatives would be required to create a Fire Prevention Plan that identifies potential fire hazards and their proper handling and storage procedures, potential ignition sources (such as welding, smoking and others) and their control procedures, and the type of fire protection equipment or systems that can control a fire involving them. A training program would inform employees of the fire hazards of the materials and processes to which they are exposed. The contractor would review with each worker upon initial assignment those parts of the Fire Prevention Plan that the employee must know to protect the worker in the event of an emergency. The written plan would be kept in the workplace and made available for employee review.

Potential NEPA Avoidance, Minimization, and Control Measures

For operations, the following project measures are components of the Project and applicable to Alternatives 1 through 6. These measures are included in the CEQA documentation and may be included in NEPA documentation.

PM SAF-1 *The Project shall comply with all regulations of California Health and Safety Code Sections 13000 et seq. and City of Los Angeles Municipal Code pertaining to fire protection systems, such as the adequate provision of smoke alarms, fire extinguishers, building access, emergency response notification systems (master alarm system), fire flows, and hydrant pressure and spacing, and relevant building codes relating to fire suppression and defensible space.*

PM SAF-2 *Metro shall coordinate with the Los Angeles Fire Department and the Los Angeles Police Department to evaluate the design of Alternative 4 to ensure that emergency access for fire and police protection services is maintained at acceptable levels.*

For construction, MM TRA-4 is applicable to Alternatives 1 through 6.

3.13.2 Police Protection

Police services would be provided by the Los Angeles Police Department (LAPD) and Los Angeles County Sheriff's Department (LASD) under Metro's existing contract service agreements with these agencies. Figure 3-20 shows police services relative to each project alternative.

Operational Effects

During operation of all project alternatives, there would be low potential increase in the demand for police protection services from incidents or emergencies occurring at the proposed stations or transit vehicles, which could result in an increase in overall response calls within the local jurisdictions. Operational activities would be monitored by Metro, which has implemented a multi-policing model inclusive of Metro's transit security officers and contract security personnel. Metro's transit security officers are Metro's own security team and are deployed to specific locations with high frequencies of public-safety issues. Transit security officers enforce the Metro Code of Conduct, ensuring riders follow the rules and norms of the system. Additionally, Metro deploys trained contract personnel on Metro's buses, bus stops, trains, and stations to provide customer support. Ambassadors are unarmed and travel the system or are present at stations to promote safety for riders and operators. While not acting as security officers or replacing security officers, they provide a visible presence and support riders by connecting them with resources they may need such as providing directions or connecting them to

other agencies and services as appropriated or warranted. They also help Metro to respond to issues more quickly by reporting maintenance, cleanliness, or safety concerns directly to the appropriate Metro department. The purpose of this multi-agency approach is to achieve higher visibility, enhanced response time, improved customer experience, and deployment of specifically trained officers to engage patrons with special needs. In addition, the UCLA Police Department would provide support police services at the UCLA bus station associated with Alternative 1 and the UCLA Gateway Plaza Station with Alternatives 3, 4, 5, 6, and Modified Alternative 5.

Alternative 4 would install aerial guideway columns and protective raised medians on Sepulveda Boulevard in the Valley. The existing center lane along Sepulveda Boulevard is primarily striped as a two-way left-turn lane. The installation of the aerial viaduct's supporting columns and raised medians would affect the sight distance for police vehicles when making left turns on or onto Sepulveda Boulevard and potentially increase response times. However, design standards set forth by state and local agencies establish roadway engineering criteria to ensure that minimum sight distances are maintained for motorists to pass other vehicles safely and comfortably. Alternative 4 roadway design would comply with geometric design standards set forth by the Caltrans *Highway Design Manual* (Caltrans, 2020) and the LADOT (LADOT, 2010) so that the line of sight would not be impaired for police vehicles making turn movements on Sepulveda Boulevard. The raised medians that would protect the columns for the aerial guideway would also prohibit left turns on or onto Sepulveda Boulevard at Hartsook Street, Hesby Street, Archwood Street, Hart Street, Leadwell Street, La Maida Street, South Valleyheart Drive, and Covello Street. The removal of left turns would have the potential to increase response times for police protection. PM SAF-2 would ensure that LAPD evaluates the design of Alternative 4 so that that emergency access for police services is maintained at acceptable levels.

Metro MSFs are typically fenced off and access is restricted. In addition, security cameras and nighttime lighting are typical security measures.

Construction Effects

Police service agencies in the area — including the LAPD, LASD, UCLA Police Department, and CHP — allocate funding from tax revenues to maintain adequate staffing levels and response times. Project operations would not require the construction of new or expanded police facilities, as existing service capacity is anticipated to accommodate any potential changes in demand. During construction, relevant police service agencies would review Health and Safety Plans, which include safety measures such as nighttime lighting, clear signage, and pedestrian detour routes. Agencies may also assess fees to support police protection services as needed. Metro standard practices require that lane and roadway closures be scheduled to minimize disruptions, with a TMP prepared and approved in coordination with local police departments prior to construction. The contractor would coordinate with first responders and emergency service providers to minimize any impacts on emergency response.

Potential NEPA Avoidance, Minimization, and Control Measures

For operations, refer to PM SAF-2, which is applicable to Alternative 4. For construction, refer to MM TRA-4 for Alternative 1 through 6. These measures were included in the CEQA documentation and may be included in NEPA documentation.

3.13.3 Emergency Evacuations

Disaster routes play a primary role in disaster response and recovery. During a disaster and immediately following, disaster routes are used to transport emergency equipment, supplies and personnel into an affected area. Disaster routes are also utilized by fire, Emergency Medical Services, and others involved

with public safety for life saving measures. Disaster routes are prioritized for clearing, repairing, and restoring over all other roads. The County of Los Angeles identifies I-405 and Sepulveda Boulevard as disaster routes.

Operational Effects

Alternatives 1 and 3 would operate within and adjacent to I-405. Alternative 4 features an aerial configuration on Sepulveda Boulevard, in the Valley. For Alternatives 1, 3, and 4, I-405 and Sepulveda Boulevard would be kept accessible to emergency vehicles and fire equipment due to the height of the proposed aerial alignments and stations. Alternatives 5, 6, and Modified Alternative 5 would operate entirely underground and would not affect conditions on surface streets.

All new guideways, stations, and crossings would be designed in accordance with Metro Rail Design Criteria or an equivalent design criteria, including Fire Life Safety Criteria, to ensure safety and minimize potential hazards at all locations of the Project elements. Further compliance with applicable county and city design criteria pertinent to emergency vehicle access, as well as the California Fire Code standards, would ensure that sufficient ingress and egress routes would be provided at all station areas.

All project alternatives would comply with National Fire Protection Association guidance to reduce the potential physical interference with an emergency response or evacuation plan. The authority responsible for the safe and efficient operation of a fixed guideway transit or passenger rail system would anticipate and plan for emergencies. Participating agencies would be invited to assist with the preparations of the *Emergency Procedure Plan*. Such coordination efforts with emergency services personnel would be agreed upon through third-party agreements or Memoranda of Understanding to ensure the project alternatives would not physically interfere with or substantially impair an adopted emergency response or evacuation plan. In addition, the *All-Hazards Mitigation Plan* for the County of Los Angeles (CoLA CEO, 2020) and the *Local Hazard Mitigation Plan* (City of Los Angeles, 2018) address procedures for large-scale emergency situations, such as natural disasters and technological incidents and not normal day-to-day emergencies. These emergency preparedness documents are for large-scale emergency situations (e.g., earthquakes, wildfire) that would be applicable to the entire County of Los Angeles and the City of Los Angeles.

Construction Effects

Temporary short-term effects on I-405 would occur for the construction of Alternatives 1 and 3. Temporary short-term effects on Sepulveda Boulevard would occur for all project alternatives due to roadway improvements and construction of the stations, and construction staging yards. Construction activities would necessitate roadway improvements to provide sufficient space for the guideway, stations, TPSS sites, the MSF, and construction staging yards. Roadway improvements within I-405 and Sepulveda Boulevard would result in a temporary and intermittent reduction of the number of lanes or temporary closure of roadways. MM TRA-4 requires that lane and/or roadway closures are scheduled to minimize disruptions and that a TMP be prepared in coordination with local fire and police departments prior to construction, including the development of detour routes and notification procedures to facilitate and ensure safe and efficient traffic movement. The nearest local first responders would be notified, as appropriate, of traffic control plans during construction to coordinate emergency response routing.

As required by All project alternatives would comply with the provisions set forth under the California Code of Regulations Title 8 and the California Division of Occupational Safety and Health (Cal/OSHA), the contractor would create an Emergency Action Plan that would cover designated actions that employers

and employees must take to ensure employee safety from fire and other emergencies. The following elements, at a minimum, would be included in the plan:

- Procedures for emergency evacuation, including type of evacuation and exit route assignments
- Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
- Procedures to account for all employees after emergency evacuation has been completed
- Procedures to be followed by employees performing rescue or medical duties
- The preferred means of reporting fires and other emergencies
- Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan

Adherence to existing laws, regulations, preparedness plans, and implementation of the TMP under MM TRA-4 would ensure that project alternatives would provide adequate access for emergency vehicles and not impede an adopted emergency response plan or emergency evacuation plan.

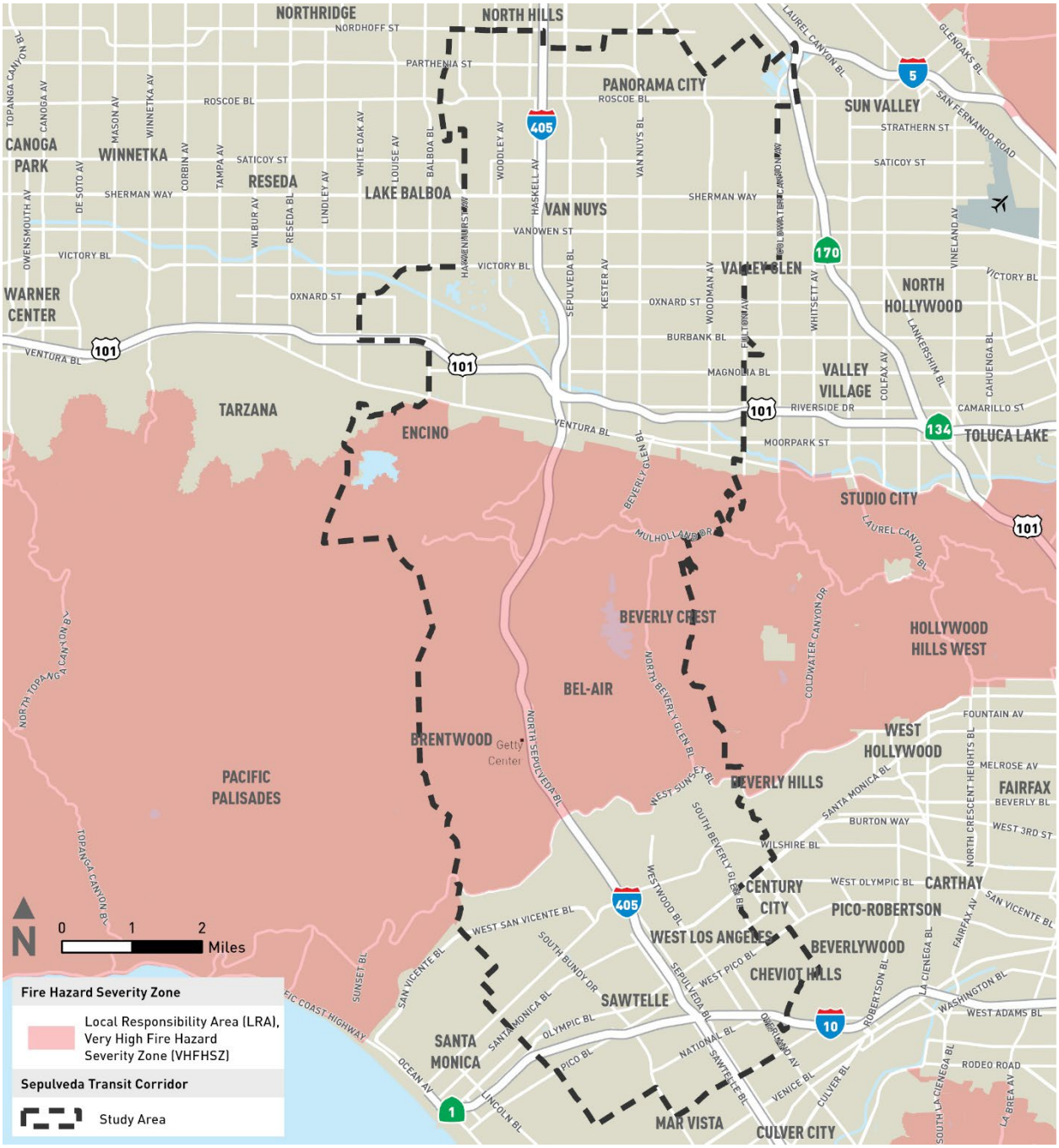
Potential NEPA Avoidance, Minimization, and Control Measures

Refer to MM TRA-4 for Alternatives 1 through 6. This mitigation measure was included in the CEQA documentation and may be included in NEPA documentation.

3.13.4 Wildfire Risk

As shown on Figure 3-21, all project alternatives would occur within the Santa Monica Mountains which is a Wildfire Hazard Zone that California Department of Forestry and Fire Protection has designated as a Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE, 2011). Additionally, as shown on Figure 3-22, this segment of the Santa Monica Mountains has historically experienced wildfires, including the 2025 Palisades Fire, 2025 Sepulveda Fire, 2019 Getty Fire, and the 2017 Skirball Fire. The surrounding geography, climate, and environmental conditions contribute to risk of wildfire.

Figure 3-21. Wildfire Hazard Zones in the Project Study Area



Source: CAL FIRE, 2011; HTA, 2024

Figure 3-22. Historical Wildfires in the Project Study Area



Source: CAL FIRE, 2025c; HTA, 2024

Operational Effects

Alternatives 1 and 3 feature aerial alignments that would be located within the median of I-405 and its adjacent landscape in the VHFHSZ. Both alternatives have a risk of harm to project occupants because of increased exposure to wildfires and their pollutants. Alternatives 4, 5, 6, and Modified Alternative 5 would feature underground guideway within the VHFHSZ. Due to the depth of the proposed alignment, Alternatives 5, 6, and Modified Alternative 5 would not expose Project occupants to wildfires or their pollutants. While a majority of the Alternative 4 alignment within the Wildfire Hazard Zone is underground at a depth that would not expose Project occupants, the tunnel portal south of the proposed Ventura Boulevard Station would be located in a developed area with some open space areas. This could potentially lead to direct health impacts related to smoke and fire, as well as the potential of destruction of nearby property. In addition, all project alternatives would require maintenance of roads, fuel breaks, emergency water sources, and other utilities associated infrastructure to support Project elements. Additionally, provisions under NFPA 130 would require the operator of all project alternatives to develop a passenger evacuation protocol.

PM SAF-1 would minimize wildfire risks through compliance with all regulations of the California Health and Safety Code Sections 13000 et seq. and the City of Los Angeles Municipal Code pertaining to fire protection systems during operations.

Construction Effects

Potential ignition sources during construction of all project alternatives include hot exhaust from a vehicle parked on dry grass or welding during high winds, which could send sparks traveling through the air and land and igniting dry grass. Construction activities would comply with existing regulations that restrict periods of activity to times that are not a high fire risk. In addition, the implementation of MM SAF-1 and MM SAF-2 would ensure that the effects associated with fire risks would be minimized during construction activities.

Potential NEPA Avoidance, Minimization, and Control Measures

For operations, the following project measures are components of the Project and applicable to Alternatives 1 through 6. These measures are included in the CEQA documentation and may be included in NEPA documentation.

MM SAF-1 *The Project shall curtail above ground construction and maintenance activities requiring spark-producing equipment during high-risk wildfire periods in applicable areas. Applicable areas would be areas in the Santa Monica Mountain Range that the California Department of Forestry and Fire Protection designates as a wildfire zone and is populated with dried vegetation or other material that could ignite. Construction and maintenance activities utilizing motorized equipment shall be curtailed during red-flag warning days and other high-risk periods characterized by relative humidity of 15 percent or less combined with windy conditions consisting of frequent gusts at 25 miles per hour or greater for at least 3 hours in a 12 hour period.*

MM SAF-2 *During construction of the Project, all staging areas, welding areas, or areas slated for development that use spark-producing equipment shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be monitored to ensure the spark arrestor is in good working order. All vehicles and crews working on the project site shall have access to functional fire extinguishers at all times.*

3.14 Real Estate and Acquisitions

Refer to the *Sepulveda Transit Corridor Project Real Estate and Acquisitions Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025o).

The Project would affect existing properties and result in property acquisitions and displacements. The parcels acquired for the Project would involve either full or partial acquisition. Full acquisition would involve fee simple acquisitions, which consist of a complete transfer of ownership rights. In a fee simple acquisition, the buyer has full and irrevocable ownership of land and any buildings on it. Partial acquisition would involve either fee simple acquisitions or easements. Property acquisitions may be phased over time depending on Project funding and construction phasing, methods, and schedule. Table 3-19 lists typical causes of property acquisitions and displacement that could occur as a result of the Project.

Full acquisition would require the use of the entire property. Full property acquisition would result in the purchase of an entire property by Metro for the Project. Metro would purchase a "fee simple interest" of the property and become the owner of the property. Full acquisition would occur in instances that require the use of a significant portion of the property, including the physical structure or structures identified as the property's principal dwelling or business facility, permanently or for an extended period during construction. Full acquisition would be required in cases where a property's physical structure or structures were not affected but another component critical to a property's intended use would be affected (such as a severe loss of parking or access that would reduce the useful operation of the property).

Partial acquisition would occur if the Project would use a portion of a given property but would not require the entirety of the property. Partial property acquisition means that only a portion of the property would be acquired, and the owner would retain the remaining portion of the property. Types of partial acquisition include partial "fee simple" acquisitions and various types of permanent and temporary easements. For a "fee simple" acquisition, Metro would purchase a "fee simple interest" for the portion of the property and would become owner for that portion of the property. A partial acquisition is also considered if the area required is not critical to the property's primary function as a residence or business, or if the remaining portion of the property could be reconfigured to continue serving its purpose without significant disruption to occupants.

Table 3-19. Typical Causes of Property Acquisition and Displacement for the Project

Source of Acquisition	Type of Acquisition	Cause/Process
Horizontal Alignment	Full/Partial Fee Simple	Insufficient existing right-of-way for construction and operation.
Aerial Alignment	Permanent Easement	A condition for a non-exclusive access agreement or easement (either permanent or temporary) for aerial alignments to allow access to a property or facility.
Vertical Circulation (e.g., stairs)	Partial Fee Simple	Area needed to bring passengers from the ground level to a station platform at an aerial (elevated) structure.
Property Encroachment	Full/Partial Fee Simple	Unauthorized use of private property. Resolution through boundary survey and potential relocation of use.
Access to a Residential or Non-Residential Use(driveway or road)	Full Fee Simple/ Permanent Easement	Permanent easement would be needed to provide residential units or non-residential uses access to a road; full acquisition may be required if reduced or restricted access would disrupt use of residences or non-residential uses.
Street/Intersection Improvements; Grade Crossing/Separation; Drainage and Utility Improvements	Partial/Full Fee Simple	Additional area/lanes required to maintain traffic volumes, turn lanes and sidewalk widths; additional area required to upgrade drainage facilities or to improve utility.
Station Entrance	Full Fee Simple / Partial Fee Simple/ Permanent Easement	Area needed to provide passenger access to an at-grade or aerial station.
Parking Facility	Partial/Full Fee Simple	Area required for station parking.
Operations Maintenance and Storage Facility	Partial/Full Fee Simple	Area required to perform maintenance activities.
TPSS and Ancillary Facilities	Partial/Full Fee Simple	TPSS's and ancillary facilities would be located within the station footprints. However, there might specific locations along the alignment where partial/full takes are needed to make sure that all required infrastructure would be in place to support the efficient operation of the Sepulveda rail line.
Construction Activities	Temporary Construction Easements	Area used for staging materials and equipment, as well as cut-and-cover and tunneling activities, during the construction period; property would be returned at the end of construction.
Construction Access, Staging and Laydown	Partial/Full Fee Simple	Area required for staging materials and equipment, as well as cut-and-cover and tunneling activities, during the construction period; would be used for station parking or other permanent use after construction has been completed.

Source: Metro, 2025o

An easement provides one party with the right to use another party's property for a stated purpose. That property may be owned by a private person, business entity, or a group of owners and can involve a general or specific portion of the property. An easement can be at the surface, underground/subsurface (beneath a property), or aboveground (aerial) level and can be characterized as temporary (typically during construction) or permanent. Temporary construction easements (TCE) may be necessary if temporary rights may be required from property owners for material storage, construction activities, or access. Depending on the size and location of the TCEs, they may or may not require the demolition of existing structures. If TCEs do not require demolition of existing structures, TCEs typically would not affect the primary function of the property. In these circumstances, the area may revert to its former use after construction activities have been completed. If TCEs require demolition of existing structures, the primary function of the property could be affected or may cause undue disruption to the occupants.

Underground/subsurface easements would be required during construction for tunneling and all underground facilities, including underground utilities and TPSS. The easement would be permanent since it would be required for the operations of an underground transit line once construction is completed. Permanent aerial easements would be used for the operation of an elevated transit line. Permanent foundation easements would be required for the construction and maintenance of the foundations, footings, and support systems associated with the aerial structure. An easement is considered a partial property acquisition from the property owner. The purchase of an easement is accomplished through a one-time payment and the recording of an easement deed.

Operational Effects

The following project components located outside of the public right-of-way would require property acquisitions:

- Aboveground alignments (Alternatives 1, 3, 4, and 5)
- Underground alignments (Alternatives 3, 4, 5, and 6)
- Station areas (All Alternatives)
- At-grade TPSS facilities that are outside of station areas (All Alternatives)
- I-405 improvements (Alternatives 1 and 3)
- Local street, utility, and drainage improvements (All Alternatives)
- MSF (All Alternatives)
- Electric Bus MSF (Alternative 1)

Table 3-20 provides a summary of the potential businesses and housing units identified for displacement and relocation from each alternative. This summary includes acquisitions associated with each MSF. The potential for displacement and relocation associated with Modified Alternative 5 will be determined during the upcoming design process. Appendix A of the *Sepulveda Transit Corridor Project Real Estate and Acquisitions Technical Report* presents parcel-specific data, and Appendix B provides figures that identify the parcels that would potentially be acquired along the alignments (Metro, 2025o).

Table 3-20. Summary of Potential Displacement Units by Alternative

Land Use		Alternative 1[a]	Alternative 3[b]	Alternative 4	Alternative 5	Alternative 6
Commercial	Parcels	14	14	19	26	41
	Units	14	14	97	86	44
Industrial	Parcels	10	10	11	11	2
	Units	9	8	12	19	1
Institutional/Public Facilities	Parcels	2	2	1	1	1
	Units	2	2	1	1	1
Vacant/Undeveloped	Parcels	2	1	1	1	10
	Units	0	0	0	0	0
Mixed Use	Parcels	0	0	1	1	1
	Units	0	0	2 businesses 34 residential units	2 businesses 34 residential units	2 businesses 3 residential units
Multi-Family Residential	Parcels	0	0	3	0	1
	Units	0	0	168	0	124
Single-Family Residential	Parcels	1	1	9	0	0
	Units	1	1	10	0	0
Total Parcels		**28**	**27**	**45**	**40**	**55**
Total Residential Units		**1**	**1**	**212**	**34**	**127**
Total Business Units		**23**	**22**	**111**	**107**	**46**

Source: HTA, 2024

[a.] Includes the MSF Base Design and Electric Bus MSF. The parcels that would be used for MSF Design Option 1 would be acquired for the Alternative 1 or Alternative 3 alignment and are therefore also included.

[b.] Includes the MSF Base Design. The parcels that would be used for MSF Design Option 1 would be acquired for the Alternative 1 or Alternative 3 alignment and are therefore also included.

Construction Effects

Construction would involve the following:

- Site preparation and demolition of structures (All Alternatives)
- Utility relocation (All Alternatives)
- Construction of the MRT alignment (Alternatives 1 and 3)
- Tunneling and cut-and-cover activities (Alternatives 4, 5, and 6)
- Soil relocation (Alternative 6)
- Construction of the aerial and subsurface alignments (Alternatives 4, 5, and 6)
- Construction of stations, MSF, TPSS, auxiliary facilities, and parking facilities (All Alternatives)
- Installation of tiebacks to support the subsurface alignment (Alternative 6)
- Street widening (All Alternatives)
- Street and sidewalk reconstruction (All Alternatives)

Some parcels that would be permanently acquired for the operations would also be used for construction purposes, such as for construction access, staging, and laydown. Temporary acquisitions would be required for parcels that would only be used as TCEs. Depending on the location and size of the TCEs, existing structures on parcels could either remain in place or be demolished. For parcels where structures would be demolished, existing non-residential uses and residents would be relocated. For parcels where structures would not be demolished, non-residential use could temporarily be displaced

during construction, but no permanent displacement would occur. These parcels would be returned to pre-construction conditions once construction is completed.

Table 3-21 lists the parcels that would be affected by construction of the project alternatives. No structures on these residential parcels would be demolished and the function of these residential parcels would not change. Construction of Alternatives 1 and 3 would not result in the displacement of any residential units. It is anticipated that Modified Alternative 5 will result in construction-related acquisitions similar to Alternatives 5 and 6.

Table 3-21. Parcels to be Used as During Construction for the Project Alternatives

Alternative	Permanent Acquisition (Fee Simple and/or Easement)[a]	Temporary Construction Easement[b]
Alternative 1	38	6
Alternative 3	43	7
Alternative 4	87	36
Alternative 5	26	32
Alternative 6	46	125

Source: Metro, 2025o

[a.] Parcels that would be permanently acquired for operations and also be used during construction, such as for access, staging, and/or laydown.

[b.] Parcels from which the acquisition of TCEs may be required.

Potential NEPA Avoidance, Minimization, and Control Measures

Relocation assistance and compensation for all displaced residences, as required by the Uniform Act and California Relocation Act, would be provided for property acquisition and/or displacement that may occur under the project alternatives. Metro would compensate owners at fair market value to purchase the required properties. In the case of partial acquisitions, Metro would compensate owners if damages are incurred to the remainder property. Residents of parcels affected by partial acquisitions may make a case that the remainder property is no longer compatible with their intended use. Residents of properties that would be fully acquired by Metro would need to be relocated. Each residence displaced as a result of the project alternatives would be given advance written notice and would be informed of their eligibility for relocation assistance and payments.

Parcels that would be temporarily acquired (e.g., for TCEs) and permanently acquired (e.g., a parcel that would be used for TCE or construction staging and laydown during construction would also be used as an easement for the alignment or a station during operations) would be appraised to determine the fair market value of the portion that would be used temporarily during construction, and just compensation not less than the amount recommended/determined by an approved appraisal would be made to each property owner.

3.15 Economic and Fiscal Considerations

Refer to the *Sepulveda Transit Corridor Project Economic and Fiscal Impacts Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025p).

Each of the project alternatives is expected to enhance economic development in the Los Angeles region by improving connectivity between the Valley and the Westside of Los Angeles. This high-capacity rail transit alternative would provide efficient and reliable transportation for a large and growing travel market currently dependent on the congested Sepulveda Pass and nearby canyon roads. One of the

primary benefits would be the improved access it would provide to major employment, educational, and cultural centers in the greater Los Angeles area. By linking the Van Nuys Metrolink/Amtrak Station in the north with the Metro E Line in the south, the project alternatives would facilitate smoother and faster commutes and reduce travel times compared to automobile travel along regularly congested I-405. This enhanced connectivity is expected to attract businesses and workers, which would foster a more dynamic and integrated regional economy. The convenience of rapid transit access would likely stimulate real estate development and boost property values along the Sepulveda Transit Corridor. Throughout the construction period, the project alternatives are anticipated to increase employment for the region. Jobs would range from construction and engineering roles to on-going operational and maintenance positions, providing a healthy boost to local employment. Additionally, the project alternatives would contribute to the long-term resiliency of the City of Los Angeles. The region would be better positioned to withstand economic shocks related to fuel price volatility or disruptions in road networks by diversifying transportation options and reducing reliance on automobiles.

3.15.1 Operational Output, Earnings, and Employment

The project alternatives are expected to generate reoccurring employment and earnings for the region in the form of operation and maintenance staff, facility operators, and maintenance expenditures. They are expected to have a beneficial, but not substantial effect on local employment, relative to the overall employment of the region.

3.15.2 Fiscal Effects

The wages generated from construction activities would boost tax revenues. Table 3-22 lists the potential income tax generated by each project alternative. The incremental consumption from new earnings would also boost sale tax revenues, which is listed in Table 3-23.

Table 3-22. Potential Income Tax Generated Earnings (2023 $M)

Area	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Regional	676	903	853	1,070	1,127
State of California	782	1,048	990	1,242	1,308

Source: Metro, 2025p

2023 $M = millions in 2023 dollars

Table 3-23. Potential Sales Tax Revenues (2023 $M)

Area	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Regional	182	243	229	288	303
State of California	160	214	202	255	268

Source: Metro, 2025p

2023 $M = millions in 2023 dollars

Constructing the project alternatives would require acquiring private land and structures for right-of-way, parking, and station facilities. These acquisitions would remove the properties from the local tax base, reducing annual tax revenue. Including temporary acquisitions during construction and applying a conservative assumption that both partial and full takes would result in property tax loss for the full parcel, it is estimated that Alternative 1 would impact less than 0.13 percent of the Los Angeles County or City of Los Angeles annual property tax revenue relative to 2023 assessed parcel values and the total 2023 property tax revenues (County of Los Angeles, 2023; City Controller of Los Angeles, 2024).

Alternative 3 would impact less than 0.12 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. Alternative 4 would impact less than 0.21 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. Alternative 5 would impact less than 0.16 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. Alternative 6 would impact less than 0.18 percent of the Los Angeles County or City of Los Angeles annual property tax revenue. It is anticipated that Modified Alternative 5 would impact annual property tax revenues in a similar manner as Alternative 5 or Alternative 6, although this will be determined during the upcoming design process.

The calculated revenue loss is well below the annual change in levied taxes, which increased 5.5 percent in fiscal year 2022-2023 from fiscal year 2022-2023 (County of Los Angeles, 2023). The projected loss in tax revenues associated with any of the project alternatives would not compromise the County's or City's ability to provide services or generate an adverse effect.

3.15.3 Construction Output, Earnings, and Employment

Construction of each of the project alternatives would require substantial capital investment. The spending would increase the employment, earnings, and output for the duration of the construction period. Table 3-24 lists capital cost estimates in 2023 dollars, providing a common value for expenditures that would be distributed over several years. Alternative 6 has the highest estimated capital costs followed by Alternative 5, Alternative 3, Alternative 4, and Alternative 1. It is anticipated that Modified Alternative 5 would likely reduce capital costs compared to Alternative 5 because it reduces overall Project length, although this will be determined during the upcoming design process. Preliminary benefit-cost comparison indicates that each project alternative would result in considerable benefits. Further quantification of project costs and benefits will inform future decision-making, including the potential for reduced travel times and vehicle operating costs and improved air quality, traffic safety, health, and economic productivity.

Table 3-24. Summary of Capital Costs (2023 $M)

Category	Alternative 1	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Design and Planning	3,619	4,638	4,174	5,238	5,655
Construction	9,574	13,104	12,661	15,891	16,537
Equipment	814	861	610	584	501
Total	14,007	18,603	17,444	21,713	22,693

Source: Metro, 2025p

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

To isolate the potential economic effects on the local economy and the state, it is typical to distinguish between resources/funds that are new to the economy—those that would be invested in region and/or the state under the project alternatives—and resources/funds that would be spent on projects in the region with similar economic effects (e.g., funds that would be allocated to other transportation construction projects in the area). The capital cost effects considers if expenditures would be likely to yield effects in the local economy and if the funds used to make those expenditures are new resources for the region. The project alternatives are expected to be funded by a variety of local, state, and federal sources, including Measure M, which is a Los Angeles County voter approved, no sunset half-cent sales tax that funds projects to ease traffic, expand public transportation, and more (Metro, 2016). For this analysis, 100 percent of costs are treated as new funding to the region. The actual effects from

construction would likely be lower, after expenditures planned under the No Build Alternative, such as the Measure M funds, are removed. Project equipment is expected to be sourced from outside the state. Therefore, the equipment cost category is not factored into the effect analysis. Table 3-25 lists the potential regional and state benefit for Alternative 1. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-26 lists the potential regional and state benefit for Alternative 3. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-27 lists the potential regional and state benefit for Alternative 4.

2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-28 lists the potential regional and California benefit for Alternative 5. 2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-29 lists the potential regional and state benefit for Alternative 6. It is anticipated that Modified Alternative 5 would result in benefits of similar magnitude to the other alternatives, although this will be determined during the upcoming design process.

Table 3-25. Alternative 1: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	3,619	7,509	2,606	33,802	7,711	2,847	37,267
Construction (Tunnel, Track and Approaches)	9,574	18,019	4,661	65,960	18,831	5,565	79,363
Total	13,193	25,528	7,267	99,762	26,542	8,411	116,630

Source: Metro, 2025p

2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-26. Alternative 3: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	4,638	9,625	3,340	43,327	9,884	3,649	47,769
Construction (Tunnel, Track and Approaches)	13,104	24,661	6,379	90,272	25,772	7,616	108,615
Total	17,742	34,286	9,719	133,599	35,656	11,265	156,385

Source: Metro, 2025p

2023 $M = millions in 2023 dollars

Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-27. Alternative 4: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	4,174	8,661	3,006	38,987	8,894	3,283	42,984
Construction (Tunnel, Track and Approaches)	12,661	23,828	6,163	87,224	24,902	7,359	104,948
Total	16,835	32,489	9,169	126,211	33,795	10,642	147,932

Source: Metro, 2025p

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-28. Alternative 5: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	5,238	10,870	3,773	48,931	11,162	4,121	53,948
Construction (Tunnel, Track and Approaches)	15,891	29,907	7,736	109,476	31,255	9,236	131,721
Total	21,129	40,777	11,508	158,407	42,417	13,357	185,669

Source: Metro, 2025p

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Table 3-29. Alternative 6: Net Effects of Capital Expenditure

Industry	Net Capital Expenditure (2023 $M)	Regional Effect			California Effect		
		Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)	Output (2023 $M)	Earnings (2023 $M)	Employment (Person-Year Jobs)
Design and Planning	5,655	11,735	3,516	58,239	12,050	4,449	58,239
Construction (Tunnel, Track and Approaches)	16,537	31,123	6,950	137,077	32,525	9,611	137,077
Total	22,192	42,858	10,466	195,316	44,575	14,060	195,316

Source: Metro, 2025p

2023 $M = millions in 2023 dollars
Note: Capital cost estimates are exclusive of right-of-way acquisition costs

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.16 Growth Inducing Impacts

Refer to the *Sepulveda Transit Corridor Project Growth Inducing Impacts Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025q).

Analysis of growth inducing impacts evaluates reasonably anticipated growth in comparison to the population, households, and employment projections developed by a federally designated metropolitan planning organization, which is SCAG for Los Angeles County. The socioeconomic estimates and projections are used for federal- and state-mandated long-range planning efforts. The SCAG regional growth forecast represents the most likely growth scenario for the southern California region in the future and takes into consideration recent and past trends, key technical assumptions, regional growth policies, and local plans and policies.

Operational Effects

The potential for operational impacts associated with population, housing, and employment growth are similar for the project alternatives since the Project would not construct any new housing units and therefore would not generate direct population growth within the proposed station areas. The Project is proposed to serve growth projected within the region. The SCAG-derived forecast growth supports local jurisdictions to explore opportunities to change the existing land uses surrounding the station areas. Potential indirect effects as a result of the project alternatives include the future planning and development of transit-oriented development (TOD) within the proposed station areas. However, as the proposed station areas would be almost entirely within Priority Growth Area, these TODs would be in areas already designated by SCAG for the allocation of denser, more compact development. Thus, the projected growth within the Study Area proposed station areas is identified in the SCAG's 2024 RTP/SCS and is not new unplanned growth.

The existing City of Los Angeles Transit-Oriented Communities (TOC) Incentive Program and Metro TOC Policy prioritize the development of TOCs within 0.5 miles of a major transit stop or High-Quality Transit Stop. Such future planned densification of land uses is also incorporated into the forecast SCAG growth data, is central to the growth strategies of the 2024 RTP/SCS and is not considered unplanned growth. The project alternatives would be a catalyst to the TOD planning and development, which would direct projected growth for the affected communities. Additionally, the Project is included in the list of transportation projects identified in the SCAG's 2024 RTP/SCS and Measure M and is thus incorporated into their assumptions for future planning and development in the region.

The project alternatives would not result in growth inducing impacts or unplanned growth beyond growth already anticipated in the regional plans and projections for the SCAG region, or in local land use and community plans. Rather, the project alternatives would redirect planned jurisdiction-wide growth to the proposed station areas.

Construction Effects

The potential for construction impacts associated with population, housing, and employment growth are similar for the project alternatives since the Project would not construct any new housing units and therefore would not generate population growth within the proposed station areas. Construction activities would result in temporary influxes of construction workers, equipment, and vehicular trips. However, these workers would likely be sourced from the local labor pool, and thus the temporary employment opportunities should not directly foster the construction of permanent housing for workers. Construction activities would not remove obstructions to population growth, nor encourage or facilitate other projects that have not already been identified in planning documents.

Potential NEPA Avoidance, Minimization, and Control Measures

It is not anticipated that control measures will be required to avoid, minimize, or mitigate potential adverse effects.

3.17 Cumulative and Indirect Effects

A cumulative effect is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). The cumulative context includes the geographic area, timeframe, and/or type of projects that would contribute to the potential cumulative effect. This context differs for each discipline. Each discipline identifies a relevant geographic area for the evaluation of cumulative impacts. The geographic range considered for the cumulative analysis can vary based on the resource area. For purposes of the cumulative analysis, the Project Study Area 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 Final Feasibility Report* (Metro, 2019). The Project Study Area lies within the jurisdictions of the Cities of Los Angeles and Santa Monica and the unincorporated Sawtelle Veterans Affairs community of Los Angeles County. Communities identified within the City of Los Angeles include the communities of North Hills, Panorama City, Sun Valley, Lake Balboa, Van Nuys, North Hollywood, Encino, North Sherman Oaks, Sherman Oaks, Brentwood, Bel Air, Beverly Crest, Westwood, West Los Angeles, Mar Vista, and Palms.

Cumulative projects include regional transportation improvement projects, commercial developments of at least 50,000 square feet, and residential developments of 20 units or more. Cumulative projects associated with this growth and located within the Project Study Area are listed in Table 3-30 and identified on Figure 3-23 and Figure 3-24.

The following resource analyses are summarized from the *Sepulveda Transit Corridor Project Cumulative Impacts Technical Report*. Refer to this report for additional analysis of potential cumulative and indirect effects (Metro, 2025r).

Table 3-30. Cumulative Projects List

Map ID	Project Name	Location	Description	Status
Regional				
1	Metro North San Fernando Valley Bus Rapid Transit Project	East-west across the northern San Fernando Valley	18-mile bus rapid transit connecting to the East San Fernando Valley Transit Corridor Project, Chatsworth Metrolink Station, and North Hollywood Metro B/G Line Station.	Planned completion 2025
NA	Metro NextGen Bus Plan	Los Angeles County	Metro bus plan to adjust bus routes and schedules based on existing origin/destination ridership data.	Implementation through end of 2021
2	Metro East San Fernando Valley Light Rail Transit Project	San Fernando Valley	9.2-mile light rail transit connecting the Metro G Line Van Nuys Station to the Sylmar/San Fernando Metrolink Station.	Planned completion 2027
3	City of Los Angeles Orange Line Transit Neighborhood Plan	San Fernando Valley	Long-range planning effort around three Metro G Line stations in the Eastern San Fernando Valley to regulate land uses, zoning, and design of new development.	Planning process
4	Metro Orange Line Bus Rapid Transit Improvements Project	San Fernando Valley	18 miles of Metro G Line bus rapid transit improvements, including up to 35 railroad-style gates at intersections and new grade separated structures at Van Nuys Boulevard and Sepulveda Boulevard.	Planned completion 2025
5	Metro Purple Line Extension Transit Project	Los Angeles	2.56-mile extension of the Metro D Line and two new stations at Wilshire/Westwood and on the U.S. Department of Veterans Affairs property.	Planned completion 2027
6	Metro G Line Conversion to Light Rail	Los Angeles, Van Nuys	Metro G Line conversion of the 18-mile Bus Rapid Transit to Light Rail Transit service.	Planned completion 2057
7	I-405 ExpressLanes	I-405 from I-10 to US-101	Installation of new ExpessLanes between the San Fernando Valley and the Westside along I-405.	Planned completion 2027
8	I-405 Dynamic Corridor Ramp Metering System	I-405 from I-10 to US-101	System-wide adaptive ramp metering strategy to coordinate with arterial traffic-signal operation.	Planned completion 2022
City of Los Angeles				
9	Multi-Family Development	14541 and 14547 Gilmore Street	31 units	Planned completion 2022
10	Multi-Family Development	14629 Erwin Street	20 units	Planning process

Map ID	Project Name	Location	Description	Status
11	Mixed-Use Development	6569 N. Van Nuys Boulevard	174-unit mixed use	Under construction since 2022 (near complete)
12	Multi-Family Development	6500 Sepulveda Boulevard	45 units	Approved December 2020, pre-construction
13	Multi-Family Development	14400-14412 Vanowen Street	45 units	Approved January 2021, pre-construction
14	Multi-Family Development	14303-14313 Friar Street	30 units	Planning process
15	Multi-Family Development	14553 Friar Street	42 units	Planning process
16	Mixed-Use Development	7002-7004 Van Nuys Boulevard	170-unit mixed use	Not constructed as of November 2020
17	One Westside / Google	10800 Pico Boulevard	584,000 sq. ft. office space	Planned completion 2022
18	West End	Pico Boulevard and Overland Avenue	Renovation to 230,000 sq. ft. office space	Planned completion 2021
19	West Los Angeles Veterans Affairs Center	West Los Angeles Veterans Affairs Medical Center Campus	1,200 units	Planned completion 2021
20	Martin Expo Town Center	12101 W. Olympic Boulevard	600-unit mixed use, 150,000 sq. ft. office space	Under construction, planned completion 2023
21	Multi-Family Development	11950 W. Missouri Avenue	74 units	Planned completion summer 2021
22	Mixed-Use Development	12001-12021 W. Pico Boulevard	80-unit mixed use	Planning approved April 2020, no construction as of December 2020
23	Mission Gateway	8811-8845 Sepulveda Boulevard	356 units	Under construction
24	ICON at Panorama	14665 Roscoe Boulevard	350-unit mixed use, 250,000 sq. ft. commercial space	Planned completion 2022
25	Mixed-Use Development	3443 S. Sepulveda Boulevard	409-unit mixed use, 60,000 sq. ft. retail space	Planned completion 2024
26	Multi-Family Development	2136-2140 Westwood Boulevard	77 units	Pre-construction
27	Multi-Family Development	2600-2616 Sepulveda Boulevard	43 units	Approved February 2020, pre-construction
28	Multi-Family Development	2117-2121 Westwood Boulevard	109 units	Planning process, pre- construction as of December 2020

Map ID	Project Name	Location	Description	Status
29	Multi-Family Development	10822 Wilshire Boulevard	54-unit eldercare facility	Planning process
30	Mixed-Use Development	11628 W. Santa Monica Boulevard	99-unit mixed use, 12,121 sq. ft. commercial space	Approved April 2021, planning/pre-construction as of December 2020
31	Multi-Family Development	2444-2456 S. Barry Avenue	61 units	Approved August 2020, pre-construction as of December 2020
32	Multi-Family Development	1656 S. Sawtelle Boulevard	33 units	Approved August 2020, pre-construction as of December 2020
33	Department of Water and Power Office Space	11761-12300 W. Nebraska Avenue	92,000 sq. ft. office building	Planning process
34	Il Villagio Toscano	4827 N. Sepulveda Boulevard	325 units, 44,000 sq. ft. retail space	Planning process, pre-construction
35	Multi-Family Development	16015 Sherman Way	46-unit supportive housing	Approved April 2020, pre-construction as of November 2020
36	Mixed-Use Development	8141 Van Nuys Boulevard	200-unit mixed use, 2,450 sq. ft. retail space	Planning process
37	Multi-Family Development	7700 N. Woodman Avenue	239-unit senior affordable housing	Planned completion September 2022
38	Multi-Family Development	888 S. Devon Avenue	21 units	Approved February 2020, pre-construction as of December 2020
39	Multi-Family Development	1300 S. Westwood Boulevard	31 units	Approved September 2020, pre-construction as of December 2020
40	Multi-Family Development	1427 S. Greenfield Avenue	29 units	Approved September 2020, revised plans submitted May 2021
41	Multi-Family Development	15027 – 15033 W. Ventura Boulevard	33 units	Approved August 2020, pre-construction as of 2019
42	Mixed-Use Development	13716 W. Victory Boulevard	32-unit mixed use, 1,000 sq. ft. commercial space	Approved June 2020, pre-construction
43	Multi-Family Development	1721 S. Colby Avenue	34 units	Approved January 2020, pre-construction as of December 2020
44	Commercial Development	6001 Van Nuys Boulevard	82,273 sq. ft. commercial space (Keyes Honda Auto Dealership)	Planned completion 2020, but pre-construction as of November 2020
45	Commercial Development	5746 Sepulveda Boulevard	75-unit hotel	Approved June 2018, pre-construction as of 2019

Map ID	Project Name	Location	Description	Status
46	Berggruen Institute Campus	1901 Sepulveda Boulevard and 2100, 2101, 2132, 2139, 2141, 2187 N. Canyonback Road	160,880 sq. ft. office space, temporary dwelling units, studios	Planned completion 2028
47	Girls Athletic Leadership School	14203 W. Valerio Street	Public charter middle school campus, 330 students grades 6-8	Planning process, pre-construction
48	UCLA Lot 15 Residence Hall	UCLA Lot 15	1,781 beds (student housing)	Under construction
49	UCLA Southwest Campus Apartments	900 Weyburn Place North	2,279 beds (student housing)	Under construction
50	UCLA 10995 Le Conte Avenue Apartments	10995 Le Conte Avenue	1,167 beds (student housing)	Under construction, expected completion 2021
51	Multi-Family Development	10460 W. Santa Monica Boulevard	68 units	Planning process
52	Multi-Family Development	11261 Santa Monica Boulevard	119 units	Approved June 2019, pre-construction
53	West Los Angeles Civic Center	1645 Corinth Avenue	926-unit mixed use, 114,400 sq. ft. commercial and office space	Planning process
54	Multi-Family Development	12300 W. Pico Boulevard	65 units	Approved October 2018, pre-construction as of December 2020
55	Multi-Family Development	11001 Pico Boulevard	89 units	Approved November 2019, pre-construction as of December 2020
56	Barringway Place	11701 Gateway Boulevard	73 units mixed use, 5,900 sq. ft. commercial space	Revised plans submitted May 2021
57	Multi-Family Development	11857-11861 Santa Monica Boulevard	52 units	Approved November 2021, pre-construction as of December 2020
58	Multi-Family Development	16243 W. Chase Street	25 beds (congregate living health facility)	Planning process
59	Multi-Family Development	10915 W. Strathmore Drive	37 units	Planning process
60	Multi-Family Development	10841 N. Sepulveda Boulevard	52 units	Pre-construction
61	Commercial Development	10768 Bellagio Drive	Demolition and reconstruction of the Bel Air Country Club House (approximately 62,615 sq. ft.)	Revised plans submitted January 2021, pre-construction

Map ID	Project Name	Location	Description	Status
62	Trident Center Expansion	11355 & 11377 W. Olympic Boulevard	Additional 120,000 sq. ft. of office and retail space	Planned completion 2022
63	Mixed-Use Development	14130 and 14154 Riverside Drive	249-unit mixed use, 27,000 sq. ft. commercial	Approved, pre-construction
64	Multi-Family Development	11010 Santa Monica Boulevard	50-unit affordable housing	Planning process
65	Multi-Family Development	11272 Nebraska Avenue	24 units	Approved April 2018, under construction December 2020 (near completion)
66	On Butler	11421 W. Olympic Boulevard	77-unit mixed use, 6,575 sq. ft. commercial	Under construction as of December 2020 (near completion)
67	Multi-Family Development	11434 W. Pico Boulevard	102 units	Planning approved June 2019, pre-construction as of December 2020
68	Mixed-Use Development	11460 W. Gateway Boulevard	129-unit mixed use, 5,241 sq. ft. commercial space	Planning process, not constructed as of 2019
69	Multi-Family Development	11600-11618 W. Santa Monica Boulevard	100 units	Under construction
70	Mixed-Use Development	11650-11674 Santa Monica Boulevard	180-unit mixed use, 64,759 sq. ft. grocery store and amenities	Approved October 2019, pre-construction as of December 2020
71	Mixed-Use Development	11701 Santa Monica Boulevard	53-unit mixed use, 1,500 sq. ft. retail	Updated plans approved 2020, pre-construction as of December 2020
72	Mixed-Use Development	11750-11770 Wilshire Boulevard	376-unit mixed use	Planned completion 2022
73	West Edge	12101 W. Olympic Boulevard	600-unit mixed use, 200,000 sq. ft. office and amenities	Planned completion 2022
74	Multi-Family Development	1402 S. Veteran Avenue	23 units	Planning process
75	Multi-Family Development	14142 Vanowen Street	64 units	Planned completion 2024
76	Multi-Family Development	14534-14536 W. Burbank Boulevard	55 units	Planned completion September 2021
77	Commercial Development	15005 W. Oxnard Street	98,458 sq. ft. storage facility	Planning process, pre-construction
78	Multi-Family Development	15314 W. Rayen Street	64 units	Planning process
79	Commercial Development	15640 W. Roscoe Boulevard	123,950 sq. ft. self-storage facility	Under construction

Map ID	Project Name	Location	Description	Status
80	Commercial Development	2255 Sawtelle Boulevard & 2222 Corinth Avenue	135,000 sq. ft. office building	Approved March 2021, pre-construction
81	Multi-Family Development	2415-2419 S. Barrington Avenue	38 units	Approved January 2020, pre-construction as of December 2020
82	Multi-Family Development	5020 Woodman Avenue	51 units	Under construction
83	Multi-Family Development	5943-5953 N. Hazeltine Avenue	61 units	Planning process
84	Angel Apartments	8547-8549 N. Sepulveda Boulevard	54 units	Approved October 2019, pre-construction as of November 2020
85	Multi-Family Development	8750 N. Sepulveda Boulevard	43 units	Approved January 2020, pre-construction as of November 2020
86	Multi-Family Development	4741 N. Libbit Avenue	46 units	Approved April 2019, pre-construction
87	Multi-Family Development	1855-1871 Westwood Boulevard	60 units	Under construction as of December 2020
88	Mixed-Use Development	16030 W. Sherman Way	54-unit mixed use	Under construction as of November 2020
89	Multi-Family Development	3357 S. Overland Avenue	41 units	Under construction, planned completion 2021
100	Mixed-Use Development	10955 Wilshire Boulevard	250-unit mixed use	Preconstruction
101	Mid-Valley Water Facility Project	South of LOSSAN Corridor	New Water System District Yard	Construction anticipated to begin 2027
102	Multi-Family Development	7650 Van Nuys Boulevard	124-unit	Construction completed 2024, occupancy expected 2025
City of Santa Monica				
90	Commercial Development	1633 26th Street	129,265 sq. ft. commercial space	Planning process
91	Mixed-Use Development	2906 Santa Monica Boulevard	88-unit mixed use, 12,400 sq. ft. retail pace	Planning process
92	Providence Saint John's Health Center South Campus	2121 Santa Monica Boulevard	799,000 sq. ft. health care facilities	Planning process
93	Mixed-Use Development	2901 Santa Monica Boulevard	60-unit mixed use, 5,100 sq. ft. retail space	Approved, pre-construction

Map ID	Project Name	Location	Description	Status
94	Multi-Family Development	1450 Cloverfield Boulevard	34 units	Approved, under construction
95	Mixed-Use Development	2822 Santa Monica Boulevard	50-unit mixed use, 10,347 sq. ft. commercial space	Approved, under construction
96	Mixed-Use Development	1707 Cloverfield Boulevard	63-unit mixed use, 74,665 sq. ft. commercial space	Approved, pre-construction
97	Mixed-Use Development	1618 Stanford	50-unit mixed use, 15,548 sq. ft. commercial space	Approved, pre-construction
98	Mixed-Use Development	3223 Wilshire Boulevard	53-unit mixed use, 5,831 sq. ft. commercial space	Approved, pre-construction
99	Mixed-Use Development	3030 Nebraska Avenue	177-unit mixed use, 66,100 sq. ft. creative office space	Approved, pre-construction

Source: Metro, 2025r

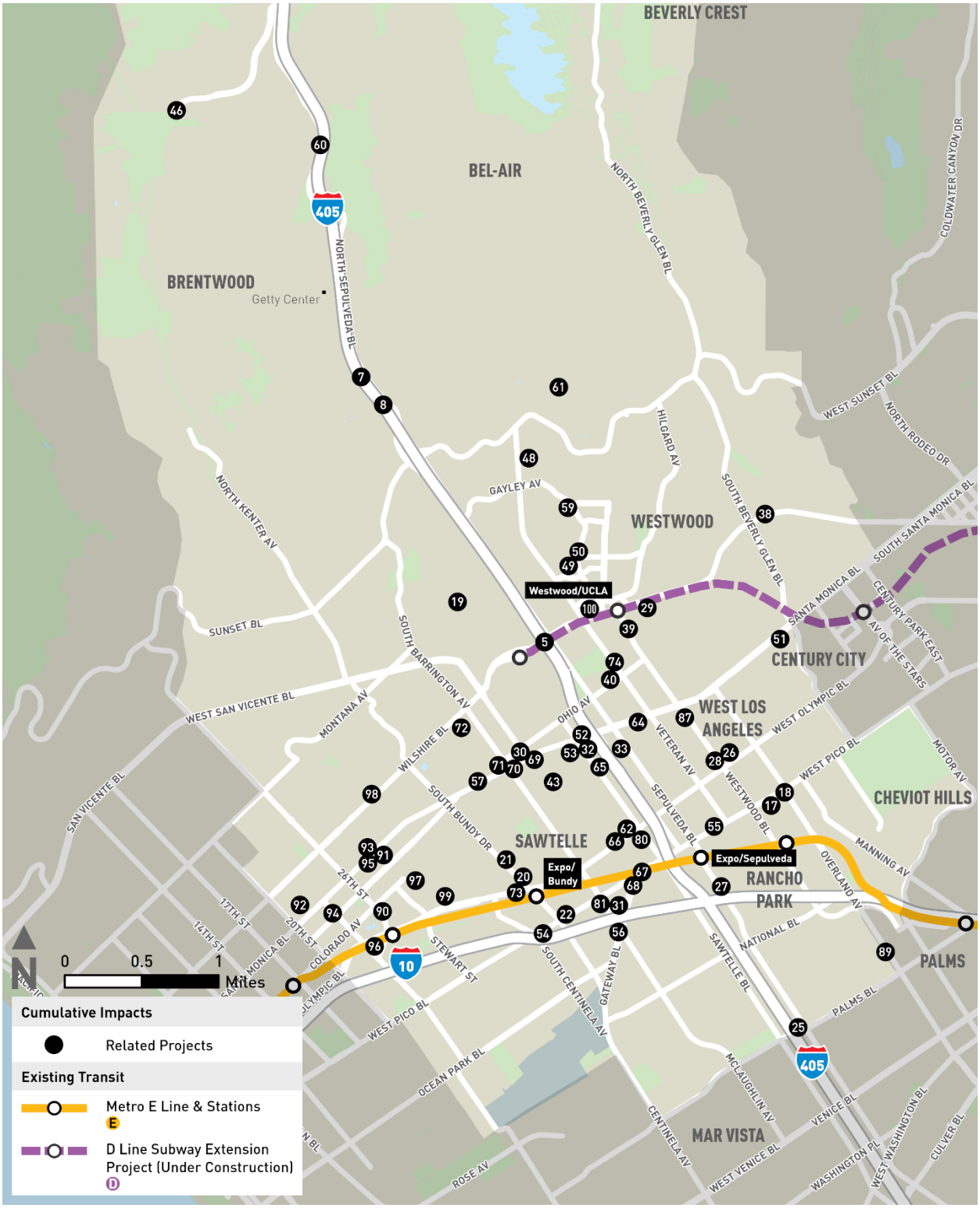
ID = identification
NA = Not applicable
sq. ft. = square feet

Figure 3-23. Cumulative Projects Identified in the Project Study Area – North



Source: Metro, 2025r

Figure 3-24. Cumulative Projects Identified in the Project Study Area – South



Source: Metro, 2025r

3.17.1 Transportation and Traffic

All project alternatives would expand regional transportation choices, improve overall regional mobility, and decrease VMT and travel time due to the increased use of transit. This is considered a beneficial cumulative effect on area-wide traffic conditions. The project alternatives would not affect local transit operations and circulation as there would be minimal impacts to individual bus lines or stops and transit service would be improved overall by implementation of the Project.

Modifications to the roadway network to accommodate Alternatives 1 and 3 would potentially be influenced by the ExpressLanes project. While Alternatives 1 and 3 propose modifications to the I-405 facility as well as parallel roadways and associated ramps, the ExpressLanes project similarly may propose modifications to the I-405 corridor in the same locations as Alternatives 1 and 3. All highway modifications associated with either project would require detailed review by Caltrans to ensure there are no geometric safety concerns. Implementation of the ExpressLanes project has been assumed to result in modification to the Alternatives 1 and 3 footprints at several constrained locations along the alignments. The ExpressLanes project may change the lane configuration along I-405 and as a result there may not be adequate space to construct the alignments and maintain the number of lanes assumed in the cumulative condition. To maintain the number lanes assumed in the cumulative condition, Alternatives 1 and 3 would likely need to expand the I-405 facility westward several feet at several constrained locations along the I-405 corridor including portions of the corridor within the Brentwood and Sherman Oaks communities. As a result of the highway improvements, various modifications to adjacent roadways may be required including curb realignment, restriping, and ramp realignment. Despite these roadway changes, all highway and land use access would be maintained throughout the Project Study Area.

For all project alternatives, the queues resulting from the peak-hour passenger flow into the ESFV LRT Van Nuys Metrolink Station are forecast to exceed the available queueing space at the fare gates and would create a hazard to passengers. Passenger queues at other station transfers would have adequate space and would not create a hazard to passengers. Implementation of MM TRA-1 would require an evaluation of passenger flow at the ESFV LRT Van Nuys Metrolink Station to determine appropriate design solutions such as removal of fare gates or installation of stand-alone validators to prevent queue lengths from exceeding the available queueing space.

For all project alternatives, construction impacts would be temporary and intermittent during the overall construction period. As continued development is planned throughout the Project Study Area, individual development projects may occur simultaneously adjacent to the project alignment. All project alternatives include transportation-related mitigation measures such as MM TRA-4 to minimize the anticipated traffic disruptions during construction. Specific to Alternatives 1 and 3, the ExpressLanes project would affect many of the same areas as those project alternatives and is currently planned to be complete by 2030. If the ExpressLanes project is completed prior to Alternative 1 or 3, construction activities would have the potential to affect operation of the I-405 ExpressLanes through temporary ramp closures required to construct the MRT alignment along the I-405 median. As such, construction has the potential to result in a cumulative impact on transportation due to conflicts with the operation of the ExpressLanes project. The future NEPA document will address this potential cumulative impact in greater detail.

3.17.2 Air Quality

The SCAQMD cumulative air quality impact methodology indicates that if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (Metro, 2025c). In Section 3.2, none of the project alternatives would generate emissions that exceed the SCAQMD regional operational significance thresholds.

Construction emissions for all project alternatives would exceed the SCAQMD regional significance thresholds for NO_X and CO emissions despite implementation of mitigation measures. Because construction emissions would exceed the applicable SCAQMD's regional construction significance thresholds for NO_X and CO, construction emissions from all project alternatives would potentially be cumulatively considerable. The future NEPA document will address this potential cumulative impact in greater detail.

As explained in Section 3.2, construction emissions for all project alternatives would exceed the PM_{10} localized significance threshold. This would possibly cause or contribute to a violation of an ambient air quality standard. Given that deputy particle matters emissions constitute a portion of localized PM_{10} emissions, impacts related to localized diesel particulate matter (DPM) emissions during construction would also potentially be significant due to (1) the elevated background carcinogenic risk, (2) the duration of construction activity, and (3) the proximity of sensitive receptors to DPM emissions sources. A significant cumulative impact would occur if other cumulative projects would generate construction emissions that would cause or contribute to a violation of health-protective standards. It is anticipated that multiple projects would generate deputy particle matters emissions that could affect the same sensitive receptors as those affected by the project alternatives. The future NEPA document will address this potential cumulative impact in greater detail.

3.17.3 Noise and Vibration

Construction of the project alternatives would require heavy earth-moving equipment, generators, cranes, pneumatic tools, and other similar machinery. The existing cumulative noise condition is characterized by existing traffic noise which was captured by existing ambient noise measurements. The noise environment in the Project Study Area is dominated by traffic noise, including freeways such as I-405, I-10, US-101, arterial roads such as Sepulveda Boulevard and Wilshire Boulevard, and other local roadways. Aircraft flyovers are also contributors to the existing noise environment in most of the Project Study Area. Cumulative growth and development in the Project Study Area could result in increases in roadway traffic volumes over time that would also increase ambient noise levels in the vicinity of project alternatives. However, future increases in roadway noise are expected to be minimal along the alignment because of limited roadway capacity.

Construction noise levels for all project alternatives would exceed the FTA noise standards and, where applicable, the standards established by the local noise ordinances due to the intensive nature construction activities and the proximity of sensitive land uses to the corridor. Implementation of MM NOI-1.2, MM NOI-3.2, MM NOI-4.2, MM NOI-5.2, and MM NOI-6.3 (Noise Control Plan) would reduce construction noise levels, but there may still be temporary or periodic exceedances of the FTA construction noise criteria and local standards resulting in temporary impacts related to construction noise. Similar to the project alternatives, construction of related projects would likely include the use of heavy construction equipment that would generate elevated construction noise levels. Projected future

projects would go through their own environmental clearance process and would include mitigation for construction noise to reduce impacts. Related projects within 500 feet of Project construction could result in a cumulative construction noise impact at sensitive receptors. Currently, there have not been any related projects with construction schedules determined to overlap with the project alternatives. Although it is not possible to predict which related projects would result in a cumulative construction noise scenario, the construction noise levels associated with the project alternatives could increase ambient noise levels. The project alternatives could result in cumulative noise impacts during construction activities.

Alternatives 1, 3, and 4 would result in operational noise impacts at sensitive receptors along their respective alignments. Implementation of MM NOI-1.1, MM NOI-3.1, and MM NOI-4.1 would minimize potential noise impacts by requiring the installation of soundwalls for Alternatives 1, 3, and 4. The FTA noise impact criteria would no longer be exceeded after implementation of mitigation. It is not anticipated that any of the project alternatives would result in cumulative impacts related to operational noise.

Regarding vibration, construction of the project alternatives would result in vibration impacts, even with implementation of MM VIB-1.1, MM VIB-3.1, MM VIB-4.2, MM VIB-5.2, and MM VIB-6.1 (Vibration Control Plan). However, it is not anticipated that vibration-generating equipment from past, present, and reasonably foreseeable future projects would operate at the same time and in the same location as the construction equipment for the project alternatives. It is not anticipated that any of the project alternatives would result in cumulative impacts related to construction vibration.

Operation of Alternatives 1 and 3 would not generate excessive vibration, and it is not anticipated that any related projects in the vicinity of Alternatives 1 and 3 would generate substantial vibration that could combine with Alternatives 1 and 3 operational vibration such that a cumulative vibration impact would occur. Operation of Alternatives 4, 5, and 6 would generate groundborne vibration at various locations along the Alternative 4 alignment. Implementation of MM VIB-4.1, MM VIB-5.1, and MM VIB-6.1 would reduce vibration levels associated with Alternatives 4, 5, and 6 to less than the FTA vibration impact criteria. It is not anticipated that any related projects in the vicinity of the project alternatives would generate substantial vibration that could combine with the project alternatives operational vibration such that a cumulative vibration impact would occur. It is not anticipated that any of the project alternatives would result in cumulative impacts related to operational vibration.

3.17.4 Ecosystems and Biological Resources

For special-status species, Alternatives 1 and 3 would require the clearing of native vegetation in the Sepulveda Pass likely resulting in loss of suitable habitat. This also applies to the aerial segments of Alternative 4. Construction disturbances such as noise and vibration generated by construction equipment can disturb avian species and/or other special-status species who are dependent on auditory signals during essential daily activities. MM BIO-4 through MM BIO-11 and MM BIO-14 through MM BIO-27 would be implemented to reduce Alternative 1 construction-related impacts to special-status plant and wildlife species and their habitats.

Tree removal has potential to affect nesting birds and roosting bats and potentially conflicts with local tree preservation policies and ordinances. Numerous cumulative projects listed in Table 3-30, such as the Metro ESFV LRT Project, Metro G Line Bus Rapid Transit Improvements Project, and the I-405 ExpressLanes Project, would potentially result in the removal of trees. Alternative 1 would remove approximately 3,282 trees including approximately 98 trees within the Santa Monica Mountains National Recreation Area, a considerable contribution to cumulative tree removals in the Project Study

Area. Alternative 3 would remove approximately 2,926 trees including approximately 98 trees within the Santa Monica Mountains National Recreation Area, a considerable contribution to cumulative tree removals in the Project Study Area. Alternatives 1 and 3 include various mitigation measures, such as MM BIO-4 and MM BIO-5, to avoid potential impacts to nesting birds and roosting bats during construction. In addition, through implementation of MM BIO-11, Alternatives 1 and 3 would replace removed trees in accordance with applicable local tree ordinances and policies. All cumulative projects listed in Table 3-30 would be subject to local tree ordinances and would be expected to replace trees removed as a result of construction activities. While numerous trees would be removed throughout the Project Study Area as a result of the cumulative construction effects of Alternatives 1 and 3 and other projects, each project alternatives would be responsible for replacing removed trees to minimize cumulative impacts.

Alternative 1, 3, and 4 aerial guideways present potential hinderances to avian movement. Most bird species would migrate above the height of the aerial structure (45 to 55 feet above the existing ground level), so disruptions are expected to be minimal. Dispersing local resident or younger, recently fledged birds have potential to collide with the guideway track or vehicles while flying along local movement corridors. None of the cumulative projects listed in Table 3-30 include aerial guideways or other raised infrastructure with transit vehicles that would combine for a cumulative impact to migratory birds.

I-405 currently acts as a restrictive barrier to mountain lion and vertebrate movement from east to west and vice-versa where it intersects the Santa Monica Mountains. Alternatives 1 and 3 would further impact movement of mountain lions and other large mammals across I-405 as a result of the expanded (i.e., increased width) roadway, anthropogenic disturbance for on-going maintenance, and the presence of the aerial guideway, a novel obstacle and potential deterrent to wildlife movement in the area. MM BIO-12 is specified to minimize operational-related impacts to the movement of native wildlife species; specifically, mountain lions and other vertebrates. The I-405 ExpressLanes could also pose potential impacts to special-status species habitat and wildlife movement due to changes to the I-405 facility. Alternatives 1 and 3 would result in a cumulative impact to mountain lions and vertebrate movement. The future NEPA document will address this potential cumulative impact in greater detail.

3.17.5 Water Resources

Each of the project alternatives would result in increased impervious surface area which may affect or obstruct groundwater recharge but impacts would be less than significant as Alternative 3 would adhere to existing regulations and stormwater compliance requirements. Like Alternative 1, the Alternative 3 MSF and TPSS facilities would use products and materials that contain potential pollutants during maintenance that could contribute to water pollution not properly dispensed, stored, or disposed. With adherence to existing regulations and proper implementation of stormwater compliance requirements, potential impacts related to the violation of any water quality standards or waste discharge requirements or substantial degradation of surface or groundwater quality during operation would be less than significant. Cumulative projects would be required to adhere to the same regulations and implementation requirements as Alternative 3. These regulations and requirements are the Los Angeles Regional Water Quality Control Board and other water management regulatory agencies' primary tool for managing the water quality and hydrology impacts of development in the region and throughout California. It is not anticipated that any of the project alternatives would result in cumulative impacts related to water resources.

3.17.6 Visual Considerations

The Project and the related land development projects are typical of the urbanized environment and cumulatively would not substantially change the existing visual character. Further, it is anticipated that the related land use development projects would comply with zoning and design requirements of the applicable jurisdiction, including undergoing mandated design review where applicable. Scenic vistas are not substantially present within the Project Study Area and are generally available at various vantage points within the Santa Monica Mountains and along Mulholland Drive. Several of the related land development projects are sufficiently substantial in massing and visual presence that they could affect views (i.e., be visible from a scenic vista vantage point). However, all of the development projects within the viewshed would be consistent with the existing development pattern of the Project Study Area and would not substantially alter views. There are no California-designated scenic highways within the Project Study Area; however, six City of Los Angeles-designated scenic highways are within the Resource Study Area, including portions of Beverly Glen Boulevard, Mulholland Drive, Santa Monica Boulevard, Sepulveda Boulevard, Sherman Way, and Sunset Boulevard. It is not anticipated that any of the development projects would affect scenic resources along these city-designed scenic highways; however, the I-405 ExpressLanes Project would involve changes to the I-405 facility. This may require slope modifications, including potential large cut-and-fill slopes in areas where the freeway right-of-way is particularly constrained. Such changes may affect some of the scenic resources available along Sepulveda Boulevard, including the views of the natural landscape and hillsides. It is anticipated the I-405 ExpressLanes Project will implement various measures to minimize these potential visual effects potentially including revegetation and landscaping and aesthetic design enhancements. Other past, present, and reasonably foreseeable projects within the Sepulveda Pass include the I-405 High-Occupancy Vehicle (HOV) Lanes Project, which was completed in 2014. The HOV lanes project resulted in significant alterations to the Sepulveda Pass landscape. The I-405 ExpressLanes Project is currently undergoing environmental review and the ultimate design and associated potential slope alterations that may result from that design are unknown.

Regarding light and glare, new nighttime light would primarily emanate from station areas (e.g., station plazas, entryways, and platforms) and MSFs, which would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights, and parking lots) currently exist. The aerial guideways for Alternatives 1, 3, and 4 would also emit light during nighttime hours; however, lighting from monorail vehicles on aerial structures is not expected to extend beyond the aerial guideway or roadway right-of-way. In accordance with the MRDC or equivalent, all light sources at the surface parking lots and proposed stations would be directed downward to minimize potential spillover onto surrounding properties, including light-sensitive uses. All light generated by Alternative 1 would be consistent with the urban light setting, which typically involves street lighting and light emanating from dense development. Since Alternative 1 would follow the equivalent of MRDC and the Systemwide Station Design Standards Policy, light emitted by the project alternatives would be consistent with existing light levels.

3.17.7 Land Use

The cumulative projects identified in Table 3-30 are subject to land use regulation by local jurisdictions, including the City of Los Angeles, UCLA, and the VA. Simultaneous construction of cumulative projects and all project alternatives could occur, potentially resulting in short-term and temporary construction disruptions to the existing built environment and circulation through temporary roadway or sidewalk closures or construction laydown areas. Projects proposed in close proximity to the project alternatives

have the potential to be disruptive to the adjacent land uses if construction occurred concurrently, but given it is not anticipated that any of the transportation projects listed in Table 3-30 would have overlapping construction periods cumulative construction-related disruptions would not occur. Additionally, roadway and/or I-405 lane closures and laydown areas in conjunction with cumulative projects would not divide existing communities as access within and out of the affected communities would generally be required to be maintained through their respective construction traffic management plans. It is not anticipated that any of the project alternatives would result in cumulative impacts related to land use plans.

3.17.8 Parks and Recreational Facilities

None of the project alternatives would impact parks or recreational facilities. However, each project alternative could indirectly affect population, housing, and employment growth as a result of and in combination with reasonably foreseeable future projects in the region. Changes in demographics associated with new development opportunities are anticipated to be consistent with the SCAG adopted growth projections since these growth projections are based on the General Plan land use designations of local jurisdictions. These projections, which include the Project and cumulative projects, are accounted for in population increases that affect planning for park facilities. It is not anticipated that any of the project alternatives would result in cumulative impacts related to parklands.

3.17.9 Cultural Resources

Construction of all project alternatives has the potential to cause a substantial adverse change in the significance of an archaeological resource listed or eligible for listing in registers of historical resources. As discussed in Section 3.10, potential impacts on unique archaeological resources, human remains, and TCRs would be minimized with implementation of MM CUL-1, MM CUL-6, MM CUL-7, MM CUL-8, MM TCR-1, and MM TCR-2. This includes potential impacts to the Sepulveda Pass and the Los Angeles River landscape features. It is presumed that current and future development would include similar mitigation and avoidance measures to address undiscovered buried archaeological resources or human remains. It is not anticipated that the project alternatives would result in a cumulative impact associated with historic archaeological resources.

The project alternatives would potentially impact historic buildings. Alternatives 1 and 3 would acquire and demolish the Da Siani Ristorante. Alternative 4 would impact the 15300 Ventura Boulevard commercial building and parking garage, the latter of which would be demolished. Alternative 5 would impact 4506 Saugus Avenue. Alternative 6 would demolish Bill's Valley Car Wash. None of the cumulative projects presumed to demolish any historic buildings; however, project-specific environmental review is required to determine impacts on historical resources and any associated mitigation measures to address such impacts.

Regarding paleontological resources, it is expected that the cast-in-drilled-hole method would be used during the construction of the foundations for the columns for Alternative 1, which could impact paleontological resources when utilized in paleontologically sensitive geologic formations. Implementation of MM GEO-6 through MM GEO-9 would minimize potential impacts associated with Alternative 1. Alternatives 3, 4, 5, and 6 would use an automated TBM to excavate the tunnels for the underground portion of Alternative 3. The TBM would excavate sediments to the dimensions of the finished tunnel, remove the sediments from the forward portion of the TBM via an internal conveyer belt, and erect the concrete walls of the tunnel. Due to the nature of TBM operations, it would not be possible for a monitor to observe the sediments as they are excavated or the tunnel walls before the

concrete lining is installed. Thus, Alternatives 3, 4, 5, and 6 could impact paleontological resources in paleontologically sensitive geologic units. It is not anticipated that a cumulative impact to paleontological resources would occur because a majority of the cumulative projects identified in Table 3-30 do not involve deep excavations below existing artificial fill, a cumulative impact to paleontological resources is not anticipated. Related projects disturbing ground and subsurface areas would be required to mitigate potential impacts to paleontological resources in highly sensitive paleontological areas. It is not anticipated that the project alternatives would result in a cumulative impact associated with paleontological resources because potential paleontological impacts can be mitigated and other cumulative projects in the Project Study Area do not involve substantial ground disturbance or drilling/tunneling.

3.17.10 Geotechnical Considerations

During both construction and operation, the project alternatives have the potential to expose people or structures to seismic risks, including the risk of loss, injury, or death involving fault rupture or seismic hazards including liquefaction or landslides. Alternative 6 would also not result in impacts related to soil erosion, unstable or expansive soils, or adequacy of soils to support septic tanks. Alternative 6 would comply with all applicable state and local guidelines and mandatory design requirements related to geologic, subsurface, and seismic hazards. Projected future projects would also be subject to the same seismic risks as Alternative 6 but would also be required to comply with all prescribed standards, requirements, and guidance hazards, and implement mitigation measures as necessary. As such Alternative 6 in combination with past, present, and reasonably foreseeable projects would not have a significant cumulative impact related to seismic risks or soil concerns. As such the project alternatives would not have a cumulatively considerable contribution to a cumulative impact related to seismic risks or soil concerns. It is not anticipated that any of the project alternatives would result in cumulative impacts related to geotechnical considerations.

3.17.11 Hazards and Hazardous Materials

None of the project alternatives would routinely transport, use, store, or dispose of substantial quantities of hazardous materials. Operation of stations and the guideway would involve the use of small amounts of hazardous substances such as oil, grease, solvents, paints, and common cleaning materials. As with all development, use and storage of such materials is heavily regulated and the project alternatives would comply with regulations and requirements related to transportation, use, and storage of hazardous materials. Any contaminated soils, building materials, or groundwater encountered during construction activities would be handled, disposed of and, if necessary, remediated consistent with regulatory requirements. Implementation of MM HAZ-1 through MM HAZ-5 for all project alternatives would ensure that workers have a clear understanding of hazardous materials that may occur in the construction area as well as procedures and plans for safely handling, transporting, and disposing of hazardous materials, and would minimize potential exposure to construction workers and the public to hazardous conditions through the disturbance or improper handling and/or disposal of hazardous building materials such as asbestos-containing material, lead-based paint, or polychlorinated biphenyls) during demolition activities; thus, impacts would be reduced to less than significant. Cumulative projects would have similar potential to release or expose hazardous materials as the project alternatives; however, like the project alternatives, all cumulative projects would be required to handle hazardous materials consistent with regulatory requirements and best practices. It is not anticipated that any of the project alternatives would result in cumulative impacts related to hazards and hazardous materials.

3.17.12 Safety and Security

None of the project alternatives include any housing component that would directly increase population, although some indirect concentration of growth may occur around some of the station areas due to the new transit access. Funds are allocated to fire protection services during the annual monitoring and budgeting process to ensure that fire protection services are responsive to changes in the City of Los Angeles. Similarly, the LAFD or Los Angeles County Flood Control District evaluate staffing levels during the annual budgetary process, and personnel are hired, as needed, to ensure that adequate fire protection and emergency response services are maintained. The LAFD would also evaluate the Project Alternative 1 to ensure that adequate fire protection could be accommodated with project implementation. With regard to police protection, the Metro system is currently policed by the LAPD and LASD. Metro has contracted the LASD and the LAPD Transit Services Division to provide policing services on the Metro system within the City of Los Angeles. In addition, the Project would be monitored by Metro, which has implemented a multi-policing model inclusive of Metro's Transit Security Officers and contract security personnel. The LAPD would be the first responders for in the event of an emergency requiring police protection. The project alternatives would not affect either fire or police protection response times or otherwise affect emergency services. Cumulative projects could have the potential to impact fire and police protection services within the Project Study Area by requiring lane closures or drawing on emergency responders to respond to emergency incidents. None of the cumulative projects identified in Table 3-30 are anticipated to have overlapping construction periods such that cumulative construction activities could affect emergency response. If concurrent construction were to occur, it is reasonable to assume that the cumulative projects would implement their own measures to reduce impacts to emergency services by implementing detours and appropriate notification of agencies, which the project alternatives would implement to ensure emergency responses would not be impacted. It is not anticipated that any of the project alternatives would result in cumulative impacts related to emergency services.

PM SAF-1 requires compliance with the California Health and Safety Code to ensure fire-life safety at all facilities proposed by the project alternatives. Alternatives 1, 3, and 4 would be located within a designated VHFHSZ within the Santa Monica Mountains. However, these project alternatives would not exacerbate wildfire risks, interference with emergency response plans, and flooding in areas affected by wildfires because the alignments and associated facilities would be situated along the I-405 right-of-way where such risks are low. None of the cumulative projects identified in Table 3-30 are anticipated to exacerbate wildfire risks. The state, county, and city Fire Code regulations would be incorporated into legally required health and safety plans for all construction workers and visitors associated with cumulative projects. It is not anticipated that Alternatives 1, 3, and 4 would result in cumulative impacts related to wildfires. Alternative 5 would be underground through the Santa Monica Mountains and would not be located within a Wildfire Hazard Zone. It is not anticipated that Alternative 5 would result in a cumulative impact related to wildfires. Alternative 6 alignment would be underground through the Santa Monica Mountains and would generally have no potential for wildfire risks. However, the proposed ventilation shaft and access road would be located on LADWP property east of Stone Canyon Reservoir in the Santa Monica Mountains within a designated VHFHSZ. The ventilation shaft structure does not include combustible elements and is a fire line safety requirement, which includes fire suppression and pollutant capturing elements. The state, county, and city Fire Code regulations would be incorporated into legally required health and safety plans for all construction workers and visitors associated with cumulative projects. It is not anticipated that Alternative 6 would result in a cumulative impact related to wildfires.

3.17.13 Real Estate and Acquisitions

Alternatives 1 and 3 would result in the displacement of 1 housing unit, Alternative 5 would result in the displacement of 34 housing units, and Alternative 6 would result in the displacement of 127 housing units. It is anticipated that loss of housing due to displacement would be retained with relocation in the Project Study Area or region. In addition, the I-405 ExpressLanes Project has the potential to incrementally affect the footprint of Alternatives 1 and 3, requiring various additional roadway modifications at several constrained points along I-405. Such modifications to the Alternatives 1 and 3 footprint would similarly have the potential to result in additional property acquisitions. It is anticipated that if additional residential or commercial displacements would be required due to this incremental change in the Alternative 1 footprint, displaced residents or businesses would be relocated in accordance with Metro's acquisition and relocation policies, and there would not be a need to construct replacement housing elsewhere. It is not anticipated that Alternatives 1, 3, 5, or 6 would result in cumulative impacts related to displacement.

Alternative 4 would result in the displacement of 212 housing units. It is anticipated that loss of housing due to displacement associated with Alternative 4 would be avoided with the relocation of residents to other locations within the Project Study Area or region. Due to the magnitude of anticipated residential relocations associated with Alternative 4, it is anticipated that the relocation process would occur over multiple years in a phased manner to avoid disruption to the local housing market and allow adequate time for Metro's real estate specialists to fairly relocate all displaced residents. Numerous projects listed in Table 3-30 include development of new housing and related transportation projects are not anticipated to result in substantial residential displacements though some may be required.

3.17.14 Growth Inducing Effects in Communities and Neighborhoods

No project alternatives would construct new housing units and, therefore, would not generate direct population growth within the Project Study Area. Instead, all project alternatives accommodate planned growth for the affected communities and potentially redirect growth to station areas. Potential indirect effects include the future planning and development of TOD within the station areas. Such growth would not be unplanned as the project alternatives are located in a part of the region that has been planned to receive additional growth through the designation of priority growth areas. The project alternatives would support regional planning efforts to focus growth in areas served by transit and related transportation projects would similarly support these regional growth plans. It is not anticipated that the project alternatives would result in a cumulative impact associated with growth inducing effects within communities and neighborhoods.

3.18 Section 4(f) Effects

Refer to the *Sepulveda Transit Corridor Project Section 4(f) Technical Report* for information related to existing conditions and the applicable regulatory environment (Metro, 2025s).

Section 4(f) of the U.S. Department of Transportation Act of 1966 (Title 23 United States Code [U.S.C.] Section 138 and 49 U.S.C. 303(c)) provides special protection of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the official(s) with jurisdiction over the park, area, refuge, or site) (49 U.S.C. Section 303). The FTA may not approve the use of Section 4(f) property unless the FTA determines that (1) there is no prudent or feasible alternative, and (2) the

project includes all possible planning to minimize harm to these resources resulting from such use (23 CFR 774.3).

As defined in 23 CFR 774.17, the "use" of a protected Section 4(f) property occurs when conditions described are met for permanent incorporation, temporary occupancy, constructive use, or de minimis impact. Regarding permanent incorporation, land from a Section 4(f) property is permanently incorporated into a transportation project when it has been purchased as right-of-way or sufficient property interests have otherwise been acquired for the purpose of project implementation.

Temporary occupancy results when Section 4(f) property, in whole or in part, is required for project construction-related activities. The property is not permanently incorporated into a transportation facility, but the activity is considered to be adverse in terms of the preservation purpose of Section 4(f). The conditions under which "temporary occupancies of land…are so minimal as to not constitute a use within the meaning of Section 4(f)" are provided in 23 CFR Section 774.313(d). A temporary occupancy exception to use of a Section 4(f) property occurs when there is a temporary use of that property. When the temporary occupancy (such as a construction easement) is no longer needed, the Section 4(f) property must be restored to its original condition. A temporary occupancy may be a use if the property is subject to temporary or permanent adverse changes such as contour alterations, removal of trees and vegetation, or disruption of facilities or activities on the property.

A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished (23 Code of Federal Regulations Section 774.15). The regulation is specific that a constructive use occurs only if there is no incorporation of land.

Section 4(f) use is assessed in terms of the magnitude of impact to determine whether the use is "*de minimis*" or not "*de minimis*." The requirements of Section 4(f) would be considered satisfied if it is determined that a transportation project would have only a *de minimis* impact on the Section 4(f) resource. The provision allows avoidance, minimization, mitigation, and enhancement measures to be considered in assessing the net impact to Section 4(f) use to make a *de minimis* determination. The agencies with jurisdiction must concur in writing with the determination.

Section 106 of the National Historic Preservation Act of 1966 (36 CFR Part 800) directs federal agencies to consider the effects of projects on historic sites that are listed in or eligible for listing in the NRHP. In the Section 106 process, agencies work with the SHPO, the Tribal Historic Preservation Officer, and the Advisory Council on Historic Preservation to identify historic properties and avoid, minimize, or resolve adverse effects. Section 4(f) requires that, prior to a historic site being granted protection, it must be considered historically significant. Section 106 process is the method by which this historical significance is determined.

The Land and Water Conservation Fund Act of 1965 (LWCFA) established a funding source for both federal acquisition of park and recreation lands and matching grants to state and local governments for recreation planning, acquisition, and development. Section 6(f) of the LWCFA requires that all property acquired or developed with assisted funding from the Land and Water Conservation Fund be maintained perpetually in public outdoor recreation uses. Other than the Santa Monica Mountains National Recreation Area, no Section 6(f) properties have been identified within the Project Study Area. The portions of the Santa Monica Mountains National Recreation Area improved by LWCFA funds are not

affected by any of the project alternatives and thus, Section 6(f) is not discussed further in the PEL Study.

3.18.1 Historic Sites

Historic and archival research was undertaken to determine the presence of previously identified historic properties eligible for listing in the NRHP. Archival research and field surveys identified 68 historical resources that may be affected by Alternative 1. Research also identified 64 historical resources associated with Alternative 3, 65 historical resources associated with Alternative 4, 54 historical resources associated with Alternative 5, and 53 historical resources associated with Alternative 6. Historic resources associated with Modified Alternative 5 will be determined during the upcoming design process. Overall, a total of 128 built historic resources were identified in the Project Study Area, some of which are not eligible for the NRHP and are only important for California or local registers. The resources include residential, commercial, institutional, government, and industrial properties primarily along existing transportation corridors. There are five historic districts, two historic linear landscapes, and three historic structures.

In addition to built-environment historic properties, 10 previously identified archaeological resources were identified within the Project Study Area through a combination of archival and field research. Of those previously identified resources, the SCCIC records search identified one previously recorded archaeological resource (P-19-003803) within the Project Study Area. This archaeological resource was also the only previously identified resource that has been determined eligible for listing in the NRHP. Section 4(f) applies to archaeological sites that are listed in or eligible for listing in the NRHP and that warrant preservation in place. Efforts to preserve the resource or develop and execute a data recovery plan should be addressed in the Section 106 process. Thus, P-19-003803 is considered a Section 4(f) protected historical site though further review of the site as part of the Section 106 process is necessary to determine if preservation in place is warranted.

To date, a Section 106 consultation process has not occurred; thus, key Section 4(f) consultation with the officials with jurisdiction over historic sites (i.e., the SHPO) has not occurred. The identification of historic sites will be revisited when there is federal involvement.

Alternative 1 is anticipated to have the following Section 4(f) impacts on historic resources.

- *De minimis* impact to 15300 Ventura Boulevard
- *De minimis* impact to the West Los Angeles Veterans Affairs Historic District
- Permanent Use to Da Siani Ristorante (Sherwood Coiffeurs)

The proposed aerial Ventura Boulevard/Sepulveda Boulevard Station would be constructed approximately 20 feet from the rear (west elevation) of the 15300 Ventura Boulevard building and approximately 261 square feet of the legal parcel of the resource would be permanently acquired to accommodate portions of the Ventura Boulevard/Sepulveda Boulevard Station. The building itself would not be physically demolished, destroyed, relocated, or altered. The historical site's setting is commercial, and the rear elevation's current viewshed includes I-405. The aerial structure would generally follow existing transportation corridors and would not limit views of the resource. The proposed aerial structure would introduce a new visual element but would not change the historic character of the building or its setting to materially impair its significance. Construction of the station and the construction staging areas have the potential to cause damage to the historic building related to construction vibration. Construction adjacent to this resource also has the potential to inadvertently impact character-defining features, including the 15300 Ventura Boulevard parking garage, if protection

measures are not put in place. Implementation of a Cultural Resources Monitoring Plan (MM CUL-1) would minimize potential harm to this resource. To address construction vibration-related damage to the historic site, vibration reduction measures would be implemented. Vibration reduction methods include routing equipment away from the historic site, locating stationary vibration-generating equipment away from the historic site, utilizing alternative equipment or methods to reduce overall vibration, and phasing earth-moving and ground-impacting activities during different time periods. In addition, a Vibration Control Plan (MM VIB-1.1) will be prepared for Alternative 1. As part of the Vibration Control Plan, vibration monitoring at historic structures would be required. Conversion of approximately 261 square feet of the historic site's property to transportation use would not constitute an adverse effect under Section 106 as the historic site would continue to convey its historic significance despite the presence of transportation infrastructure adjacent to and on the historic site property. Vibration reduction measures are anticipated to avoid any potential vibration-related damage to the historic site.

The Da Siani Ristorante (Sherwood Coiffeurs) property would be acquired and demolished for the construction of a proposed aerial MRT alignment parallel to I-405. Physical demolition would materially impair the significance of the historical resource and has been presumed to result in an adverse effect to the historic site which would constitute a greater than *de minimis* use of this property. Implementation of MM CUL- 4 and MM CUL-5 would not reduce harm to the resource by requiring archival documentation and development of an interpretive program; however, a greater than *de minimis* use of the property would remain. As outlined in 23 Code of Federal Regulations (CFR) 774.3, prior to approving the use of any Section 4(f) protected property, the FTA must determine that no feasible and prudent avoidance alternative exists. If Alternative 1 is selected by the Metro Board as the Locally Preferred Alternative, the Alternative 1 developer should assess and develop avoidance alternatives that avoid the use of this historic site, though additional assessment through the FTA's Section 106 process would also be required. Potential alternatives to avoid the use of Section 4(f) property may include location alternatives, alternative actions, alignment shifts, and/or design changes. If it is determined that no feasible and prudent avoidance alternative exists, then the FTA may approve, from among the remaining alternatives that use Section 4(f) property, only the alternative that causes the least overall harm in light of the statute's preservation purpose. Such a determination would only occur after substantial consultation with the official with jurisdiction over the resource (i.e., the SHPO) and in coordination with the FTA.

The West Los Angeles Veterans Affairs Historic District is significant for its association with the government's development of veterans' health care and for its distinctive architecture. The district includes 66 contributing resources and 44 noncontributing resources. Under Alternative 1, the proposed aerial guideway and the proposed aerial Wilshire Boulevard/Metro D Line Station would be constructed within roughly 20 to 150 feet of the historic district, east of Dowlen Drive. In addition, approximately 23,817 square feet of land from the West Los Angeles Veterans Affairs Historic District property would be permanently acquired along the eastern property line to accommodate necessary grading and I-405 ramp modifications. None of the contributing elements to the historic district, including structures and landscaping, would be physically demolished, destroyed, relocated, or altered. However, due to the aerial nature of the project components, permanent visual impacts on the historic district and its setting are anticipated from the guideway and station. To address visual effects associated with the Alternative 1 aerial structure, MM CUL-2 would be implemented to ensure design of the structure adheres to the SOI Standards, thereby avoiding visual disruption to the historic site's contributing elements. MM CUL-1 and MM CUL-3 are proposed to address potential effects to the historic district during construction, including protection of the district's contributing landscape elements and development of a CRMMP

including development of treatment and protection measures for the historic site. Conversion of approximately 23,817 square feet of the historic district's property to transportation use has been presumed to not constitute an adverse effect under Section 106 as the historic district would continue to convey its historic significance despite the presence of transportation infrastructure adjacent to and on the historic district property. Measures to minimize or avoid harm including MM CUL-1, MM CUL-2, and MM CUL-3 would be implemented to ensure that all contributing elements to the historic district are protected during construction while requiring design of Alternative 1 Wilshire Boulevard/Metro D Line Station and aerial guideway to adhere to the SOI Standards. With impact avoidance, minimization, mitigation, and enhancement measures applied to Alternative 1, the transportation use of the Section 4(f) resource would not adversely affect the historic significance of the resource. It is anticipated that the Section 106 process would conclude no adverse effect on the historic site. Based on the nature of the effects of Alternative 1 on the West Los Angeles Veterans Affairs Historic District, it is presumed that the FTA would make a *de minimis* impact finding. Prior to finalizing this determination, the FTA must satisfy the requirements of 23 CFR 774.5(b), including consultation with the official with jurisdiction over the resource, which is the SHPO.

Alternative 3 is anticipated to have the following Section 4(f) impacts on historic resources.

- *De minimis* impact to 15300 Ventura Boulevard
- Permanent Use to Da Siani Ristorante (Sherwood Coiffeurs)
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the West Los Angeles Veterans Affairs Historic District
- *De minimis* impact to the Westwood Federal Building

The analyses of impacts to these historic resources under Alternative 3 are identical to the analyses presented with one exception. Implementation of MM VIB-3.1 would minimize potential impacts associated with Alternative 3.

Alternative 4 is anticipated to have the following Section 4(f) impacts on historic resources.

- *De minimis* impact to The Performing Arts Center
- *De minimis* impact to the Valley Animal Hospital
- *De minimis* impact to 6833 Sepulveda Boulevard
- *De minimis* impact to 6160 Sepulveda Boulevard
- *De minimis* impact to the Air Raid Siren No. 117
- *De minimis* impact to the Cabana Motel
- *De minimis* impact to the El Cortez Motel
- *De minimis* impact to 5724 Sepulveda Boulevard
- *De minimis* impact to the Kauai Surf
- *De minimis* impact to the resource at 5450 Sepulveda Boulevard
- *De minimis* impact to the Cathedral of St. Mary Church
- *De minimis* impact to the Lt. Patrick H. Daniels United States Army Reserve Center
- *De minimis* impact to 4700 Sepulveda Boulevard
- Permanent Use to 15300 Ventura Boulevard
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the UCLA Linde Medical Building

The analyses of impacts to these historic resources under Alternative 4 are identical to the analyses presented with one exception. Implementation of MM VIB-4.1 would minimize potential impacts associated with Alternative 4.

Alternative 5 is anticipated to have the following Section 4(f) impacts on historic resources.

- *De minimis* impact to the Lt. Patrick H. Daniels United States Army Reserve Center
- *De minimis* impact to 4506 Saugus Avenue
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the UCLA Linde Medical Building

The analyses of *de minimis* impacts to these historic resources under Alternative 5 are identical to the analyses presented with one exception. Implementation of MM VIB-5.1 would minimize potential impacts associated with Alternative 5.

Alternative 6 is anticipated to have the following Section 4(f) impacts on historic resources.

- Permanent Use to Bill's Valley Car Wash
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the Linde Medical Building
- *De minimis* impact to the Tishman Building
- *De minimis* impact to the Laemmle Theater

Bill's Valley Car Wash would be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. Physical demolition would materially impair the significance of the historic site and would constitute a permanent use. The explanation for addressing this potential permanent use under Alternative 4 is identical to the explanation for addressing the potential permanent use under Alternative 1. The analysis of *de minimis* impacts to these historic resources under Alternative 6 is identical to the analysis presented above for Alternative 1 with one exception. Implementation of MM VIB-6.1 would minimize potential impacts associated with Alternative 6 by requiring a Vibration Control Plan with mitigation measures such as locating stationary vibration-generating equipment away from the historic site, utilizing alternative equipment or methods to reduce overall vibration, phasing earth-moving and ground-impacting activities during different time periods, and vibration monitoring at historic structures.

The analyses of impacts to the remaining historic resources under Alternative 6 are identical to the analyses presented with one exception. Implementation of MM VIB-6.1 would minimize potential impacts associated with Alternative 6.

Modified Alternative 5 could have the following Section 4(f) impacts on historic resources based on an anticipated alignment similar to Alternatives 5 and 6:

- Permanent Use to Bill's Valley Car Wash (confirmation pending upcoming design)
- *De minimis* impact to the UCLA Ackerman Hall
- *De minimis* impact to the Linde Medical Building
- *De minimis* impact to the Tishman Building

Similar to Alternative 6, Bill's Valley Car Wash could be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. This potential effect will be determined during the upcoming design process. The explanation for addressing this potential permanent use under Modified Alternative 5 would be identical to the explanation for addressing the potential permanent use under Alternative 1.

Implementation of MM VIB-5.1 would likely minimize potential impacts associated with Modified Alternative 5, if needed.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures, which are previously detailed in this report, have been identified to minimize harm to historic sites resulting from the project alternatives. These measures are included in the CEQA documentation and may be included in NEPA documentation. Applicability of these mitigation measures to each historic site is listed below. The applicability for Modified Alternative 5 will be determined during the upcoming design process.

- The Performing Arts Center (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Valley Animal Hospital (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- 633 Sepulveda Boulevard (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- 6160 Sepulveda Boulevard (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Air Raid Siren No. 117 (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Cabana Motel (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- El Cortez Motel (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- 5724 Sepulveda Boulevard (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Kauai Surf (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- 5450 Sepulveda Boulevard (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Cathedral of St. Mary Church (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Lt. Patrick H. Daniels United States Army Reserve Center (Alternative 4): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- 4700 Sepulveda Boulevard (Alternative 4): MM CUL-1, MM NOI-1.1 – MM NOI-6.1
- 15300 Ventura Boulevard under Alternatives 1, 3, and 4: MM CUL-1, MM NOI-1.1 – MM NOI-6.1
- Da Siani Ristorante (Sherwood Coiffeurs) under Alternatives 1 and 3: MM CUL-4, MM CUL-5, MM VIB-1.1 – MM VIB-6.1
- West Los Angeles Veterans Affairs Historic District: MM CUL-1, MM CUL-2, MM CUL-3, MM VIB-1.1 – MM VIB-6.1
- UCLA Ackerman Hall (Alternatives 3, 4, 5 and 6): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- West Los Angeles Veterans Affairs Historic District (Alternative 3): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Westwood Federal Building (Alternative 3): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Lt. Patrick H. Daniels United States Army Reserve Center (Alternative 5): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- 4506 Saugus Avenue (Alternative 5): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Bill's Valley Car Wash (Alternative 6): MM CUL-4, MM CUL-5, MM VIB-1.1 – MM VIB-6.1

- Linde Medical Building (Alternative 4,5, and 6): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Tishman Building (Alternative 6): MM CUL-1, MM VIB-1.1 – MM VIB-6.1
- Laemmle Theater (Alternative 6): MM CUL-1, MM VIB-1.1 – MM VIB-6.1

3.18.2 Public Parks and Recreational Areas

Alternatives 1 and 3 are anticipated to have the following impacts on public parks and recreational areas.

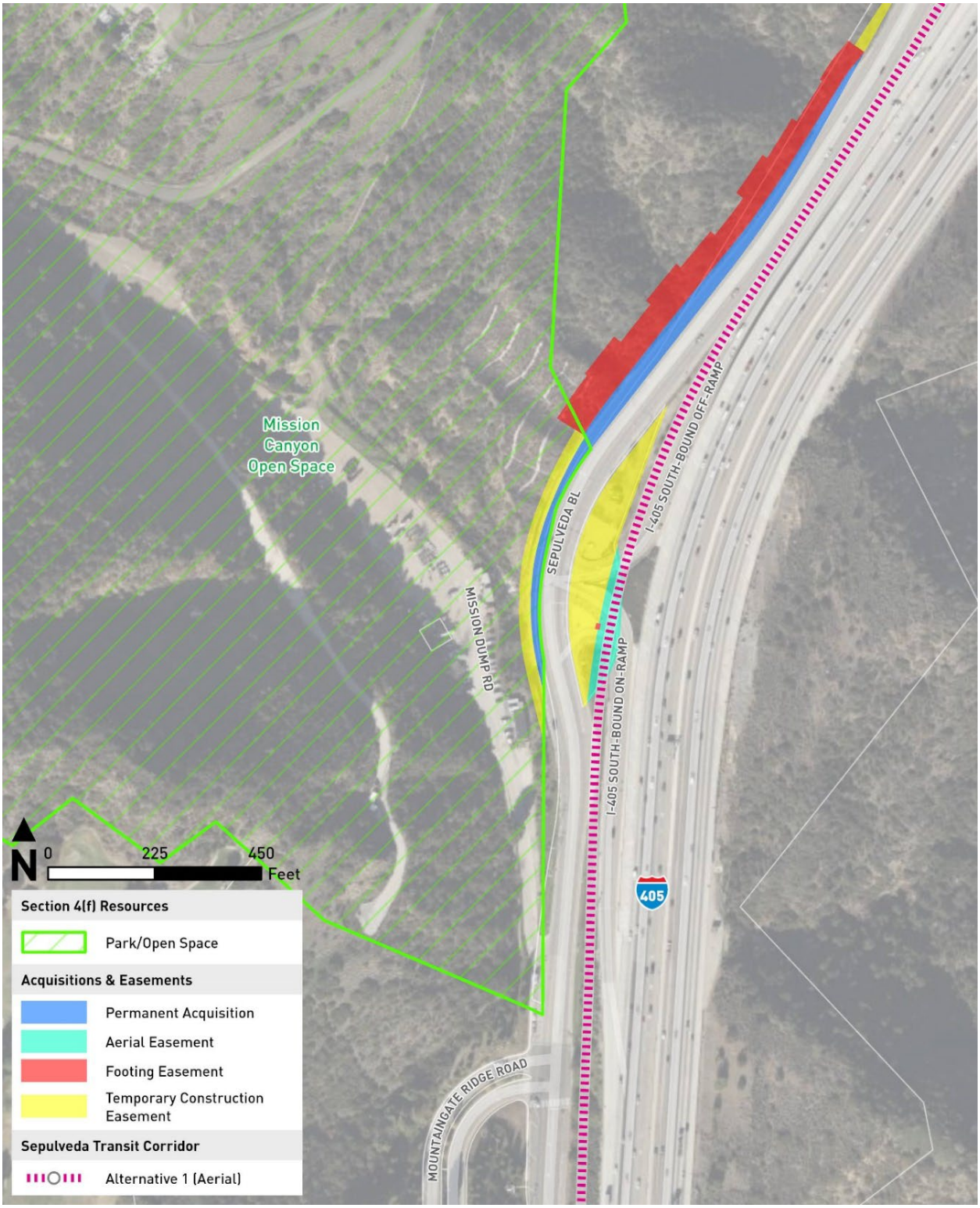
- *De minimis* impact to Mission Canyon Open Space
- *De minimis* impact to Teichman Family Magnolia Park

The Mission Canyon Open Space is a former landfill that has been planned for development of a regional park. The Mountains Recreation and Conservation Authority, a partner agency to the Santa Monica Mountains Conservancy, has developed designs and circulated an Initial Study and Mitigated Negative Declaration under CEQA in 2022. Construction easements within the planned park property would be required to realign Sepulveda Boulevard. Figure 3-25 depicts the anticipated acquisition areas. Because the Mission Canyon property has not been developed as a park, there are no existing features, attributes, or activities potentially affected and the likely location and function of any recreational facilities on the site is unknown. The modifications to the property would consist of grading and slope stabilization along the property line as well as installation of new roadway pavement. Given the steep undeveloped topography of the site, there is limited opportunity to develop any recreational facilities or features. Further, Mission Dump Road, the primary means of access to the property, would remain unaffected by Alternatives 1 and 3. Upon completion of construction, the aerial guideway would be visible to potential future park users and may reduce the sense of the natural setting intended for the park development. No impacts are anticipated on the potential activities, features, or attributes of the planned park. Only 0.6 acres of the approximately 480-acre property would be converted to transportation use. Furthermore, implementation of MM BIO-11 (Alternatives 1 and 3), MM BIO-12 (Alternatives 4 and 5), MM BIO-13 (Alternative 6), MM GEO-1, MM GEO-4, MM GEO-5, MM GEO-7, and MM GEO-8 would minimize potential impacts. Potential impacts are expected to be minor when considering the scope of Alternatives 1 and 3 and the avoidance and minimization measure commitments. The transportation use of the Section 4(f) resource, together with impact avoidance, minimization, mitigation, and enhancement measures incorporated into the Project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). In conclusion, the impacts of Alternatives 1 and 3 on the Mission Canyon Open Space would constitute a *de minimis* impact. Prior to finalizing this determination, the FTA must satisfy the requirements of 23 U.S. Code 138 and 49 U.S. Code 303.

The Teichman Family Magnolia Park is a public park constructed by the Emek Hebrew Academy, a private, not-for-profit Hebrew school. The park is under lease to the Los Angeles Department of Recreation and Parks (LADRP) from the U.S. Government through the U.S. Army Corps of Engineers, and the park is available to the public through a shared use agreement between the Hebrew school, the U.S. Army Corps of Engineers, and the Los Angeles Department of Recreation and Parks (LADRP). The aerial MRT alignment would be constructed along the western property line of the both the parking lot and the park itself. As a result, approximately 0.6 acres of the park would be permanently acquired and used for a transportation use. The area to be acquired would consist of the landscaped area along the western edge of the park property that serves as a buffer between park uses and the I-405 right-of-way. No park facilities or features would be acquired or removed as a result of Alternative 1 or 3. Figure 3-26

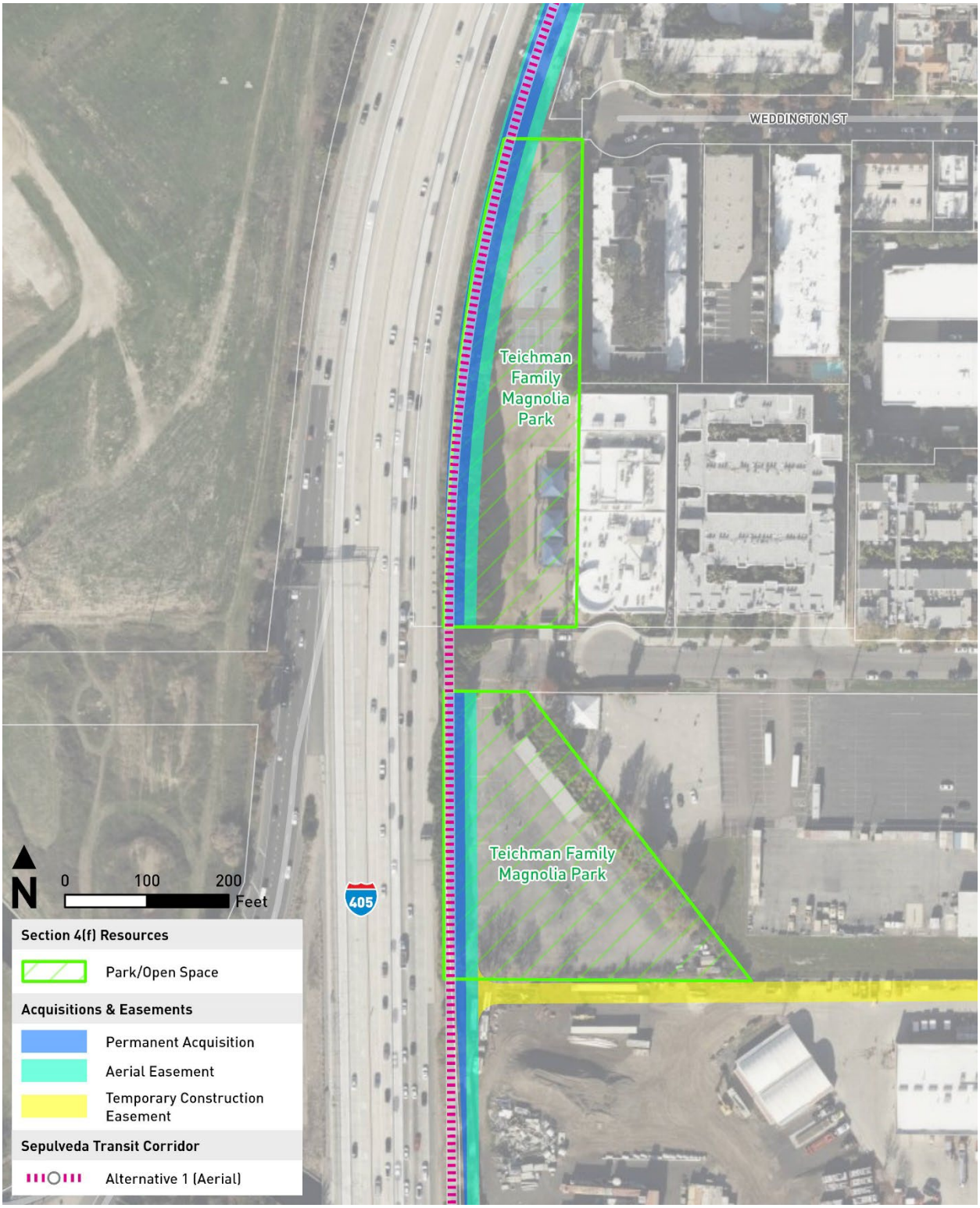
depicts the anticipated acquisitions. Only 0.6 acres of the approximately 4-acre property would be converted to transportation use. Furthermore, implementation of MM BIO-11 (Alternatives 1 and 3), MM BIO-12 (Alternatives 4 and 5), and MM BIO-13 (Alternative 6) would minimize potential impacts.

Figure 3-25. Alternative 1: Property Acquisition – Mission Canyon Open Space



Source: Metro, 2025s

Figure 3-26. Alternative 1: Property Acquisition – Teichman Family Magnolia Park



Source: Metro, 2025s

Potential impacts are expected to be minor when considering the scope of Alternatives 1 and 3 and the avoidance and minimization measure commitments. The transportation use of the Section 4(f) resource, together with impact avoidance, minimization, mitigation and enhancement measures incorporated into the Project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f). In conclusion, the impacts of Alternatives 1 and 3 on the Teichman Family Magnolia Park would constitute a *de minimis* impact. Prior to finalizing this determination, the FTA must satisfy the requirements of 23 U.S. Code 138 and 49 U.S. Code 303.

Alternatives 4, 5, and 6 are not anticipated to affect public parks and/or recreational areas.

Potential NEPA Avoidance, Minimization, and Control Measures

The following mitigation measures have been identified to minimize harm to parks and recreational areas resulting from the project alternatives. These measures, which are previously detailed in this report, are included in the CEQA documentation and may be included in NEPA documentation. Applicability of these mitigation measures to each park or recreational facility is as follows:

- Mission Canyon Open Space (Alternatives 1 and 3): MM BIO-11, PM GEO-1, PM GEO-2, PM GEO-3, MM GEO-3, and GEO-5
- Teichman Family Magnolia Park (Alternatives 1 and 3): MM BIO-11

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Appendix C. Sepulveda Transit Corridor Project PEL Study Agency and Public Involvement Appendix

SEPULVEDA TRANSIT CORRIDOR PROJECT

Contract No. AE67085000

Planning and Environmental Linkages Study Agency and Public Involvement Appendix

Task 5.01.01.05F

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Table of Contents

ABBREVIATIONS AND ACRONYMS III

1 AGENCY AND PUBLIC INVOLVEMENT 1-1

1.1 Goals of Agency and Public Involvement Efforts 1-1

1.2 Techniques Used to Engage Stakeholders 1-1

1.3 Agency and Public Notice 1-3

1.4 Groups Engaged 1-3

1.5 Outreach Outcomes 1-4

1.6 Unresolved Issues and Recommendations for Future Involvement 1-22

2 REFERENCES 2-1

Tables

Table 1-1. PEL Study Introductory Meeting for Agencies 1-5

Table 1-2. PEL Study Agency Comments and Meeting 1-7

Table 1-3. Draft PEL Study Comments 1-18

Attachments

Attachment 1. Agency Letters

Abbreviations and Acronyms

BSL	City of Los Angeles Bureau of Street Lighting
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
DEIR	Draft Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GSA	U.S. General Services Administration
GTI	Gabrielino Tongva Indians
HTA	HTA Partners
HUD	U.S. Department of Housing and Urban Development
I-405	Interstate 405
IOS	Initial Operating Segment
LACSD	Los Angeles County Sanitation District
LADOT	Los Angeles Department of Transportation
LADWP	City of Los Angeles Department of Water and Power
LPA	Locally Preferred Alternative
MCLF	Mission Canyon Landfill
Metro	Los Angeles County Metropolitan Transportation Authority
MOU	Memorandum of Understanding
MSF	maintenance and storage facility
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOP	Notice of Preparation
NPS	National Park Service
NRHP	National Register of Historic Places
PEL	Planning and Environmental Linkages
Project	Sepulveda Transit Corridor Project
SCAG	Southern California Association of Governments

SCAQMD	South Coast Air Quality Management District
TOD	transit oriented development
U.S.	United States
UCLA	University of California, Los Angeles
USACE	U.S. Army Corps of Engineers
VA	U.S. Department of Veterans Affairs
WCCOG	Westside Cities Council of Governments

1 AGENCY AND PUBLIC INVOLVEMENT

The Los Angeles County Metropolitan Transportation Authority (Metro) engaged in a comprehensive agency and public outreach process to inform the Planning and Environmental Linkages (PEL) Study.

1.1 Goals of Agency and Public Involvement Efforts

The PEL Study consultation process is a collaborative and integrated approach to transportation decision-making that considered benefits and impacts of the proposed transportation system improvements to the environment, community, and economy during the transportation planning process. This process is particularly important to federal agencies that may not typically engage lead agencies during the California Environmental Quality Act (CEQA) process. Accordingly, Metro focused on engaging federal agencies that may be directly affected by the Sepulveda Transit Corridor Project (Project). Metro also approached state, regional, and local agencies that may be affected by the Project. The general public was engaged through the comprehensive CEQA public participation process to ascertain community concerns and project alternative preferences.

1.2 Techniques Used to Engage Stakeholders

The public participation outreach was implemented concurrently with agency coordination activities throughout the environmental process and PEL Study. Metro undertook a series of communication activities, equitably distributed throughout the Project Study Area, leading up to key project milestones, such as prior to each round of public meetings. These activities were conducted either in-person or virtually, depending on the phase of the Project, public health guidelines, and what was determined to be the most effective and efficient outreach method for sharing the information with the audience. Meeting notices were provided in English and Spanish. All collateral materials were posted online for those who were unable to attend the meetings in person.

Stakeholder briefings, community group presentations, and one-on-one meetings with key community groups/leaders were conducted throughout the process at strategic Project milestones beginning in 2021 with two key events. These two events included a June 2021 webinar prior to the scoping process to provide stakeholders with background information regarding the Project and to update them on what had occurred since the 2019 Feasibility Report. The webinar meeting allowed stakeholders to ask questions and to provide feedback and input regarding the Project and alternatives. Later in 2021, Metro released the Notice of Preparation (NOP) for the Draft Environmental Impact Report (DEIR), which started the CEQA scoping process. From November 30, 2021 to February 11, 2022, Metro managed the comprehensive scoping process to engage the public, agencies, and stakeholders and to provide opportunities for input on issues to be examined and included in the DEIR. This activity included local, state, and federal agencies with facilities in the area; major educational, cultural and religious institutions; healthcare systems; community-based organizations; transportation advocacy groups; business organizations; neighborhood councils; homeowners associations; and large employers. Metro held and recorded four virtual scoping meetings via Zoom during the scoping period. Additionally, Metro held a scoping meeting for representatives of public agencies. Metro posted a recording of each public scoping meeting to its YouTube channel and also placed links to the recordings and to the scoping meeting PowerPoint presentation on the Project's website to allow those who could not participate in real time to have access to the recordings at their convenience.

Metro is conducting general outreach activities that include information display tables or "pop-up" meetings at popular community events. These events provide the opportunity to educate, engage, and enhance the visibility of the Project to stakeholders who may otherwise not be reached through other outreach efforts. Information display boards, interactive displays, and distribution of fact sheets are utilized at these events. Stakeholder contact information is gathered and added to the mailing list.

Extended outreach efforts can be extremely valuable in gaining deeper public awareness about the Project and in helping Metro understand the issues and concerns of the communities. This approach includes requesting support from key community representatives to help promote the public meetings, including elected official staff representatives, chambers of commerce, school districts, community groups, businesses and business associations, academic institutions, and other local interest groups involved in transportation, environmental sustainability, and social issues in the region. The outreach team provides a public notification toolkit to enable their assistance with promoting awareness and/or public meetings through their respective electronic communication tools, including websites, e-newsletters, social media sites, and membership e-blasts.

Metro engaged in a robust public outreach process during the development of the 2019 Feasibility Report (Metro, 2019), guided by Metro's Equity Platform. Metro designed a wide range of opportunities for feedback in an inclusive and transparent way and held multiple forums for bilingual English and Spanish community engagement. This included engaging stakeholders at a variety of events and locations in the San Fernando Valley and on Westside, reaching thousands of stakeholders in person. Metro also conducted significant outreach with many public agencies that have jurisdiction throughout the Project Study Area. Coordination with these agencies allowed concerns to be identified and addressed early in the process.

Metro hosted three rounds of informational public meetings (for a total of 10 individual public meetings) as part of the public outreach efforts. Meetings were held to coincide with the introduction, refinement, and evaluation of the project alternatives. All materials were available in English and Spanish, and interpreters were available to translate and assist with submission of comments.

Metro coordinated with many public agencies that have jurisdiction throughout the Project Study Area, holding both multi-agency briefings and individual meetings. This effort was designed to present information on the alternatives under consideration, to discuss relevant issues related to each agency's jurisdiction, and proactively consult with these agencies prior to formal agency consultation.

A virtual meeting attended by over 20 agencies was held on February 2, 2023. The meeting introduced the agencies to the PEL Study process for the Project. Focused meetings were held in spring 2023 through winter 2024 with individual agencies that expressed interest in the PEL Study process. Comments provided during this interagency consultation process were considered during the design process and environmental assessment of the project alternatives.

Additional public outreach was completed during the DEIR review process. During the 90-day public review period, Metro hosted five information sessions and five public hearings. Additionally, five community meetings were held in the weeks leading up to the DEIR release to provide information about project status, benefits, costs, and construction schedules. Each round of meetings included one virtual and four in-person sessions. In total, 8,074 formal comment submissions were received during the public review period. Comments were received by various methods, including oral and written comments at the public hearings, written comments at the information sessions, online submissions, project email submissions, mail submissions, and phone submissions. A majority of the comments (approximately 85 percent) were submitted through the online SmartComment form. Of the comments

received, approximately 98 percent were from individuals, with the remainder received from public agencies, elected officials, businesses, and community organizations. Overall, 7,308 of the comment submissions (90.5 percent) expressed support for the Project, either for a specific alternative(s) or the overall Project. In total, 69 of the comment submissions (0.9 percent) expressed opposition to the overall Project.

1.3 Agency and Public Notice

Metro conducted outreach via an emailed letter in January 2023 to more than 50 federal, state, regional, and local agencies to introduce the PEL Study. The stated purpose of the letter was to inform interested agencies that Metro initiated the PEL Study process and to invite them to a kick-off meeting. The letter described the project location/environmental setting, the initiation of the CEQA process, the planned contents of the PEL Study, information to participate in the kick-off meeting, and information to participate in three public open house meetings designed to solicit feedback from the public related to the design of the project alternatives under consideration. The emailed letter included the *Planning and Environmental Linkages Study Approach Memorandum* (Metro, 2023a) and the *Agency Coordination and Public Participation Plan* (Metro, 2023b). Separate from the PEL Study, the November 2021 NOP notified federal and other agencies and the general public that Metro was initiating the CEQA process. The DEIR was released on June 2, 2025 for a 90-day public review and comment period (Metro, 2025). All stakeholders, including federal agencies, were notified that the DEIR was available for review and comment.

The Daft PEL Study was circulated for public review between April 10 and May 9, 2026 to assist Metro in understanding environmental and design constraints prior to assessing a single build alternative in an anticipated NEPA document. Notice of the Daft PEL Study availability was posted to the project website in addition to being emailed to key agency stakeholders. Comment letters were received from the EPA, VA, FAA, LADWP, one stakeholder group, and two members of the general public. These comments are summarized in Section 5, Agency and Public Involvement, of the PEL Study, along with responses.

1.4 Groups Engaged

The PEL Study considers input from the following groups:

- Project Leadership Team: This group consisted of Metro managers, planning staff, and Federal Transit Administration (FTA) team members. This group engaged federal agencies, provided strategic direction, reviewed progress, and approved the contents of the PEL Study.
- Metro Board of Directors: The Metro Board of Directors is the local decision-making body responsible for identifying the Locally Preferred Alternative (LPA). This group will consider the recommendations of the PEL Study to inform selection of the build alternative for the National Environmental Policy Act (NEPA) process.
- Resource Agency Partners: This group consisted of representatives from federal resource and regulatory agencies, in addition to other agencies, providing focus on their agencies' roles, responsibilities, and jurisdiction.
- Consultant Team: HTA Partners (HTA) supported Metro in developing the PEL Study, including collaborating with federal agencies and interested parties, providing preliminary NEPA assessments, and evaluating alternatives.

- General Public: The PEL Study considered public comment submitted during the CEQA scoping process and preparation of the *Draft Environmental Impact Report* (DEIR) (Metro, 2025).

1.5 Outreach Outcomes

Table 1-1 shows the agencies that participated in the virtual meeting held on February 2, 2023, along with comments and responses provided during the meeting.

Table 1-1. PEL Study Introductory Meeting for Agencies

Agency	Comments and Responses During the Meeting
Federal Agencies	
Federal Transit Administration (FTA)	• FTA clarified that agencies interested in having individual meetings should directly contact Metro. The purpose of the PEL Study is to advance planning in recognition of the needs of this corridor and through coordination with stakeholder agencies to help Metro narrow the alternatives to an LPA. However, it is possible that multiple alternatives will be assessed during the NEPA process. • FTA noted that Metro has been following the state law and conducting all coordination with agencies as required by the law under CEQA. Metro hosted this meeting to introduce the PEL Study process, and also explain the difference between the PEL Study and CEQA requirements. • FTA added that comments during the CEQA process will be built upon in the PEL Study, and that Metro will be asking for additional comments during the NEPA scoping process.
Federal Highway Administration (FHWA)	FHWA asked if there will be federal funds associated with the Project. Metro responded that the *Measure M Expenditure Plan* (Metro, 2016) anticipated federal funding for this Project.
U.S. Army Corps of Engineers (USACE)	• USACE asked if FTA will be the federal Lead Agency and if there will be Cooperating Agencies. FTA confirmed that it will be the Lead Agency for NEPA and Cooperating Agencies, if any, will be identified after the beginning of the NEPA process. • USACE asked for concerns about viability of the alternatives regarding routing and permits needed from USACE, and if these issues would be addressed in the PEL Study or under CEQA. Metro responded that USACE is encouraged to raise these issues during the PEL Study process. Metro acknowledged the need to understand the federal requirements as the project moves towards an LPA. • USACE suggested reaching out to the Los Angeles Fire Chief to discuss potential firebreaks.
U.S Department of Veterans Affairs	This agency did not comment during the meeting.
U.S. Environmental Protection Agency	This agency did not comment during the meeting.
U.S. National Park Service	This agency did not comment during the meeting.
State Agencies	
California Department of Fish and Wildlife (CDFW)	• CDFW asked if CEQA and NEPA processes will be separate. Metro answered in the affirmative. • CDFW asked if state agencies need to request meeting with Metro to discuss concerns on biological resources. Metro answered in the affirmative and mentioned the request can come through e-mails to the Project team. Metro replied that CEQA consultation has started, and PEL Study will build on the CEQA analyses. • CDFW asked if there will be future meetings and why there was not pre-consulting meeting with stage agencies under CEQA. Metro replied that the study scope has public meetings and targeted agency

Agency	Comments and Responses During the Meeting
	consultation, and that today's meeting is an umbrella to kick off the PEL Study efforts, followed by public touchpoints and specific meetings with individual agencies.
California Department of Transportation (Caltrans)	• Caltrans asked to clarify the schedule for the concurrent process and meeting schedule for the CEQA and PEL Study processes. Metro responded that while the PEL Study meetings include a CEQA discussion, the PEL Study will not be part of the CEQA documentation. • Caltrans asked if agencies need to provide separate comments for CEQA and the PEL Study. Metro confirmed that agencies will need to provide comments for each document separately. • Caltrans asked to clarify the roles for federal agencies. FTA responded that the Project team is considering financial planning, range of alternatives and the screening process, and coordination with other federal partners with consideration of a mix of funding. Caltrans and the FHWA agreed to discuss roles and responsibilities offline, and FTA offered support as needed. • Caltrans asked when more details will be available. Metro provided a link to the Story Map, which shows more details for the alternatives.
California Public Utilities Commission	This agency did not comment during the meeting.
University of California, Los Angeles	This agency did not comment during the meeting.
Regional Agencies	
Los Angeles Regional Water Quality Control Board	This agency did not comment during the meeting.
San Fernando Valley Council of Governments	This agency did not comment during the meeting.
Southern California Association of Governments (SCAG)	SCAG asked how to comment on the *Agency Coordination Plan* (Metro, 2023b). Metro responded that comments should be sent to Cameron Palm via e-mail within the next few weeks. FTA added that the Project team will provide an update of request for feedback in an email, and will include additional details
Westside Cities Council of Governments	This agency did not comment during the meeting.
Los Angeles County Agencies	
Los Angeles County Department of Regional Planning (LA County Planning)	This agency did not comment during the meeting.
Los Angeles Department of Public Health	This agency did not comment during the meeting.
Los Angeles County Sanitation Districts	This agency did not comment during the meeting.
City of Los Angeles Agencies	
Bureau of Street Lighting	The Bureau of Street Lighting requested a timeline, including designs for the alternatives. Metro responded that a Master Contracting Agreement was being negotiated with the City of Los Angeles, which would cover provision of design materials. Metro also responded that the schedule is a work-in-progress, although the CEQA scoping period started in November 2021 followed by the initiation of design plans for the alternatives.
Department of City Planning (DCP)	This agency did not comment during the meeting.

Agency	Comments and Responses During the Meeting
Department of Recreation and Parks	This agency did not comment during the meeting.
Department of Transportation	This agency did not comment during the meeting.
Department of Water and Power (LADWP)	This agency did not comment during the meeting.
Other Cities	
City of Santa Monica	This agency did not comment during the meeting.
Santa Clarita Transit	Santa Clarita Transit requested to see the last slide of the presentation that shows the next steps, which was accommodated by Metro.
City of West Hollywood	This agency did not comment during the meeting.

Source: HTA, 2024

After the introductory meeting on February 2, 2023, a number of agencies requested a focused meeting with Metro and/or submitted written comments. These meetings began with a presentation by Metro followed by a question-and-answer session. Metro encouraged agencies to submit a formal comment letter specific to the PEL Study. Table 1-2 shows agencies that requested a focused meeting, comments provided during the meeting, and comments by letter (if applicable). The table begins with federal agencies followed by state, regional, and local agencies. Most agencies asked Metro for information on the Build Alternatives and to clarify the timeline for the Project, which is not noted as a comment in the table. The agencies are listed in alphabetical order by federal, state, regional, and local jurisdiction.

Table 1-2. PEL Study Agency Comments and Meeting

Agency	Comments Related to the Build Alternatives
Federal Agencies	
Advisory Council on Historic Preservation Written Comment Date: January 18, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> Declined to participate in the PEL Study process.
Amtrak, Metrolink, and Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor Meeting Date: August 24, 2023	<u>Verbal Comments during the Focused Meeting</u> • Amtrak requested to be informed of developments because the Project might impact the Amtrak bus network. • Numerous questions related to the Project schedule, the PEL Study process, and the nexus for submitting comments specific to the PEL Study. <u>Written Comments</u> No written comments were provided for the PEL Study.
Federal Aviation Administration (FAA) and Los Angeles World Airports (LAWA) Meeting Date: June 27, 2023	<u>Verbal Comments during the Focused Meeting</u> FAA and LAWA requested clarification related to the use of Van Nuys Airport property. Metro clarified that a potential construction staging area is located north of Roscoe Boulevard on land not connected to Airport property. The land is zoned open space and shown on land use plans to be owned by a government entity. <u>Written Comments</u> No written comments were provided for the PEL Study.
Federal Railroad Administration	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u>

Agency	Comments Related to the Build Alternatives
Written Comment Date: July 7, 2023	Declined to engage in the PEL Study process.
National Park Service (NPS) Meeting Date: March 6, 2023	<u>Verbal Comments during the Focused Meeting</u> • The NPS noted the importance of habitat connectivity. • The NPS clarified administrative boundaries and the relationship with the Santa Monica Mountains Conservancy. • The NPS noted that the subterranean alignments of Alternatives 4, 5, and 6 would likely have less effect to wildlife than the surface alignments associated with Alternatives 1, 2, and 3. • The NPS clarified that they are not aware of plans for a new wildlife crossing in the Project area. <u>Written Comments</u> No written comments were provided for the PEL Study.
U.S. Army Corps of Engineers (USACE) Meeting Date: January 4, 2024 Written Comment Date: January 25, 2024	<u>Verbal Comments during the Focused Meeting</u> • USACE stated that the agency's regulatory group will oversee the permitting process. Temporary construction access may trigger a Section 404 permit. A Section 408 permit could be triggered by the alignment going over or under the Los Angeles River. • USACE asked Metro to confirm that there are no river crossings near University of California, Los Angeles (UCLA). It was also stated that the Los Angeles River is not likely considered navigable at Project crossing points. • USACE acknowledged that the PEL Study process is an opportunity for USACE to raise red flags. • USACE stated that the Los Angeles River may be listed as an historic property thereby requiring additional assessment in the NEPA document. <u>Written Comments</u> • Issues of concern regarding the Sepulveda Dam: Assuming the aerial alignment of the proposed alternatives along the Interstate 405 (I-405) Freeway are to the east of I-405, none of the alternatives directly affect the Sepulveda Dam. USACE owns the Sepulveda Dam property. A portion of the property is used to operate the Sepulveda Dam and 1,527 acres is leased to the City of Los Angeles for recreational use. Any alignment that intersects with USACE-owned property would likely require an out-grant from the Real Estate Division. Any alignment that has the potential to affect a USACE built facility would likely require permission under Section 408.

Agency	Comments Related to the Build Alternatives
	• Issues of concern regarding the Los Angeles River Crossing: All of the proposed alternatives appear to involve a crossing (aerial or below ground) of the Los Angeles River. The Los Angeles River Flood Control Channel was constructed by USACE and is owned by Los Angeles County, the City of Los Angeles, and private landowners. The section of the Los Angeles River upstream from Sepulveda Boulevard (through Sepulveda Basin) was constructed by USACE and is operated and maintained by USACE. The section between Sepulveda Boulevard and Lankershim Boulevard is operated and maintained by the City of Los Angeles. The Los Angeles River from San Pedro Bay to the confluence with Arroyo Calabasas is also a traditionally navigable water under Section 404. However, it is not a Navigable Water and therefore not regulated under Section 10 of the Rivers and Harbors Act. • Any alternative which has the potential to affect the USACE-built channel of Los Angeles River (under, over, or through), would likely require permission under Section 408. In addition, any alternative which would involve temporary or permanent discharge of dredged or fill material into the Los Angeles River would likely require a Section 404 permit. Activities which are typically considered a discharge of dredged or fill material include, but are not limited to, temporary construction access ramps, temporary water diversions, trenching, and support piers. • Issues of concern regarding eligibility of the Los Angeles River for listing on the National Register of Historic Places (NRHP): Please be aware that the Los Angeles River is eligible for listing on the NHRP as a linear district. Therefore, it is a historic property by definition (36 CFR 800.16(l)(1)). As such, the effects of a federal undertaking (including the issuance of a license or permit) on the Los Angeles River must be evaluated (36 CFR 800.4(d)) and any adverse effects must be resolved (36 CFR 800.6). • Issues of concern regarding the Sepulveda Channel Crossing: All of the proposed alternatives appear to involve a crossing (aerial or below ground) of the Sepulveda Channel. As with the Los Angeles River crossings, any alteration which has the potential to affect the USACE-built channel would likely require permission under Section 408. Whether USACE would have jurisdiction under Section 404 for crossings of Sepulveda Channel is unclear at this time. Due to its historic age, the Sepulveda Channel must be evaluated for eligibility for listing on the NRHP pursuant to 36 CFR 60.4. If it is found to be eligible, the effects of the federal undertaking must be evaluated and any adverse effects must be resolved. • Proposed Contents of a Future Draft Environmental Impact Statement – Waters of the U.S.: To facilitate review of the likely future request for federal action under Section 404, USACE recommends the following topics for environmental evaluation: 1) The nature and degree of effect that the proposed discharge of dredged or fill material will have, individually and cumulatively, on the characteristics of the substrate at the proposed discharge site within waters of the U.S. 2) The nature and degree of effect that the proposed discharge of dredged or fill material into waters of the U.S. will have individually and

Agency	Comments Related to the Build Alternatives
	cumulatively on water, current patterns, circulation including downstream flows, normal water fluctuation, and water chemistry. 3) The nature and degree of effect that the proposed discharge of dredged or fill material will have, individually and cumulatively, in terms of potential changes in the kinds and concentrations of suspended particulate/turbidity in the vicinity of the discharge site within waters of the U.S. 4) The degree to which the material proposed for discharge into waters of the U.S. will introduce, relocate, or increase contaminants. 5) The nature and degree of effect that the proposed discharge of dredged or fill material into waters of the U.S. will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms. • USACE encourages Metro to coordinate with USACE early in the process to evaluate the alternatives for potential effects to water resources to identify ways to avoid and minimize, to the maximum extent possible, impacts to waters of the U.S. • Proposed Contents of a Future Draft Environment Impact Statement (EIS) – Completed USACE Projects: To facilitate review of the likely future request for federal action under Section 408, USACE recommends the Metro evaluate the nature and degree to which each alternative would affect the flood control facilities. USACE recommends that such analysis specifically identifies the completed USACE projects as Section 408 facilities, discusses impacts to each such Section 408 facility, and proposes mitigation measures related to those specific Section 408 facilities. USACE encourages Metro to coordinate with USACE early in the process with regard to alterations to completed USACE Projects or USACE lands. • Proposed Contents of a Future Draft EIS – Historic Resources: If the Project requires authorization by USACE, USACE will be required to comply with federal environmental statutes including NEPA, Section 106 of the National Historic Preservation Act (NHPA), Section 7 of the Endangered Species Act, etc. To facilitate the environmental review for the likely future federal action, USACE recommends that Metro describe the following topics as part of the environmental setting: 1) The level of significance in American history, architecture, archeology, engineering, and culture of Sepulveda Channel and Sepulveda Dam. 2) The integrity of location, design, setting, materials, workmanship, feeling, and association of Sepulveda Channel and Sepulveda Dam. 3) Any association of Sepulveda Channel or Sepulveda Dam with events that have made a significant contribution to the broad patterns of American history, or the lives of persons significant in our past. 4) Whether Sepulveda Channel or Sepulveda Dam embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master", or possess high artistic values, or

Agency	Comments Related to the Build Alternatives
	represent a significant and distinguishable entity whose components may lack individual distinction. 5) Whether Sepulveda Channel or Sepulveda Dam have yielded, or may be likely to yield, information important in prehistory or history. • USACE also recommends that Metro evaluate the following topics as part of the impact analysis for each alternative: 1) How each alternative would alter the characteristics of the Los Angeles River which qualify it as eligible for listing on the NRHP. 2) If Sepulveda Channel or Sepulveda Dam are found to have characteristics which qualify them as eligible for listing on the NRHP, how each alternative would alter the characteristics of the Sepulveda Channel or Sepulveda Dam which qualify it as eligible for listing on the NRHP. • Future Federal Action: It would be appropriate for FTA to be the federal Lead Agency for the purposes of compliance with Section 106 of the National Historic Preservation Act of 1966NHPA and Section 7 of the Endangered Species Act. In this event, USACE should be invited to be a cooperating agency under 40 Code of Federal Regulations (CFR) Part 1501, 50 CFR 401 and 36 CFR 800.2(a)(2). The resource agencies with whom the lead federal agency consults and seeks concurrence, should be informed that the consultations are inclusive of USACE federal actions/undertakings and are being carried out by the lead federal agency on our behalf. If the lead federal agency consults under a Memorandum of Agreement with State Historic Preservation Officer and other parties for NHPA Section 106, then USACE should be a signatory to the Memorandum of Agreement. In addition, USACE should be given the opportunity to review pertinent biological and cultural resources documents, including draft biological opinions and draft Memorandum of Agreements. • Once a preferred alternative has been selected, we recommend filling out the permitting inquiries checklist to determine the specific permitting requirements of that alternative. However, if feedback from USACE on each alternative is desired in order to help refine or select an alternative, you may submit one permitting inquiry checklist for each alternative to each crossing. A current jurisdictional delineation report should be submitted in addition to the other information requested in the checklist. Please refer to this letter and U.S. Army Corps of Engineers File Number SPL-2021-00650-LPF in any correspondence with USACE regarding the Sepulveda Transit Corridor Project.
U.S. Department of Housing and Urban Development (HUD) Written Comment Date: August 10, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency declined a PEL Study meeting pending the availability of detailed alignment maps. <u>Written Comments</u> • HUD provided a July 22, 2021 comment letter related to the I-405 Sepulveda Pass ExpressLanes Project to also represent comments for the PEL Study. The following HUD-assisted properties were identified in the letter. • Orangewood Court Apartments located at 5050 Sepulveda Boulevard

Agency	Comments Related to the Build Alternatives
	• Diamond Head Apartments located at 1554 Vanowen Street • Emerald Pointe Apartments located at 14600 Saticoy Street • Villa Valley Apartments located at 15950 Sherman Way • Sherman Way Senior HSG located at 15864 Sherman Way • VPH Adult Retirement Center located at 15211 Sherman Way • Dickens Court located at 14955 Dickens Court • The Plaza Apartments located at 10980 Wellworth Avenue • New Vista Post-Acute Care Center located at 1516 Sawtelle Boulevard • Pico Veteran Senior Housing located at 10961 West Pico Boulevard • Because of the proximity of these properties to the Project, HUD would like to ensure that Metro evaluate potential impacts from noise and localized air emissions (relative to HUD environmental regulations and standards) at these locations.
U.S. Environmental Protection Agency (EPA) Meeting Date: June 1, 2023	<u>Verbal Comments during the Focused Meeting</u> • EPA requested and received confirmation that Metro is coordinating with FTA. • EPA commented on the potential for operational efficiencies in considering the alternatives. Metro replied that the Project system will comply with Metro Design Guidelines and standard (i.e., kit-of-parts) requirements for transit systems. • EPA noted that the Project could benefit communities through improved transit access, including those associated with the VA. • EPA confirmed participation in the PEL Study and noted the benefits of the PEL Study completed for the State Route 137 project. The PEL Study validates early environmental assessment qualifying such assessments for the NEPA document. <u>Written Comments</u> No written comments were provided for the PEL Study.
U.S. Federal Highway Administration (FHWA) Written Comment Date: June 12, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> FHWA declined to participate in the PEL Study process.
U.S. General Services Administration (GSA) Meeting Date: June 14, 2023 Written Comment Date: July 25, 2023	<u>Verbal Comments during the Focused Meeting</u> • GSA asked Metro to confirm that no presumptions have been made related to the GSA position on the Project. • GSA requested clarification regarding providing comments on environmental effects versus property effects. Metro confirmed that it is soliciting comments on both possible environmental effects related to GSA resources and property impacts.

Agency	Comments Related to the Build Alternatives
	Written Comments GSA stated that the agency has no further comments related to the PEL Study process.
U.S. Geological Survey (USGS) Written Comment Date: September 7, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments Declined to participate in the PEL Study process.
US Department of Veterans Affairs (VA) Written Comment Date: June 30, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • The VA provided PEL Study comments directly within the PEL Study Questionnaire. VA property has not been approved for the following uses: ○ An alignment west of I-405 for Alternative 1. ○ A station for Alternatives 2, 3, 4, 5, or 6 beyond what was approved for the Metro D Line (Purple) extension. ○ A pedestrian bridge for Alternative 2. ○ Widening I-405 or realigning ramps and local roads for Alternative Alternatives 2 or 3. • Veteran Service Organizations should be engaged given the proximity and potential impacts of this project to existing VA facilities.
State Agencies	
California Department of Transportation (Caltrans) Written Comment Date: June 27, 2023	Verbal Comments during the Focused Meeting This agency declined a PEL Study meeting. Written Comments Caltrans provided a sample evaluation matrix to assist in evaluating and comparing the alternatives.
Los Angeles Regional Water Quality Control Board Meeting Date: March 9, 2023	Verbal Comments during the Focused Meeting • The Los Angeles Regional Water Quality Control Board noted concerns with widening Sepulveda Boulevard due to potentially impacting storm drains. • The Los Angeles Regional Water Quality Control Board indicated that the primary area of concern is drainage within the middle segment of the Project, within the Santa Monica Mountains. • The Los Angeles Regional Water Quality Control Board requested that the delineations be reviewed for accuracy based on that agency's methodology. Written Comments No written comments were provided for the PEL Study.
Gabrielino Tongva Indians (GTI) Meeting Date: May 16, 2023	Verbal Comments during the Focused Meeting • GTI stated that they want to participate in both the federal Section 106 process and the state Assembly Bill 52 process.

Agency	Comments Related to the Build Alternatives
	• GTI stated that the alignments are near sacred springs and midden sites, including the Veterans Affairs Administration land and University High School (location of the spring site). • GTI noted that they can share information for sacred sites on the Veterans Affairs Administration land. Written Comments No written comments were provided for the PEL Study.
Regional Agencies	
Los Angeles County Sanitation Districts (LACSD) Written Comment Date: May 4, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • Maintain 24/7 access to Mission Dump Road during Project construction along Sepulveda Boulevard so access to Mission Canyon Landfill (MCLF) is not impeded. As the County's post-closure "contractor", LACSD needs 24/7 access to MCLF to inspect and maintain the landfill's environmental control systems (gas collection, stormwater management, etc.). • Consult with LACSD if realignment of Sepulveda Boulevard under Alternatives 1, 2, or 3 requires fee acquisition of, or a permanent easement over, any portion of the 12-acre vacant hillside property owned by LACSD along Sepulveda Boulevard (APN 4490-002-271), just north of Mission Dump Road. • MCLF has not been developed into a park or opened to the public. The County and Santa Monica Mountains Recreation and Conservation Authority are negotiating the particulars, and construction of park improvements has not yet begun. It is likely that the park will be open to the public by the time Project construction begins. In that case, maintain public access to MCLF.
Metropolitan Water District of Southern California (MWD) Written Comment Date: February 27, 2023	Verbal Comments during the Focused Meeting This agency did not request a PEL Study meeting. Written Comments • The MWD is concerned with potential impacts to the pipelines and appurtenant facilities that may result from the construction and implementation of the Project. A map was provided of MWD facilities, which specifically noted the Sepulveda Feeder and Santa Monica Feeder Pipelines. • The MWD must be allowed to maintain its rights-of-way and requires unobstructed access to its facilities in order to maintain and repair its system. In order to avoid potential conflicts with MWD facilities and rights-of-way, design plans for any activity in the area of MWD pipelines or facilities be submitted for review and written approval. MWD will not permit procedures that could subject the pipeline to excessive vehicle, impact or vibratory loads. Any future design plans associated should be submitted to MWD Substructures Team. Approval of the Project should be contingent on MWD approval of design plans for portions that could impact its facilities.

Agency	Comments Related to the Build Alternatives
	• The MWD provided the document "Guidelines for Improvements and Construction Projects Proposed in the Area of Metropolitan's Facilities and Rights-of-Way" to assist in preparing plans that are compatible with MWD facilities and easements. • The MWD supports mitigation measures such as using water efficient fixtures, drought-tolerant landscaping, and reclaimed water to offset any increase in water use.
Westside Cities Council of Governments (WCCOG) Written Comment Date: June 30, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> The WCCOG supports a project alignment with a station at the UCLA campus and that facilitates a seamless connection to the Metro D Line.
Local Agencies	
City of Los Angeles Bureau of Street Lighting (BSL) Written Comment Date: June 29, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> • The BSL will require increase of existing lighting levels for safety. • Modifications to street layouts will require redesign and reconstruction of lighting systems. • Any street/pedestrian lighting improvements that create new assessments or increase existing assessments to property owners will require the Proposition 218 process to take effect. This process not only requires community participation but also their approval throughout a ballot process. • Historical/Ornamental street lights shall be retained and improved (refurbished and upgraded). • Temporary street lighting systems within the City of Los Angeles are required for public rights-of-way. Number of temporary units installed and the spacing between adjacent locations will match the existing street lighting system in service on a one for one basis. • Park & Ride facilities and parking lots design shall include public street and pedestrian lighting improvements in and around the facilities that meet current BSL standards.
City of Los Angeles Department of City Planning (DCP)/Los Angeles Department of Transportation (LADOT) Written Comment Date: June 29, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> • Evaluate consistency with Mobility Plan 2035 using the City's Transportation Assessment Guidelines. • Evaluate the potential increase in vehicle miles traveled for any alternative that includes adding new multi-purpose lanes if the analysis finds that those features were not already adequately evaluated at a programmatic level, such as in the EIR prepared for the Southern California Association of Government's most recent Regional Transportation Plan.

Agency	Comments Related to the Build Alternatives
	• Where general purpose lanes would be reduced by the Project, streets that are expected to accommodate more than 750 vehicles per lane per hour for two consecutive hours after the Project is completed require further analysis. Metro would need to work with the LADOT to implement an Outreach and Evaluation Plan for the Project. The Outreach and Evaluation Plan would require, at minimum, evaluating and disclosing potential changes to operating travel speed along the roadway as a result of the Project. • Support further study of all alternatives, especially Alternatives 4, 5, and 6. • Final designs must be analyzed by LADOT. • Examine opportunities for first/last mile improvements. • Assess consistency with land use plans. • Alternatives 4, 5, and 6 support transit oriented development (TOD) better than Alternatives 1, 2, and 3. • Maintenance and storage facility (MSF) location for Alternatives 1, 2, and 3 could inhibit implementation of the Orange Line Transit Neighborhood Plan. • MSF location for Alternatives 4 and 5 is in an industrial area and would have less effect on future housing and commercial development. Be mindful of nearby residences. • MSF location for Alternative 6 is zoned industrial but near a transit hub. Consider tradeoffs of locating MSF near potential TOD area. • Assess wildlife connectivity. • Ensure consistency with city tree removal guidelines. • Alternatives 1, 2, and 3 should consider the potential future implementations of aerial mobility when evaluating any alternative with above-ground infrastructure located in the I-405 right-of-way.
City of Los Angeles Department of Water and Power (LADWP) Written Comment Date: June 12, 2023	<u>Verbal Comments during the Focused Meeting</u> This agency did not request a PEL Study meeting. <u>Written Comments</u> Requested detailed maps to identify impacts to their properties.
City of Santa Monica Meeting Date: March 13, 2023	<u>Verbal Comments during the Focused Meeting</u> The city asked if the Build components for the various Build Alternatives can be mixed-and-matched and if Bus Rapid Transit was considered for the Project, including in the I-405 corridor. <u>Written Comments</u> A comment letter was not provided for the PEL Study.

Source: HTA, 2024

The Daft PEL Study was circulated for public review between April 10 and May 9, 2026 to assist Metro in understanding environmental and design constraints prior to assessing a single build alternative in an anticipated NEPA document. Notice of the Daft PEL Study availability was posted to the project website in addition to being emailed to key agency stakeholders. Comment letters were received from the EPA, VA, FAA, LADWP, one stakeholder group, and two members of the general public. Table 1-3 provides comments received during the Draft PEL Study public circulation period along with responses to the comments.

Table 1-3. Draft PEL Study Comments

Agency	Comments Related to the Draft PEL Study
Federal Agencies	
Federal Aviation Administration (FAA)	• FAA airspace analysis must evaluate the horizontal and vertical components of the at-grade and/or aerial portions of each alternative/alignment considered (including components such as the overhead catenary electrical power system, rolling stock envelope, and sound walls) on the various imaginary surfaces prescribed in Title 14, CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, as well as on the line-of-sight and range of FAA radio frequencies (e.g., navigational aids), which, if impacted, may adversely affect instrument flight procedures and thereby the capacity and/or safety of the national airspace system. • The imaginary surfaces associated with 14 CFR Part 77 are not the most restrictive in all circumstances; Terminal Instrument Procedures and Obstacle Clearance Surfaces may be more restrictive in certain situations and are therefore key considerations for the FAA. We anticipate that analyzing these surfaces may require FAA guidance, as most non-aviation professionals are unfamiliar with Terminal Instrument Procedures and Obstacle Clearance Surfaces. Alternatively, Metro may wish to consider procuring an aviation professional services consultant. • In addition to seeking FAA guidance or procuring an appropriate professional services consultant, Metro must use the FAA Notice Criteria Tool at frequent intervals (e.g., every 500 linear feet) along the at-grade and/or aerial portions of each alternative/alignment within an airport influence area to identify locations meeting filing requirements under 14 CFR Part 77. Metro must then coordinate with the FAA to submit the appropriate forms so that the FAA can evaluate potential adverse effects on the national airspace system. Filings must include all horizontal and vertical components of the proposed project (including the overhead contact system, rolling stock envelope, and sound walls). • The relevant airport influence areas for this project include areas within 20,000 feet of Van Nuys Airport and Santa Monica Airport. Although Santa Monica Airport may close prior to Project construction, certain navigational aids are expected to remain operational on the airport property for an undetermined period; therefore, aeronautical studies remain prudent. **Response**: Metro is committed to complying with 14 CFR Part 77 and coordinating with the FAA as the project progresses through the design process and the alignment is solidified. Metro understands the concerns related to airport and aircraft safety. The K Line travels directly adjacent to Los Angeles International Airport property along Aviation Boulevard. Construction of the K Line required compliance with 14 CFR Part 77.
U.S. Environmental Protection Agency (EPA)	• The EPA comment letter summarizes the project and the PEL Study process. The EPA appreciates the opportunity to review this Draft PEL and has no additional feedback at this time. Please update the EPA should a different alternative be considered for continued analysis. When the Final PEL, subsequent Revised EIR, and future NEPA analyses are available, please notify EPA and provide electronic versions.

Agency	Comments Related to the Draft PEL Study
	• The comment notes the following correction on page 4-15: The SCAQMD dispersion modeling determined that intersections in Los Angeles County that *[do not]* exceed average daily traffic volume of approximately 100,000 vehicles would not generate CO concentrations which would exceed the NAAQS (SCAQMD, 2003). **Response**: Metro will provide EPA with future environmental documentation related to the project. The sentence on page 4-15 has been corrected as noted by EPA.
U.S. Department of Veterans Affairs (VA)	• References to the "VA Greater Los Angeles Healthcare System Draft Master Plan (VA Plan)" from 2016 should be replaced with references to the 2022 Master Plan. • The following resources are part of the West Los Angeles Veterans Affairs Historic District, but should also be separately listed in Table 3-13. The Wadsworth Chapel (Building 20) and Trolley Building (Building 66) at the VA West Los Angeles campus are individually listed resources in the National Register of Historic Places (NHRP), and the Los Angeles National Cemetery is an NHRP-eligible resource. • The timeline for near to mid-term completion of the 1,200 housing units in the 2022 Master Plan is 10 years or 2032 (not 2021 as stated in the PEL). • Alternatives should not assume VA land will be acquired. • Has Metro engaged Veteran Service Organizations for feedback on the proposed alternatives per the comment provided in June 2023? If so, will that feedback be included in future drafts of this environmental report? **Response**: The PEL Study and appendices have been updated per the comments. Metro acknowledges that the Project cannot presume the use of VA property. Modified Alternative 5, selected by the Metro Board of Directors as the LPA, does not utilize VA property. The NEPA process will include outreach to local stakeholders, including the Veterans Service Organizations.
Local Agencies	
City of Los Angeles Department of Water and Power (LADWP)	• LADWP expresses support for the project and recognizes the development of the Memorandum of Understanding (MOU) between LADWP and Metro showing commitment and cooperation between the two parties. • LADWP provide the comment letter submitted during the DEIR public circulation period with the following summarized comments. – LADWP objects to any proposed use of the Stone Canyon Reservoir Complex property. LADWP requests that Metro relocate the project outside this LADWP property which houses critical infrastructure facilities.

Agency	Comments Related to the Draft PEL Study
	– LADWP objects to the permanent and/or temporary acquisition of the entire and/or partial use of the Water Distribution Division and Joint System's Fleet Services located at 7600 North Tyrone Avenue for the MSF associated with Alternatives 1 and 3. – LADWP objects to the permanent and/or temporary acquisition of the entire and/or partial use of the Valley Service Center, the Valley Telecommunication Headquarters, the office building at 6060 Sepulveda Boulevard, and the West Los Angeles Service Center and Westwood Overhead Headquarter. – Metro should collaborate with LADWP Power System Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment. – Alternatives 4 and 5 involve tunnelling directly beneath this station's highly sensitive and essential equipment. Any disruption caused by tunneling activities or train vibrations could lead to equipment failures, potentially causing station outages which could directly impact electric service for thousands of residents and businesses in the area. Given the essential role of this station in maintaining reliable electric service, LADWP cannot support any alternative that requires tunneling under DS-145. – LADWP requests that Metro provide developed street improvement plans, striping plans, rail and station design plans showing infrastructure locations, heights, and depths, and proposed new water and power service locations as soon as possible to begin conflict reviews and identify any major project challenges early in the process. – LADWP requests that Metro submit new water and power service requests for this project as soon as possible with accurate water and power demand information to provide the LADWP and Metro ample time to collaborate and find the most efficient and cost-effective way to provide these new services. – LADWP recommends that Metro consider selecting Alternatives 1 or 3 with the MSF Option , as these alignments completely avoid five out of the seven affected LADWP facilities, and LADWP is optimistic that any remaining facility impacts can be discussed and mitigated through collaboration. If Metro chooses any of the other alignments, Metro will be impacting multiple LADWP facilities, and creating more difficult challenges and risks for this project. **Response**: Metro acknowledges the Memorandum of Understanding with LADWP showing commitment and cooperation between the two parties. The MOU will ensure that Project-related effects to LADWP properties are avoided and/or minimized. Metro is committed to continued coordination, including design plans and utility requests.
General Public	
Brian Coleman	The comment expresses support for a "fluid" system extending to Santa Monica. **Response**: This comment is acknowledged by the project team.

Agency	Comments Related to the Draft PEL Study
P.A. Brown	The comment expresses support for the LPA and opposition to an IOS. The IOS opposition is due to the lengthening of the planning process (e.g., new MSF location) and added cost. **Response**: This comment is acknowledged by the project team.
Winston Li on behalf of the Undergraduate Students Association Council at the University of California, Los Angeles	The comment expresses: • Support for Modified Alternative 5. • Strong need for the UCLA station at UCLA Gateway Plaza and not at the intersection of Gayley Avenue and Strathmore Drive. • Developing mitigation measures to address construction effects related to vibration and traffic. • Clarification related to construction disruptions associated with the Westwood/UCLA station on the D Line. • Concern that a bus bridge would not provide sufficient capacity. • Request that Metro continue to emphasize that tunneling is safe under residential and commercial properties. • Explore methods to reduce costs and accelerate construction. **Response**: This comment is acknowledged by the project team. The future phases of the environmental process will continue to address methods to minimize construction effects, system capacity, costs, and schedule.

Source: HTA, 2026

CFR = Code of Federal Regulations
CO = Carbon Monoxide
FAA = Federal Aviation Administration
IOS = Initial Operating Segment
MOU = Memorandum of Understanding
NAAQS = National Ambient Air Quality Standards
NHRP = National Register of Historic Places
PEL = Planning and Environmental Linkages
SCAQMD = South Coast Air Quality Management District
VA = U.S. Department of Veterans Affairs

Comments received during the DEIR circulation period also provide important context for the PEL process. Overall, 7,308 of the comment submissions (90.5%) expressed support for the Project, either for a specific alternative(s) or the overall Project. In total, 69 of the comment submissions (0.9%) expressed opposition to the overall Project. The most frequently cited environmental topics in public comments included noise and vibration; transportation; geology, soils, seismic and paleontological resources; and public services. The most frequently cited non-environmental topics included project design; project cost; and real estate and acquisitions. Engineering and design comments included those related to connections to other transit lines, the UCLA campus station, tunneling, and freeway proximity to stations. The planning issues included comments related to travel times, ridership, funding availability, cost-effectiveness, and connectivity of stations

Some additional specific comments were received that could further inform LPA selection, design refinement and/or additional study. These include:

- LADWP: Expressed concern about alternatives and/or project features that could impact LADWP operations including but not limited to MSF sites east of the Van Nuys Metrolink station - which conflict with existing operations and the planned Mid-Valley Water Facility - and use of the Stone Canyon Reservoir property (all Alternatives except Alternatives 1 and 3 with Design Option 1 MSF).
- Southern California Regional Rail Authority: Expressed concern about the maintenance and storage facility location adjacent to Metrolink Ventura County Line track, east of the Van Nuys Metrolink Station potentially interfering with Metrolink operations and/or future track or capacity expansion (all Alternatives except Design Option 1 MSF for Alternatives 1 and 3).
- VA: Noted that no VA property at the West Los Angeles VA Medical Center, the Los Angeles National Cemetery or nearby GSA-owned Veterans Benefit Administration will be available for encroachment by any alternative and any alternative that did would need to be redesigned (Alternatives 1 and 3).
- UCLA: Noted support for the project and a station on or adjacent to the UCLA campus but expressed concern about construction impacts at the center of campus and suggested that Metro consider a less disruptive station location (Alternatives 3, 4, 5, 6).

1.6 Unresolved Issues and Recommendations for Future Involvement

The PEL Study consultation process identified issues that will continue to be addressed and coordinated as the Project progresses through further planning and design refinements depending on the alternative selected to advance. As noted below, many of the issues are particular to certain alternatives and are avoided by the selection of Modified Alternative 5 as the LPA.

- Considering the conflicts with VA property associated with Alternatives 1 and 3.
- Coordinating approval of Alternatives 1 and 3 with FHWA and Caltrans through the assessments of cumulative effects of the Project and the I-405 ExpressLanes Project (e.g., concurrent construction activities). Alternative 1 would require FHWA to approve a Modified Access Report related to the closure of the Sunset Boulevard southbound on-ramp.
- Considering the use of U.S. HUD guidelines for assessing potential effects to HUD-assisted properties under all project alternatives.
- Coordinating the assessment of habitat connectivity under Alternatives 1 and 3 with the NPS, EPA, and other stakeholders.

- Coordinating with the FAA to avoid impacting flight operations.
- Coordinating connectivity to the Metrolink Van Nuys Station, Metro D Line, Metro E Line, Metro G Line, and Project interface with the East San Fernando Valley Light Rail Transit Line under all project alternatives.
- Coordinating with LADWP to avoid and/or minimize facility effects.
- Consulting with LACSD and/or Mountains Recreation and Conservation Authority to minimize potential effects to the regional park planned for the Mission Canyon Landfill under Alternatives 1 and 3.
- Ongoing tribal coordination under all project alternatives.
- Defining the Initial Operating Segment (IOS) and associated MSF.

2 REFERENCES

Los Angeles County Metropolitan Transportation Authority (Metro). 2016. *Measure M Los Angeles County Traffic Improvement Plan. Attachment A, Measure M Expenditure Plan.* libraryarchives.metro.net/dpgtl/MeasureM/201609-proposed-ordinance-16-01-county-traffic%20improvement-plan.pdf.

Los Angeles County Metropolitan Transportation Authority (Metro). 2019a. *Sepulveda Transit Corridor Project Final Feasibility Report.* November. libraryarchives.metro.net/dpgtl/pre-eir-eis-reports-and-studies/sepulveda-transit-corridor/2019-sepulveda-transit-corridor-final-feasibility-report.pdf.

Los Angeles County Metropolitan Transportation Authority (Metro). 2023a. *Sepulveda Transit Corridor Project Planning and Environmental Linkages Study Approach Memorandum.*

Los Angeles County Metropolitan Transportation Authority (Metro). 2023b. *Sepulveda Transit Corridor Project Environmental Linkages Study Agency Coordination and Public Participation Plan.*

Los Angeles County Metropolitan Transportation Authority (Metro). 2025. *Sepulveda Transit Corridor Project Draft Environmental Impact Report*.

Attachment 1. Agency Letters

Federal Aviation Administration (FAA) (Robert Zimmerer)

Mr. Carter

Thanks for including the Federal Aviation Administration (FAA) in your email/outreach efforts regarding the Sepulveda Transit Corridor Project Draft Planning and Environmental Linkages Study. The attached letter includes comments from the FAA Airports Division.

If you have any questions or need clarification, please feel free to contact me.

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports

777 S. Aviation Blvd., Suite 150
El Segundo, CA 90245

May 4, 2026

VIA EMAIL

Mr. Peter Carter
Senior Director, Transportation Planning
Countywide Planning & Development
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, Mail Stop 99-22-6
Los Angeles, CA 90012

Dear Mr. Carter:

Sepulveda Transit Corridor Project
Draft Planning and Environmental Linkages (PEL) Study

Thank you for reaching out to various stakeholders, including the Federal Aviation Administration (FAA), regarding the Sepulveda Transit Corridor Project (Project) Draft Planning and Environmental Linkages (PEL) Study. The FAA Airports Division provides the following comments:

The Los Angeles County Metropolitan Transportation Authority (LACMTA) is studying alternatives/alignments, both horizontal (i.e., project footprint) as well as vertical (i.e., at-grade vs. aerial vs. underground). FAA airspace analysis must evaluate the horizontal and vertical components of the at-grade and/or aerial portions of each alternative/alignment considered (including components such as the overhead catenary electrical power system, rolling stock envelope, and sound walls) on the various imaginary surfaces prescribed in Title 14, Code of Federal Regulations (CFR) Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, as well as on the line-of-sight and range of FAA radio frequencies (e.g., navigational aids), which, if impacted, may adversely affect instrument flight procedures and thereby the capacity and/or safety of the national airspace system. Portions of each alternative/alignment located within a fully enclosed subsurface tunnel (i.e., not open-cut or trenched) do not require airspace analysis or use of the FAA Notice Criteria Tool referenced below.

The imaginary surfaces associated with 14 CFR Part 77 are not the most restrictive in all circumstances; Terminal Instrument Procedures (TERPS) and Obstacle Clearance Surfaces (OCS) may be more restrictive in certain situations and are therefore key considerations for the FAA. We anticipate that analyzing these surfaces may require FAA guidance, as most non-aviation professionals are unfamiliar with TERPS and OCS. Alternatively, LACMTA may wish to consider procuring an aviation professional services consultant.

The Draft PEL Study does not contain sufficient detail for the FAA to make a determination, as it does not present the results of FAA aeronautical studies. The FAA requests that LACMTA demonstrate and document that no interference is likely at this stage, rather than later, when modifying an alternative/alignment to eliminate or minimize interference could require substantial rework.

In addition to seeking FAA guidance or procuring an appropriate professional services consultant, LACMTA must use the FAA Notice Criteria Tool (NCT) at frequent intervals (e.g., every 500 linear feet) along the at-grade and/or aerial portions of each alternative/alignment within an airport influence area to identify locations meeting filing requirements under 14 CFR Part 77. LACMTA must then coordinate with the FAA to submit the appropriate forms so that the FAA can evaluate potential adverse effects on the national airspace system. Filings must include all horizontal and vertical components of the proposed project (including the overhead contact system, rolling stock envelope, and sound walls).

The relevant airport influence areas for this project include areas within 20,000 feet of Van Nuys Airport and Santa Monica Airport. Although Santa Monica Airport may close prior to Project construction, certain navigational aids are expected to remain operational on the airport property for an undetermined period; therefore, aeronautical studies remain prudent.

If you have any questions or need clarification, please feel free to contact me via email at robert.l.zimmerer@faa.gov.

Sincerely,

Robert L. Zimmerer
Acting Regional Planner
Airports Division, Western-Pacific Region

United Station Environmental Protection Agency (Zac Appleton)

This comment letter also shared directly with Peter Carter.

Thanks,

Zac Appleton

NEPA Reviewer, Transportation Team

REGION 9
SAN FRANCISCO, CA 94105

May 8, 2026

Peter Carter
Project Manager
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, Mail Stop 99-22-6
Los Angeles, California 90012

Subject: EPA Comments on the Sepulveda Transit Corridor Draft Planning and Environmental Linkages Study, Los Angeles County, California

Dear Peter Carter:

The U.S. Environmental Protection Agency has reviewed the above-referenced document to assist in our future role in reviewing an environmental analysis prepared to comply with the National Environmental Policy Act, and to assist in our future document review role pursuant to our NEPA review authority under Section 309 of the Clean Air Act.

The Draft Planning and Environmental Linkages Study (PEL) for the Sepulveda Transit Corridor Project states that the project is intended to provide a high-capacity rail transit alternative to the congested road network across the Santa Monica Mountains between San Fernando Valley and the Westside of Los Angeles. The PEL indicates that 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 LA Metro E line.

The EPA provided scoping comments (February 11, 2022) and Draft Environmental Impact Report comments (August 29, 2025) to LA Metro and the Federal Transit Administration during the California Environmental Quality Act compliance process because our agency was informed that future analysis to comply with NEPA would also be necessary. The EPA's Draft EIR Scoping letter recommended LA Metro and Federal Transit Administration synchronize the NEPA and CEQA processes, and recommended pursuing a Planning and Environmental Linkages (PEL) process if a joint CEQA/NEPA environmental document could not be prepared yet. The PEL Study states that LA Metro initiated the PEL analysis to consider environmental and community goals early in transportation planning and to compile and integrate CEQA analysis into an anticipated subsequent NEPA process. The EPA also provided comments to inform the PEL Study development on January 18, 2023. We appreciate the early engagement and incorporation of our recommendations into the PEL.

We note that the PEL Study states Modified Alternative 5 is the Locally Preferred Alternative, consisting of a heavy rail underground alignment along Van Nuys Boulevard and a southern terminus at the Metro E Line Expo/Sepulveda Station. The PEL Study indicates that LA Metro will need to analyze this Modified Alternative 5, include a potential Initial Operating Segment, and identify and evaluate a maintenance and storage facility for the Modified Alternative 5. The PEL Study also identifies that LA Metro will prepare a revised Environmental Impact Report for the locally prepared alternative, and intends to initiate analysis to comply with NEPA in 2026.

The EPA appreciates the opportunity to review this Draft PEL and we have no additional feedback at this time. Please update the EPA should LA Metro and FAA choose to pursue a different alternative for continued analysis. When the Final PEL, subsequent Revised EIR, and future NEPA analyses are available, please notify us and provide electronic versions. If you have any questions, please contact me at (415) 972-3321 or appleton.zac@epa.gov.

Sincerely,

Zac Appleton
NEPA Reviewer
Environmental Review Program

cc: Mary Nguyen
Director of Planning and Program Development, Federal Transit Administration

Luiz Lopez
General Engineer, Federal Transit Administration

Kelli Ewing-Toledo
Deputy District Director, Environmental Planning, Caltrans

Ruby Kwan-Davis
Senior Environmental Scientist, California Department of Fish and Wildlife

Paul Edelman
Deputy Director of Natural Resources and Planning, Santa Monica Mountains Conservancy

Timothy Jackson
Project Manager, U.S. Army Corps of Engineers, Los Angeles District

Lorena Alvarez

Attached comments submitted on behalf of the U.S. Department of Veterans Affairs

U.S. Department of Veterans Affairs

COMMENT SUBMITTAL FORM

Project Name:	**SEPULVEDA TRANSIT CORRIDOR**
Project Sponsor:	Los Angeles County Metropolitan Transportation Authority
Project Phase:	Planning and Environmental Linkages (PEL) Study

Comment #	Chapter/Section Number	Page #	VA Comment
1	Various	viii, 2-3, 7-5	References to the "VA Greater Los Angeles Healthcare System Draft Master Plan (VA Plan)" from 2016 should be replaced with references to the 2022 Master Plan, available at https://www.westlamasterplan.org/p/masterplanupdate
2	Chapter 3	Table 3-13	The following resources are part of the West Los Angeles Veterans Affairs Historic District, but should also be separately listed in Table 3-13. The Wadsworth Chapel (Building 20) and Trolley Building (Building 66) at the VA West Los Angeles campus are individually listed resources in the National Register of Historic Places (NHRP), and the Los Angeles National Cemetery is an NHRP-eligible resource.
3	Chapter 4	Table 3-30	The timeline for near to mid-term completion of the 1,200 housing units in the 2022 Master Plan is 10 years or 2032 (not 2021 as stated in the PEL)
4	Chapter 4	4-118	"Under Alternative 1, the proposed aerial guideway and the proposed aerial Wilshire Boulevard/Metro D Line Station would be constructed within roughly 20 to 150 feet of the historic district, east of Dowlen Drive. In addition, approximately 23,817 square feet of land from the West Los Angeles Veterans Affairs Historic District property would be permanently acquired along the eastern property line to accommodate necessary grading and I-405 ramp modifications." - Alternatives should not assume VA land will be aquired.
5	Chapter 5	5-13	Has Metro engaged Veteran Service Organizations for feedback on the proposed alternatives per the comment provided in June 2023? If so, will that feedback be included in future drafts of this environmental report?

Los Angeles Department of Water & Power
BUILDING A STRONGER L.A.

Karen Bass, Mayor
Board of Commissioners
Allan T. Marks, President
Nurit D. Katz, Vice President
Rudy J. Ortega Jr.
Wilma J. Pinder
Benny B. Tran
Chante L. Mitchell, Secretary
David W. Hanson, Interim General Manager

May 9, 2026

Mr. Peter Carter
Project Manager
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, Mail Stop 99-22-6
Los Angeles, CA 90012

Dear Mr. Carter:

Subject: Comments on the Sepulveda Transit Corridor Draft Planning and Environmental Linkages Study

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to comment on the Sepulveda Transit Corridor draft Planning and Environmental Linkages (PEL) study. LADWP is pleased and values the coordination and collaboration between the Metropolitan Transit Authority (MTA) staff and LADWP. LADWP also appreciates the discussions that have taken place between MTA and LADWP regarding the concerns LADWP has expressed during meetings and in its comment letter on MTA's Draft Environmental Impact Report (DEIR) (Enclosure 1). LADWP recognizes the development of the Memorandum of Understanding (MOU) between LADWP and MTA showing commitment and cooperation between the two parties on this project (Enclosure 2). There has been a lot of progress noted, and LADWP is thankful for this coordination and partnership.

LADWP supports the project and recognizes its importance and benefits it will bring to the City of Los Angeles. LADWP looks forward to continuing the partnership and teamwork with MTA to discuss project refinements that will ensure success for both agencies, and requests that the discussions line up with the public record.

Should you have any questions, please feel free to contact me at (213) 367-0436.

Sincerely,
Katherine Rubin
Digitally signed by Katherine Rubin
Date: 2026.05.09 12:17:50 -07'00'

Katherine Rubin
Director of Corporate Environmental Affairs

KR:ar
Enclosures
c/enc: Ms. Cecily Way, MTA
Mr. Mat Antonelli, MTA
Mr. Greg Reed
Ms. Adriana Perez

Enclosure 1

LADWP Comment Letter on

MTA's STCP Draft Environmental Impact Report (DEIR)

Dated August 27, 2025

Los Angeles Department of Water & Power
BUILDING A STRONGER L.A.

Karen Bass, Mayor

Board of Commissioners
Richard Katz, President
George S. McGraw, Vice President
Nurit D. Katz
Mia Lehrer
Wilma J. Pinder
Chante L. Mitchell, Secretary

Janisse Quiñones, Chief Executive Officer and Chief Engineer

August 27, 2025

Ms. Cecily Way
Senior Executive Officer – Countywide Planning and Development
Los Angeles County Metropolitan Transit Authority
One Gateway Plaza, Mail Stop 22-91
Los Angeles, CA 90012

Mr. Peter Carter, Project Manager
Los Angeles County Metropolitan Transit Authority
One Gateway Plaza, Mail Stop 99-22-6
Los Angeles, CA 90012

Dear Ms. Way and Mr. Carter:

Subject: LADWP File No. P-103362 – Draft Environmental Impact Report Comments
Los Angeles County Metropolitan Transportation Authority
Sepulveda Transit Corridor Project

The Los Angeles Department of Water and Power (LADWP) would like to express our appreciation for the Los Angeles County Metropolitan Transportation Authority's (LACMTA) patience and collaboration in affording LADWP the opportunity to review plans for the Sepulveda Transit Corridor Project (STCP). LADWP realizes the many benefits it will bring to the City of Los Angeles (City). At the same time, we remain mindful of LADWP's critical role in supporting the City's infrastructure and the essential services we provide – water and power are fundamental to the well-being of every Angeleno.

We have reviewed the initial conceptual plans and offer the following responses to the draft environmental impact report. Below we have listed the seven (7) impacted LADWP facilities:

No.	LACMTA Alternatives Impacting Facility	Facility	System	Address
1	4, 5, & 6	Stone Canyon Reservoir Complex	Water	Mulholland Drive and Beverly Glen Drive
2	All alternatives	Mid-Valley Water Facility	Water	7600 Tyrone Avenue
3	All alternatives	Valley Service Center	Power	Van Nuys Boulevard and Saticoy Street
4	6	Valley Telecommunication Headquarters	Joint	6000 Van Nuys Boulevard Cross Street Oxnard Street
5	4 & 5	Joint Facility	Joint	6060 Sepulveda Boulevard Cross Street Oxnard Street

No.	LACMTA Alternatives Impacting Facility	Facility	System	Address
6	4, 5, & 6	West LA Service Center /Westwood Overhead Headquarters	Power	1394 South Sepulveda Boulevard
7	4 & 5	DS-145	Power	11137 National Boulevard

Based on the preliminary information provided, LADWP's preferred alternative is Alternative 1 or 3 contingent on the following:

a. The STCP Maintenance and Storage Facility (MSF) location is moved to the Option 1 site.

b. LACMTA will continue to collaborate with LADWP to eliminate impacts to the Mid-Valley Water Facility and Valley Service Center.

The sections below explain the importance of the seven facilities affected by the proposed STCP alternatives and LADWP's concerns about those proposed impacts.

1. Stone Canyon Reservoir Complex – Water System

The Stone Canyon Reservoir Complex (Reservoir Complex) plays a vital role in our community, serving as a critical water resource for the residents of the City. The Reservoir Complex contains the Upper Stone Canyon Dam and Reservoir and the Stone Canyon Dam and Reservoir. The Upper Stone Canyon Reservoir is an active drinking water reservoir. It also has an active chlorine station and pipelines, inactive corrosion control station, and decommissioned microfiltration plant. The Stone Canyon Reservoir stores a significant amount of non-potable water essential for fire emergencies. This non-potable water is contained by the Stone Canyon Reservoir Dam. The facilities are under the jurisdiction of state regulatory agencies, including the California Regional Water Quality Control Board, Division of Safety of Dams (DSOD) and the State Water Resources Control Board, Division of Drinking Water. The Reservoir Complex is located directly above several communities including, but not limited to, UCLA, Bel Air, and Westwood. Two closed landfills are also on the property.

Objections to STCP Alternatives (Alternatives 4, 5, and 6):

a. LADWP objects to any proposed use of the Reservoir Complex property. The property contains critical infrastructure facilities, which if disturbed or compromised, may severely disrupt the operation of supplying drinking water to Angelenos and/or result in catastrophic loss of life and destruction of property.
b. The Stone Canyon Reservoir has a natural bottom. STCP construction and operation activities may cause movement which may cause disturbance of preexisting landslide planes and may create unstable conditions. This includes, but is not limited to, the

potential to cause slope instability to the reservoirs and/or piping, changes in groundwater conditions or water seepage affecting the reservoir and surrounding landslides and creating fractures or voids in subsurface materials producing possible unpredictable and unstable conditions.

c. Movement or instability of the chlorine station and its associated pipelines due to shifting ground, vibration, or structural instability from the proposed STCP may threaten the surrounding community and cause widespread health hazards.
d. LADWP is concerned with groundwater quality impacts and groundwater management during tunneling operations. Groundwater may become pressurized and cause an abundance of water to spill and potentially enter drainage structures near the proposed locations which may ultimately contaminate reservoirs in the Stone Canyon Complex. This will cause water quality degradation within the reservoir and likely exceed Water Quality objectives established for the Los Angeles Region.
e. The Reservoir Complex is in structurally complex, fractured bedrock. Landslides surrounding Upper Stone Canyon Reservoir are controlled by adversely oriented stratigraphy in fractured bedrock. These same bedding planes and fractures may also influence movement of groundwater and landfill gases with unknown, unstudied impacts to the existing Reservoir Complex. During STCP's proposed underground construction or operations (vibrations), this unpredictability may significantly impact groundwater flow, gas accumulation, and unexpected interactions with tunneling activities, posing potentially serious hazards to human health and the environment.
f. There is a potential for foundation break/hydraulic fractures while tunneling or drilling in close proximity to the reservoir. If the drilling fluid enters any of these breaks/fractures, there may be significant erosion issues. Additionally, as drilling depth increases, the potential for hydraulic heave may also increase, which may cause soils/sediment to move upwards towards the surface, compromising the stability of the reservoirs.
g. The Reservoir Complex houses several active water facilities in the vicinity of where LACMTA may need to access for maintenance in perpetuity. LACMTA access may be disruptive to the security, routine operations, and emergency activities at these facilities. Uninterrupted LADWP facilities and operations are essential to safeguard water security, maintain operational integrity, and protect public health.
h. Alternatives 4 and 5: STCP's proposed underground alignments are near the Stone Canyon Reservoir Dam and may pose risks to the dam's stability. STCP's construction and operation activities (vibrations) may induce dynamic loading, potentially triggering liquefaction and settlement in the dam area. DSOD categorizes Stone Canyon Reservoir Dam as having an "Extremely High" Downstream Hazard in the event of dam failure. Any activity that may compromise the stability to the dam presents catastrophic risks to communities downstream of the dam.

i. Alternative 6:
    - Landslides are known in and near the Upper Stone Canyon Reservoir. The STCP proposed facilities are adjacent or near landslides threatening reservoir stability, water quality, and operations. STCP construction and operation activities may affect the stability of these landslide masses and undermine the reservoir. The stability of

the Reservoir Complex must be maintained and protected to prevent catastrophic risks.

- STCP's proposed tunnel goes directly under a closed landfill within the Reservoir Complex property. There is a potential for landfill gases to migrate unpredictably due to structurally complex fractured bedrock. STCP's proposed construction and operation activities under/near may cause the landfill gasses to potentially release into the environment, and/or may cause additional environmental concerns such as groundwater contamination.

Proposed Remedy: Given the potential severe threats that the proposed STCP may pose to the surrounding community and LADWP infrastructure, LADWP objects to any proposed use of the Reservoir Complex property. LADWP requests that LACMTA relocates the STCP outside this LADWP property which houses critical infrastructure facilities that provide essential services to Angelenos.

2. Mid-Valley Water Facility (7600 North Tyrone Avenue, Van Nuys, Assessor's Parcel Number: 2215-001-913) – Water System (WS)

The property is currently used by LADWP's Water Distribution Division and Joint System's (JS) Fleet Services (FS) to support operational and emergency activities, including the replacement and installation of new water infrastructure. The site is also used by the Power System (PS) for storage of electrical switch gears and transformers.

The property is critical to the development of two major LADWP projects: the Mid-Valley Water Facility (MVWF) and the Groundwater Injection Wellfield Project, collectively referred to as "Projects." These Projects are essential to ensuring the City's long-term water supply reliability, drought resilience, emergency response readiness, and efficient multi-division operations.

The MVWF will establish a critical campus to house LADWP staff integral to water system construction, operations, and maintenance activities, infrastructure replacement programs, and emergency response operations. This facility will address LADWP's growing staffing and facility needs, serving as headquarters for the WS's Trunk Line Construction Program, and as a vital hub for FS and Supply Chain Services (SCS). The MVWF will accommodate approximately 450 employees and includes at a minimum approximately 236,000 gross square feet (GSF) of building space, 217,000 GSF of above-grade structured parking for staff and vehicles, and 181,000 GSF of yard space.

The MVWF is necessary to meet the Water Distribution Division's trunk line and mainline replacement of aging infrastructure and to house critical personnel. It is a crucial addition to Water System yards that are operating beyond maximum capacity with outdated buildings and trailers. Without this site, LADWP's operations and infrastructure replacement efforts will be substantially impacted. The facility directly supports the Valley community, where much of the trunk line and mainline infrastructure was installed post-war era and is now due for

replacement within the next ten (10) years. A design-build contract procurement is in progress, with construction scheduled to begin in 2027/2028.

In parallel, the Tyrone Property is also integral to the $740 million Groundwater Replenishment Project, a water recycling initiative scheduled for completion in 2028. A groundwater injection wellfield is being developed to recharge the local groundwater aquifer to provide sustainable water supplies during drought conditions. Monitoring and injection test wells have been installed on the property. Favorable hydrogeologic conditions were encountered and the well test yields indicate this area is very amenable to managed aquifer recharge via injection wells. Furthermore, the Tyrone Property is in close proximity to existing water conveyance, extraction and treatment infrastructure within a portion of the San Fernando Valley that is generally free of groundwater contamination. The property is uniquely suited to meet multiple City water supply and resiliency initiatives.

The Tyrone Property serves multiple divisions —WS, PS, FS, and its loss would undermine multi-agency coordination and eliminate the possibility of creating a shared LADWP Valley campus. The Tyrone Property is adjacent to LADWP's Van Nuys Power District Yard, allowing for planned integration of WS, PS, FS, and SCS operations.

MVWF Project Development:

- August 2015 – September 2017: Completed Conceptual Design Report, Preliminary Geological and Geotechnical Assessment, and Feasibility Study.
- October 2017: LADWP disclosed to LACMTA stating the Tyrone Property shall not be considered for a LACMTA project due to future construction of the MVWF.
- February 2020: Board of Water and Power Commissioners adopted a Mitigated Negative Declaration for the MVWF in accordance with California Environmental Quality Act (CEQA).
- October 2024: Obtained City Planning Site Plan Review Letter of Determination.
- Mid-2025 – Late-2026: Contract procurements for MVWF Owner's Agent and Progressive Design-Build contracts.

Objections to All STCP Alternatives (Alternatives 1, 3, 4, 5, and 6):

The STCP, if implemented as currently proposed, would significantly disrupt LADWP's Projects – combined valued at over $1 billion. LADWP has no viable alternative location to meet the objectives and operational needs of these Projects. The loss or partial acquisition of the Property would result in:

a. Loss of the MVWF Project. The Tyrone Property is fully planned and allocated for specific uses. Any reduction to the available area would require LADWP to abandon its CEQA approvals. Restart of CEQA environmental review and planning processes would delay the MVWF Project timeline by years. No other known property meets the unique operational, spatial, and geological criteria required for the MVWF, resulting in higher costs to Angelenos.

b. Adverse impacts on LADWP's Mainline and Trunk Line Replacement Program. The City will see increasing infrastructure failures that will impact thousands more customers for extended periods as we are currently experiencing, along with other large-scale and high-profile disruptions to the public. To keep up with the demands of aging infrastructure, it is imperative that the City deploys sufficient personnel and facilities proximal to areas slated for replacement. LADWP strongly advises against any project that would significantly delay the replacement of pre- and post-war infrastructure reaching the end of its service life.
c. Delays to critical water infrastructure replacement programs in the Valley area.
d. Increased risk to emergency response operations, resulting in longer restoration times and higher water losses during blowouts and leaks.
e. Disruption of the Groundwater Injection Wellfield Project will impact the City's local water supply initiatives resulting in higher costs to Angelenos. The loss of property will delay restoration of groundwater supplies which are critical to reducing dependency on imported water supplies, remediating contamination, and enhancing drought resiliency.
f. Loss of efficiency from halted co-location and integration plans between LADWP divisions.

LADWP objects to the permanent and/or temporary acquisition of the entire and/or partial use of the Tyrone Property. The proposed use of the Tyrone Property for the Metro STCP is not just impractical – it is detrimental to the City's infrastructure, emergency preparedness, and environmental sustainability goals. Moreover, it would eliminate the opportunity to create a shared LADWP campus, undermining years of planning and investment, resulting in higher costs to Angelenos. LADWP strongly urges that this property be preserved for its current and future utility, and that alternative locations be considered for the STCP.

Proposed Remedy:

LACMTA to pursue STCP Alternative 1 or 3 with the following modifications:
a. The STCP MSF location is moved to the Option 1 site.
b. LACMTA collaborates with LADWP eliminate any encroachments onto the Mid-Valley Water Facility for temporary or permanent use.

3. Valley Service Center – PS

The Valley Service Center is significantly impacted by all of LACMTA's proposed alternatives. If any of LACMTA's current alternatives are approved, LACMTA will severely debilitate PS operations in the San Fernando Valley.

The Valley Service Center is a 24-7 operational facility that houses over 600 employees and 15 onsite facilities. The Valley Service Center serves as the primary hub for receiving, testing, and storage of distribution transformers, cables, and conductors for the entire LADWP service territory. Due to its central location, the Valley Service Center plays a vital role during emergencies to quickly restore power to affected communities, such as during the Northridge Earthquake, summer heat storms, and our current restoration efforts in the

Palisades. The Valley Service Center houses our heavy-duty truck shop, our main toolroom for all Distribution District crews, our main cable storage, main transformer storage, and is the largest power distribution headquarters serving the entire Van Nuys service territory. The Valley Service Center is also a location for customers to visit LADWP representatives to discuss their projects such as new services or service upgrades.

For all STCP alternatives, LACMTA is proposing significant land acquisition from the Valley Service Center for temporary and permanent use. LACMTA is proposing various aerial and underground rail alignments that will impact the northern and western portions of the facility, which includes a mixture of encroachments for permanent installation of STCP infrastructure and temporary construction activities.

Every part of the facility is actively used. Any permanent or temporary loss of property due to the LACMTA STCP will significantly impact PS day-to-day operations and delay the restoration of power during both routine and emergency operations. As currently proposed, LADWP does not approve of any LACMTA alternatives that would impact the Valley Service Center.

Objections to All STCP Alternatives (Alternatives 1, 3, 4, 5, and 6):

All proposed alternatives will impact the northern side of the facility adjacent to the existing Metrolink station. Significant loss of critical space at this facility will cause constraints on material and equipment storage, equipment testing, distribution logistics, and increase trouble dispatch crew response times, which will ultimately cause longer power outages for the Valley communities.

a. Valley Service Center is the main facility for receiving, testing, and storage of distribution transformers for the entire LADWP territory. Additionally, it is the main cable storage facility for the entire LADWP territory, including Owen's Valley and Boulder, Nevada. It is critical for LADWP trouble crews to have immediate access to this material and equipment onsite in order to restore power more efficiently and timely.
    i. Disruption of emergency and trouble response will delay restoration of power to the Valley communities, negatively affecting LADWP's reliability indicators such as the System Average Interruption Duration Index, System Average Interruption Frequency Index, and Customer Average Interruption Duration Index.
b. This facility is the only testing facility for all transformers under 19.5 kilovolts (kV). Testing is sensitive to outside elements such as dust accumulation and subsurface vibration. LACMTA's proposed construction operations, including underground boring, may produce significant dust levels and heavy vibrations that can impact transformer testing. Additional dust on the equipment will result in incorrect testing results, leading to repeat testing and delays. Disruption to transformer testing and deployment will delay routine and emergency power restoration.
c. Valley Service Center is the main facility for receiving and storing mineral oil in the Valley service area. Mineral oil is crucial for maintaining, operating, and testing transformers. The mineral oil is delivered through an onsite rail spur located in the

northeastern section of the facility. As such, LADWP has invested in building the necessary infrastructure to receive and properly store the material in a cost effective and convenient manner. Any relocation of the LADWP rail spur will significantly reduce the useable space on this facility. Removal or relocation of the rail spur will cause delays in transformer testing and maintenance. This critical rail spur must remain operational at all times.

d. The Valley Service Center is the home base for LADWP's Van Nuys Distribution District crews and trouble dispatch crews. These crews are responsible for the construction and maintenance of the power distribution system in the Valley area during routine and emergency conditions. Additionally, there are other supporting groups located at this facility such as Power Overhead Distribution Design, Valley Service Planning, and Electrical Service Representatives. Any reduction or changes in the current footprint, access, or operations of this facility will significantly disrupt day to day operations and activities.
e. The aerial light rail alignments proposed in Alternatives 1, 3, 4, and 5 will increase public visibility to operations and stored materials, increasing the frequency of vandalism.
f. The underground boring proposed in Alternative 6 may impact transformer testing operations.
g. The temporary construction easements for Alternative 6 will create access restrictions for the primary delivery entrance to the Valley Service Center on Saticoy Street.

Proposed Remedy:

LACMTA to pursue STCP Alternative 1 or 3 with the following modifications:

c. The STCP MSF location is moved to the Option 1 site.
d. LACMTA collaborates with LADWP eliminate any encroachments onto the Valley Service Center facility for temporary or permanent use.
a. LACMTA collaborates with LADWP PS Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment. It is extremely important for LACMTA to properly account for and incorporate these relocations into the STCP project budget and schedule.

4. Valley Telecommunication Headquarters (VTH) – PS

VTH is an active communication facility serving LADWP's critical operational needs. It is the headquarters for valley cable and mobile radio shops and contains warehouse storage space for copper and fiber optic infrastructure. VTH comprises three (3) installation bay areas for support and operation and maintenance of all LADWP mobile and portable radio services. VTH is also the location of the Valley Telecommunication Transport Shop employees, eleven (11) fleet assets along with tools, materials, and warehouse storage space to support operation and maintenance of the Los Angeles Aqueduct Filtration Plant (LAAFP), power system grid operations and all other facilities in the valley area. This site serves twenty-two (22) microwave transport sites supporting critical Power and Water operations.

The LACMTA STCP proposed alternatives do not identify direct physical impacts to the VTH, but the proposed underground Van Nuys Station in Alternative 6 does affect LADWP's existing underground electrical distribution system in the public right of way. Construction of the proposed underground STCP station may require relocation of vital communications and electrical infrastructure that originates from the on-site distribution station and supplies power to the surrounding community.

Objections to STCP Alternative 6:

a. The VTH facility is located strategically to optimize telecommunication support for the surrounding areas and LADWP facilities and transport sites. There is a large quantity of tools, materials, and supplies stored at this facility to support Telecommunications operations.
b. VTH is a hub for LADWP's communication systems. Further, it will also be used to accommodate increasing need for communication infrastructure build out and support. Any disruption to this will result in major impacts to the monitoring and operation of the power system serving the City and Valley residents.
c. Long Term Plans: The facility will be structured to support Advanced Metering Infrastructure (AMI) implementation by utilizing space to house power meters, and employees involved in the deployment of the AMI project, and to support future increases in telecommunication field personnel in the cable shops to accommodate increasing need for communication infrastructure build out and support.
d. Existing conduits and underground structures at the intersection of Oxnard Street and Van Nuys Boulevard risk relocation due to the new STCP underground station and rail alignment proposed in Alternative 6.

Proposed Remedy:

LACMTA to pursue STCP Alternative 1 or 3 with the following modifications:

a. The STCP MSF location is moved to the Option 1 site.
b. LACMTA collaborates with LADWP to eliminate any encroachments onto the Valley Service Center facility for temporary or permanent use.
c. LACMTA collaborates with LADWP PS Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment. It is extremely important for LACMTA to properly account for and incorporate these relocations into the STCP project budget and schedule.

5. 6060 Sepulveda Boulevard – JS

6060 Sepulveda Boulevard is a 3-story office building that serves as the Valley regional offices for FS, Power New Business, Security Planning, Power Transmission and Distribution, and WS. These functions are pivotal to support LADWP's core operations. The facility houses 373 employees and 237 parking spaces.

For Alternative 4, LACMTA is proposing to build an aerial station directly over portions of this facility and across Sepulveda Boulevard, permanently acquiring portions of the facility to place support structures for the aerial station and building a public entrance to the new station inside the LADWP facility.

For Alternative 5, LACMTA is proposing to build an underground station in the public right of way directly in front of this facility, which would require a temporary construction easement on a large portion of the facility parking lot, and a permanent easement on the front corner of the facility, permanently removing an unknown number of parking spaces.

Objections to STCP Alternatives 4 and 5:

a. LADWP objects to any proposed use of this site as any acquisition would impact the current operational needs and functions of the facility.
b. STCP Alternative 5 will require approximately 50 parking spaces for a temporary construction easement. Any impact will result in a parking shortage which in turn will severely impact daily operations of this facility.
c. LADWP evaluated Alternatives 4 and 5 and determined that there are no reasonable cost-effective mitigations that can resolve these concerns.

Proposed Remedy:

LACMTA to pursue STCP Alternative 1 or 3 with the following modifications:
a. The STCP MSF location is moved to the Option 1 site.
b. LACMTA collaborates with LADWP to eliminate any encroachments onto the Valley Service Center facility for temporary or permanent use.
c. LACMTA collaborates with LADWP PS Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment. It is extremely important for LACMTA to properly account for and incorporate these relocations into the STCP project budget and schedule.

6. West Los Angeles Service Center and Westwood Overhead Headquarters – PS

The West Los Angeles (WLA) Service Center located at 1394 South Sepulveda Boulevard serves as a Customer Service Center and a WLA Field Operations Office. Pre-pandemic, in person customer transactions at this location exceeded 63,000 per year.

The WLA Service Center houses nearly 100 employees and provides storage for materials, trucks, and equipment to support field services. This facility is the sole reporting location for WLA field staff that perform service requests for water and electric service, meter reading, field collection, and field investigations.

For Alternatives 4, 5, and 6, LACMTA is proposing to tunnel under the back corner of the WLA Service Center and use a portion of the facility for a temporary construction easement.

Objections to Alternatives 4, 5, and 6:

a. This site is the only LADWP Customer Service Center on the Westside of Los Angeles. LADWP's presence is valued by the community and our plan is to continue serving the community at this location and utilizing the location in the capacity of a Customer Service Center and West LA Field Operations Reporting Location.
b. This is the only location in the area for customers to make in-person payments that are required if a customer has been severed for non-payment.
c. Field staff need a secure location as their base of operations for the West LA area – that includes both parking and office space.
d. The WLA Service Center is critical for storing essential components used in the maintenance and replacement of LADWP equipment, which must be properly secured and protected against theft or vandalism.
e. The proposed tunneling under the WLA Service Center as shown in Alternatives 4, 5, and 6 may cause damage to sensitive equipment in storage due to high frequency vibrations from boring and rail operations.
f. LACMTA is proposing to obtain a temporary construction easement for the back portion of the WLA Service Center and utilize a back entrance of the facility for access. This will increase exposure and theft of critical material and equipment at this facility.

Proposed remedy:

LACMTA to pursue STCP Alternative 1 or 3 with the following modifications:

a. The STCP MSF location is moved to the Option 1 site.
b. LACMTA collaborates with LADWP to eliminate any encroachments onto the Valley Service Center facility for temporary or permanent use.
c. LACMTA collaborates with LADWP Power System Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment. It is extremely important for LACMTA to properly account for and incorporate these relocations into the STCP project budget and schedule.

7. Distributing Station 145 (DS-145) – PS

DS-145 is a vital electrical distribution facility for serving residential and commercial customers in the West Los Angeles area. This facility plays an essential role in maintaining reliable electric service for LADWP customers.

DS-145 is an indoor electric substation with all circuits entering and leaving the facility via underground structures. The facility pier foundations and underground structures are located deep beneath the ground due to soil conditions in the area.

For Alternatives 4 and 5, LACMTA is proposing to tunnel directly beneath this station's highly sensitive and essential equipment. Any disruption caused by tunneling activities or train vibrations could lead to equipment failures, potentially causing station outages which

could directly impact electric service for thousands of residents and businesses in the area. Given the essential role of this station in maintaining reliable electric service, LADWP cannot support any LACMTA alternative that requires tunneling under DS-145.

LACMTA is also proposing to have a boring site and construction staging area directly across from DS-145 on the southeast corner of Sepulveda Boulevard and National Boulevard.

Objections to Alternatives 4 and 5:

a. Boring/tunneling depths must be considered on the southside of DS-145 (off National Boulevard) as the station has critical heavy equipment that may be impacted.
b. The station has oil-filled transformers that must be grouted to maintain the integrity of the oil containment system. In the case the system fails for any reason; to fully contain all the oil, extensive excavations may be required for cleanup.
c. Dust accumulation on DS-145 equipment from LACMTA construction operations can cause arcing or other station damage, which could cause power outages in the surrounding communities.
d. The 34.5kV equipment receives scheduled washings every four months. Dust accumulations as a result of nearby boring activities will require additional LADWP personnel resources to increase washing frequency to prevent potential damage to the equipment.
e. STCP construction may restrict LADWP access to the site's only single main entrance along National Boulevard. This will impact maintenance and operation of the site and prevent necessary heavy equipment and vehicles from accessing the facility.
f. STCP boring and vibrations may undermine or damage station foundations, conduits, and critical station equipment.
g. If the station is forced offline due to LACMTA construction, service reliability to the West LA area will be impacted and may require customer outages.

Proposed remedy:

LACMTA to pursue STCP Alternative 1 or 3 with the following modifications:

a. The STCP MSF location is moved to the Option 1 site.
b. LACMTA collaborates with LADWP to eliminate any encroachments onto the Valley Service Center facility for temporary or permanent use.
c. LACMTA collaborates with LADWP PS Utility Coordination to establish clearance and relocation requirements for LADWP's existing overhead and underground infrastructure along the STCP rail alignment.

STCP Conflicts with Existing LADWP Infrastructure in the Public Right-of-Way for All Alternatives

In addition to the concerns above, LADWP anticipates many conflicts with the LACMTA STCP in the public right of way. LADWP operates and maintains existing water, power, and communication infrastructure underneath public streets, and both above and below ground along sidewalks and parkways. Therefore, LACMTA and LADWP must work closely together to develop designs that will allow for all public right of way infrastructure to coexist harmoniously during and long after the construction of the STCP.

Some relocations of LADWP power system conduits and structures within the public right of way may directly impact 4.8 kV and 34.5 kV Customer Station services. These customer-impacted relocations may require Customer Station modifications on private property or extensive collaboration with the customer to coordinate an extended power service outage to their property in order to complete the relocation.

LADWP requests that LACMTA provide developed street improvement plans, striping plans, STCP rail and station design plans showing infrastructure locations, heights, and depths, and proposed new water and power service locations as soon as possible in order to begin conflict reviews and identify any major project challenges early on.

Additionally, it is extremely important for LACMTA to properly account for and incorporate all STCP-related LADWP relocation activities into the LACMTA project budget and schedule.

New LADWP Water and Power Service Requests

LADWP requests that LACMTA STCP submit new water and power service requests for this project as soon as possible with accurate water and power demand information to provide the LADWP and LACMTA teams ample time to collaborate and find the most efficient and cost-effective way to provide LACMTA with these new services.

Conclusion

In conclusion, each property impacted by STCP plays an integral role in helping LADWP achieve its mission of providing reliable water and power to the residents of Los Angeles.

LADWP recommends that LACMTA consider selecting the STCP Alternative 1 or 3 with the MSF Option 1 for the STCP, as these alignments completely avoid five (5) out of the seven (7) LADWP facilities discussed above, and LADWP is optimistic that any remaining facility impacts can be discussed and mitigated through collaboration. If LACMTA chooses any of the other alignments, LACMTA will be impacting multiple LADWP facilities, and creating more difficult challenges and risks for this project.

LADWP appreciates the collaboration with LACMTA on past and current projects and is fully committed to working closely with LACMTA throughout this process to ensure the STCP success while maintaining the integrity of our vital services. However, we strongly oppose any project alternative that would impact LADWP's facilities and compromise this objective.

For any questions regarding this request, please contact Mr. Marshall Cyr at (213) 367-3541 or marshall.cyr@ladwp.com or Ms. Arlene Rodriguez at (213) 367-7459 or arlene.rodriguez@ladwp.com.

Sincerely,

Katherine Rubin

Digitally signed by Katherine Rubin
Date: 2025.08.27 19:49:20 -07'00'

Katherine Rubin
Director of Corporate Environmental Affairs

MC:ar
c: Mr. Marshall Cyr
Ms. Arlene Rodriguez

Enclosure 2

MOU Sepulveda Transit Corridor Project (STCP) Between MTA and LADWP

MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
and
LOS ANGELES DEPARTMENT OF WATER AND POWER

FOR COOPERATION AND COORDINATION ON THE SEPULVEDA TRANSIT CORRIDOR PROJECT

This Memorandum of Understanding ("MOU") is entered into by and between the Los Angeles County Metropolitan Transportation Authority ("LA Metro") and Los Angeles Department of Water and Power ("LADWP"), (referred to herein collectively as the "Participants"), regarding cooperation and coordination to advance the Sepulveda Transit Corridor Project ("the Project") in a way that continues to support the essential services both agencies provide.

RECITALS

A. Whereas, LA Metro is responsible for planning, designing, constructing and operating transportation projects and programs within Los Angeles County; and
B. Whereas, LADWP is a municipal utility serving the water and electricity needs of Los Angeles, organized and existing under the Charter of the City of Los Angeles; and
C. Whereas, LA Metro is developing the Project to provide a crucial north-south transit connection between the San Fernando Valley and the Westside of Los Angeles; and
D. Whereas, in June 2025, Metro issued a Draft Environmental Impact Report (EIR) for the Project describing and analyzing five build alternatives; and
E. Whereas, each of these alternatives as identified in the Draft EIR would interface with LADWP-owned properties and facilities; and
F. Whereas, LA Metro will continue to fully reimburse LADWP for its expenses associated with reviewing preliminary and final engineering design plans, reports, specifications, drawings, agreements and other documents pertinent to the Project consistent with the terms of the existing work orders (Power: 9300000000F102SC; Water Real Estate: 9300000000F103SC; Water Service: 9300000000F103SC); and
G. Whereas, LADWP reviewed the Draft EIR and provided comments to LA Metro regarding the Project; and
H. Whereas, LADWP requires that the Project not have an unmitigable adverse impact on provision of water and power within LADWP's service area, nor cause hardship on LADWP's ability to conduct business.

Based on a shared interest of advancing the Project and maintaining essential services to Angelenos, LA Metro and LADWP hereby acknowledge and agree to the following principles/commitments:

1. LA Metro recognizes that public entities having jurisdiction and/or rights in and around the Project, including LADWP, have existing facilities as well as infrastructure and development plans that may relate to or be impacted by the Project.
2. The purpose of this MOU is to establish an organizational framework whereby LA Metro and LADWP engage, where possible, as partners for the development of the Project, including continued planning, design and eventual construction of improvements that preserve and protect existing and planned water and power operations while also providing for implementation of the Project.
3. LA Metro and LADWP will coordinate and cooperate in good faith, including with other stakeholders as appropriate, on the following areas related to the Project, including, without limitation:
    a. LA Metro will identify a location to maintain and service rail vehicles that does not include LADWP properties at 7600 Tyrone Avenue or 7501 Tyrone Avenue (APNs: 2215-001-913; and 2215-001-910);
    b. LA Metro will work collaboratively with LADWP to refine alignments in the vicinity of Stone Canyon Reservoir Property to address LADWP comments;
    c. LA Metro and LADWP will work collaboratively to identify existing LADWP infrastructure that must be protected in place or relocated in order to accommodate the Project while ensuring that LADWP is able to maintain its existing level of operations and maintenance for its water and power systems; and
    d. LA Metro and LADWP will work collaboratively to address other comments provided in LADWP's August 27, 2025 comment letter on the Draft EIR for the Project, along with other areas of concern that may arise that require coordination and resolution.
4. This MOU is intended as an initial step to facilitate cooperation, coordination and intentions as set forth herein. The Participants expect that Project characteristics, impacts and mitigations may be defined in more detail and further refined as the Project design continues to advance.
5. The Participants agree to collaborate, cooperate and coordinate with each other, including their respective staff and/or consultants, to achieve the objectives of this MOU including, among other actions:
    a. The participation in recurring meetings and/or workshops, within reason;

b. The exchange of technical and other information; and
c. Good faith negotiation of more detailed agreements where needed.

6. The Participants agree to work diligently together and in good faith, using their best efforts to mitigate impacts to provision of water and power services within the Project area, perform relocations where mitigation cannot be achieved, and to resolve any unforeseen issues and disputes arising out of the performance of this MOU.
7. This MOU is a voluntary initiative and does not impose any legally binding rights, limitations or obligations upon the Participants. Each party shall bear its own costs related to this effort unless otherwise agreed in writing.
8. This MOU is not intended to amend or impact in any way other existing written agreements or MOUs that either Participant may have entered pertaining to this Project.
9. This MOU is effective from the date of its last signature and shall remain in effect until another MOU or agreement regarding this Project is executed between the Participants, the Project is completed, or one or both Participants withdraw from the MOU, whichever is earlier.
10. This MOU can only be amended by the Participants in writing. Each Participant may, at any time, withdraw from this MOU by providing a written notice to the other Participant 60 days in advance of the date of withdrawal.
11. This MOU incorporates, by reference, the recitals into the body of the MOU.

For the Los Angeles County Metropolitan Transportation Authority

By: _____ Date: 1/9/26

Stephanie Wiggins, Chief Executive Officer

For the Los Angeles Department of Water and Power

By: _____ Date: 1/9/25

Janisse Quinones, Chief Executive Officer