

WESTSIDE SUBWAY EXTENSION

Ecosystems and Biological Resources Technical Report



August 2010





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Acronyms and Abbreviations

AA	Alternatives Analysis
ADA	Americans with Disabilities Act (42 USC 126)
APM	automated people mover
BRS	blast relief shafts
BRT	bus rapid transit
CCTV	closed-circuit television
CDFG	California Department of Fish and Game
CE	California endangered
CEQA	California Environmental Quality Act (PRC 21000-21177)
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSOP	control standard operating procedure
CT	California threatened
EIR	environmental impact report
EIS	environmental impact statement
Expo I	Exposition Boulevard Light Rail Phase I
Expo II	Exposition Boulevard Light Rail Phase II
FAI	fresh air intakes
FE	Federally endangered
FEC	fairly endangered in California
FOLAR	Friends of the Los Angeles River
FT	Federally threatened
GLAVA	Greater Los Angeles Veterans Administration
HCP	habitat conservation plan
HOV	high-occupancy vehicle
HRT	heavy rail transit
HRV	heavy rail vehicles
I-10	Interstate 10 Freeway
I-405	Interstate 405 Freeway
LADOT	Los Angeles Department of Transportation
LAWA	Los Angeles World Airports
LAX	Los Angeles Airport
LPA	Locally Preferred Alternative
LRT	light rail transit
LRTP	Long Range Transportation Plan
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
MOS	minimum operable segments



mph	miles per hour
NEPA	National Environmental Policy Act (42 USC 4321-4347)
NOAA	National Oceanic and Atmospheric Administration
NOAA/FS	NOAA Fisheries Service
NVEC	not very endangered in California
OTE	over track exhaust
PEC	presumed extinct in California
PTEL	passenger assistance telephones
ROC	Rail Operations Center
RTECCE	rare, threatened or endangered in California but more common elsewhere
RTP	Regional Transportation Plan
SC	Species of Concern
SCAG	Southern California Association of Governments
SEA	Significant Ecological Area
SEC	seriously endangered in California
SOP	standard operating procedure
sq ft	square feet
SR 90	State Route 90
TPIS	transit passenger information system
TPSS	traction power substation
TSM	transportation system management
TVM	ticket vending machines
UCLA	University of California, Los Angeles
UPE	under platform exhaust
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VA	U.S. Department of Veterans Affairs



1.0 INTRODUCTION

This report examines the affected environment and potential ecosystems and biological resource impacts associated with the Westside Extension Transit Corridor project (Project). The methodology used to evaluate impacts to biological resources entailed a field review and photographic documentation of all parks and open space areas as well as mature trees within the Study Area. Results of the field review were used to determine whether biological resources, including sensitive ecological areas, wetlands, wildlife migratory corridors, and/or habitat conservation areas, occur within 0.25 mile of the proposed alignments, stations, and maintenance facility sites to support any sensitive species, including migratory birds. The potential for impacts to biological resources from the Project was then evaluated.



2.0 PROJECT DESCRIPTION

This chapter describes the alternatives that have been considered to best satisfy the Purpose and Need and have been carried forward for further study in the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). Details of the No Build, Transportation Systems Management (TSM), and the five Build Alternatives (including their station and alignment options and phasing options (or minimum operable segments [MOS]) are presented in this chapter.

2.1 No Build Alternative

The No Build Alternative provides a comparison of what future conditions would be like if the Project were not built. The No Build Alternative includes all existing highway and transit services and facilities, and the committed highway and transit projects in the Los Angeles County Metropolitan Transportation Authority (Metro) Long Range Transportation Plan (LRTP) and the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP). Under the No Build Alternative, no new transportation infrastructure would be built within the Study Area, aside from projects currently under construction or projects funded for construction, environmentally cleared, planned to be in operation by 2035, and identified in the adopted Metro LRTP.

2.2 TSM Alternative

The TSM Alternative emphasizes more frequent bus service than the No Build Alternative to reduce delay and enhance mobility. The TSM Alternative contains all elements of the highway, transit, Metro Rail, and bus service described under the No Build Alternative. In addition, the TSM Alternative increases the frequency of service for Metro Bus Line 720 (Santa Monica–Commerce via Wilshire Boulevard and Whittier Boulevard) to between three and four minutes during the peak period.

In the TSM Alternative, Metro Purple Line rail service to the Wilshire/Western Station would operate in each direction at 10-minute headways during peak and off-peak periods. The Metro Red Line service to Hollywood/Highland Station would operate in each direction at five-minute headways during peak periods and at 10-minute headways during midday and off-peak periods.

2.3 Build Alternatives

The Build Alternatives are considered to be the “base” alternatives with “base” stations. Alignment (or segment) and station options were developed in response to public comment, design refinement, and to avoid and minimize impacts to the environment.

The Build Alternatives extend heavy rail transit (HRT) service in subway from the existing Metro Purple Line Wilshire/Western Station. HRT systems provide high speed (maximum of 70 mph), high capacity (high passenger-carrying capacity of up to 1,000 passengers per train and multiple unit trains with up to six cars per train), and reliable service since they operate in an exclusive grade-separated right-of-way. The subway will operate in a tunnel at least 30 to 70 feet below ground and will be electric powered.



Furthermore, the Build Alternatives include changes to the future bus services. Metro Bus Line 920 would be eliminated and a portion of Line 20 in the City of Santa Monica would be eliminated since it would be duplicated by the Santa Monica Blue Bus Line 2. Metro Rapid Bus Line 720 would operate less frequently since its service route would be largely duplicated by the Westside Subway route. In the City of Los Angeles, headways (time between buses) for Line 720 are between 3 and 5 minutes under the existing network and will be between 5 and 11.5 minutes under the Build Alternatives, but no change in Line 720 would occur in the City of Santa Monica segment. Service frequencies on other Metro Rail lines and bus routes in the corridor would be the same as for the No Build Alternative.

2.3.1 Alternative 1—Westwood/UCLA Extension

This alternative extends the existing Metro Purple Line from the Wilshire/Western Station to a Westwood/UCLA Station (Figure 2-1). From the Wilshire/Western Station, Alternative 1 travels westerly beneath Wilshire Boulevard to the Wilshire/Rodeo Station and then southwesterly toward a Century City Station. Alternative 1 then extends from Century City and terminates at a Westwood/UCLA Station. The alignment is approximately 8.60 miles in length.

Alternative 1 would operate in each direction at 3.3-minute headways during morning and evening peak periods and at 10-minute headways during midday. The estimated one-way running time is 12 minutes 39 seconds from the Wilshire/Western Station.

2.3.2 Alternative 2—Westwood/Veterans Administration (VA) Hospital Extension

This alternative extends the existing Metro Purple Line from the Wilshire/Western Station to a Westwood/VA Hospital Station (Figure 2-2). Similar to Alternative 1, Alternative 2 extends the subway from the Wilshire/Western Station to a Westwood/UCLA Station. Alternative 2 then travels westerly under Veteran Avenue and continues west under the I-405 Freeway, terminating at a Westwood/VA Hospital Station. This alignment is 8.96 miles in length from the Wilshire/Western Station.

Alternative 2 would operate in each direction at 3.3-minute headways during the morning and evening peak periods and at 10-minute headways during the midday, off-peak period. The estimated one-way running time is 13 minutes 53 seconds from the Wilshire/Western Station.

2.3.3 Alternative 3—Santa Monica Extension

This alternative extends the existing Metro Purple Line from the Wilshire/Western Station to the Wilshire/4th Station in Santa Monica (Figure 2-3). Similar to Alternative 2, Alternative 3 extends the subway from the Wilshire/Western Station to a Westwood/VA Hospital Station. Alternative 3 then continues westerly under Wilshire Boulevard and terminates at the Wilshire/4th Street Station between 4th and 5th Streets in Santa Monica. The alignment is 12.38 miles.

Alternative 3 would operate in each direction at 3.3-minute headways during the morning and evening peak periods and operate with 10-minute headways during the midday, off-peak period. The estimated one-way running time is 19 minutes 27 seconds from the Wilshire/Western Station.

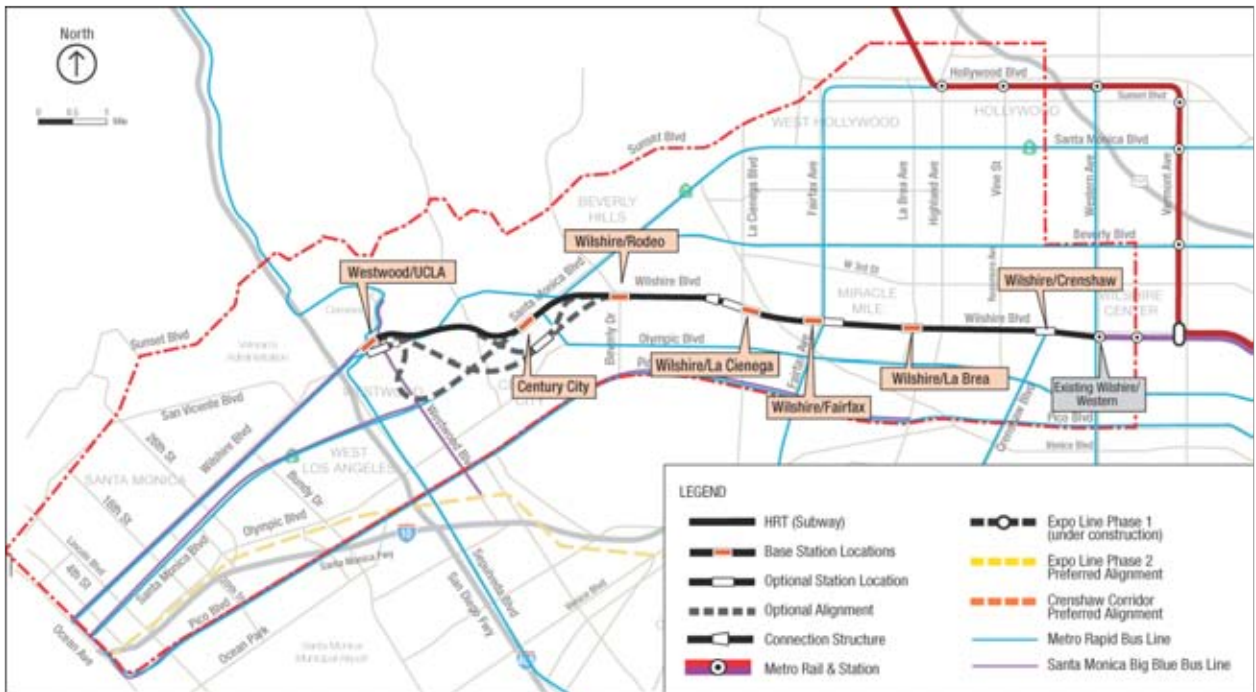


Figure 2-1. Alternative 1—Westwood/UCLA Extension

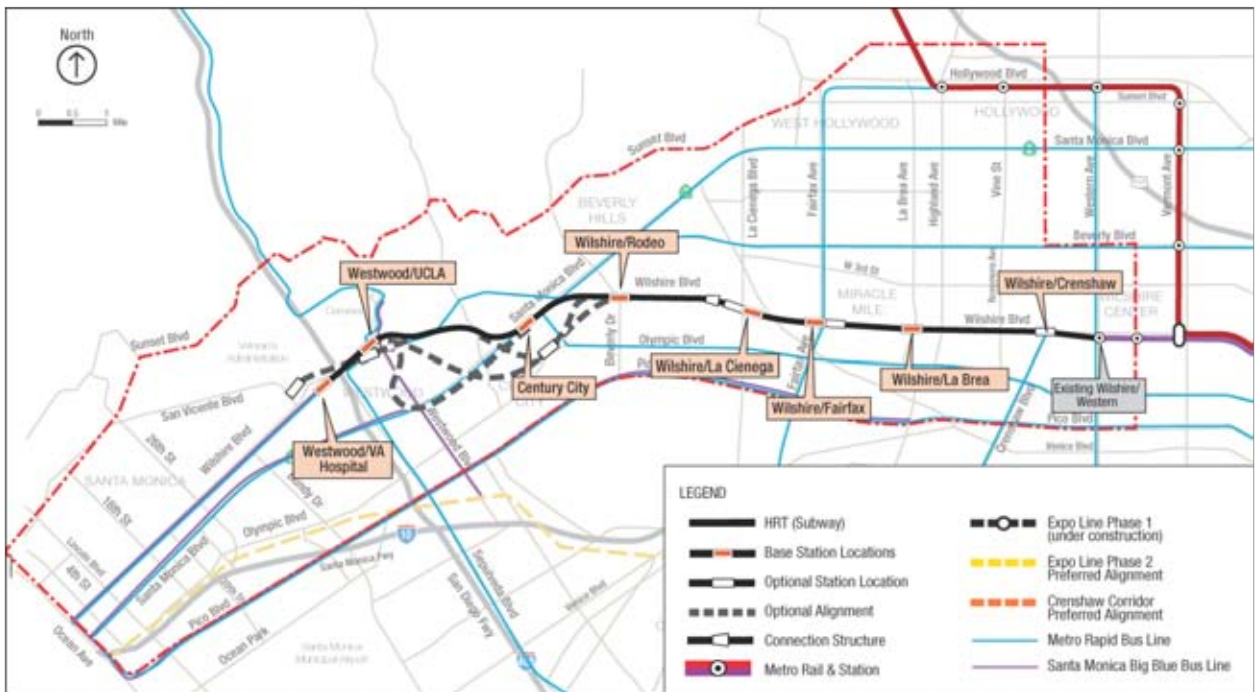


Figure 2-2. Alternative 2—Westwood/Veterans Administration (VA) Hospital Extension

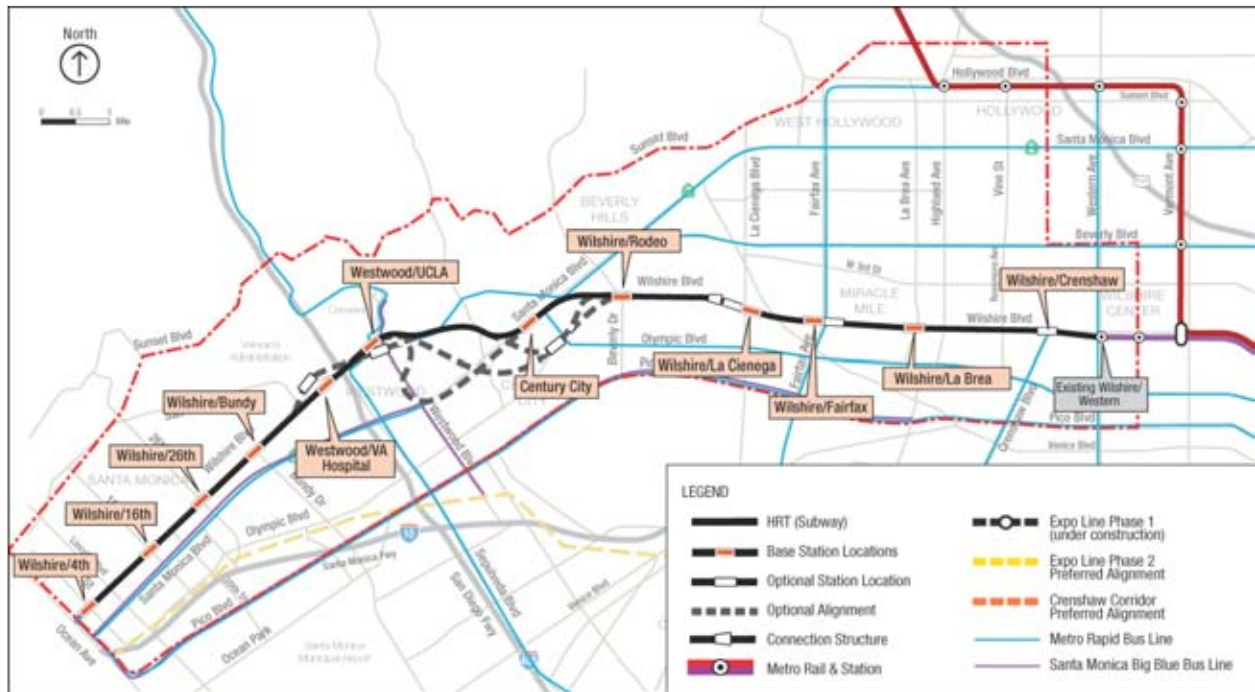


Figure 2-3. Alternative 3—Santa Monica Extension

2.3.4 Alternative 4—Westwood/VA Hospital Extension plus West Hollywood Extension

Similar to Alternative 2, Alternative 4 extends the existing Metro Purple Line from the Wilshire/Western Station to a Westwood/VA Hospital Station. Alternative 4 also includes a West Hollywood Extension that connects the existing Metro Red Line Hollywood/Highland Station to a track connection structure near Robertson and Wilshire Boulevards, west of the Wilshire/La Cienega Station (Figure 2-4). The alignment is 14.06 miles long.

Alternative 4 would operate from Wilshire/Western to a Westwood/VA Hospital Station in each direction at 3.3-minute headways during morning and evening peak periods and 10-minute headways during the midday off-peak period. The West Hollywood extension would operate at 5-minute headways during peak periods and 10-minute headways during the midday, off-peak period. The estimated one-way running time for the Metro Purple Line extension is 13 minutes 53 seconds, and the running time for the West Hollywood from Hollywood/Highland to Westwood/VA Hospital is 17 minutes and 2 seconds.

2.3.5 Alternative 5—Santa Monica Extension plus West Hollywood Extension

Similar to Alternative 3, Alternative 5 extends the existing Metro Purple Line from the Wilshire/Western Station to the Wilshire/4th Station and also adds a West Hollywood Extension similar to the extension described in Alternative 4 (Figure 2-5). The alignment is 17.49 miles in length. Alternative 5 would operate the Metro Purple Line extension in each direction at 3.3-minute headways during the morning and evening peak periods and 10-minute headways during the midday, off-peak period. The West Hollywood extension would operate in each direction at 5-minute headways during peak periods and 10-minute headways during the midday, off-peak period. The estimated one-way running time for the

Metro Purple Line extension is 19 minutes 27 seconds, and the running time from the Hollywood/Highland Station to the Wilshire/4th Station is 22 minutes 36 seconds.

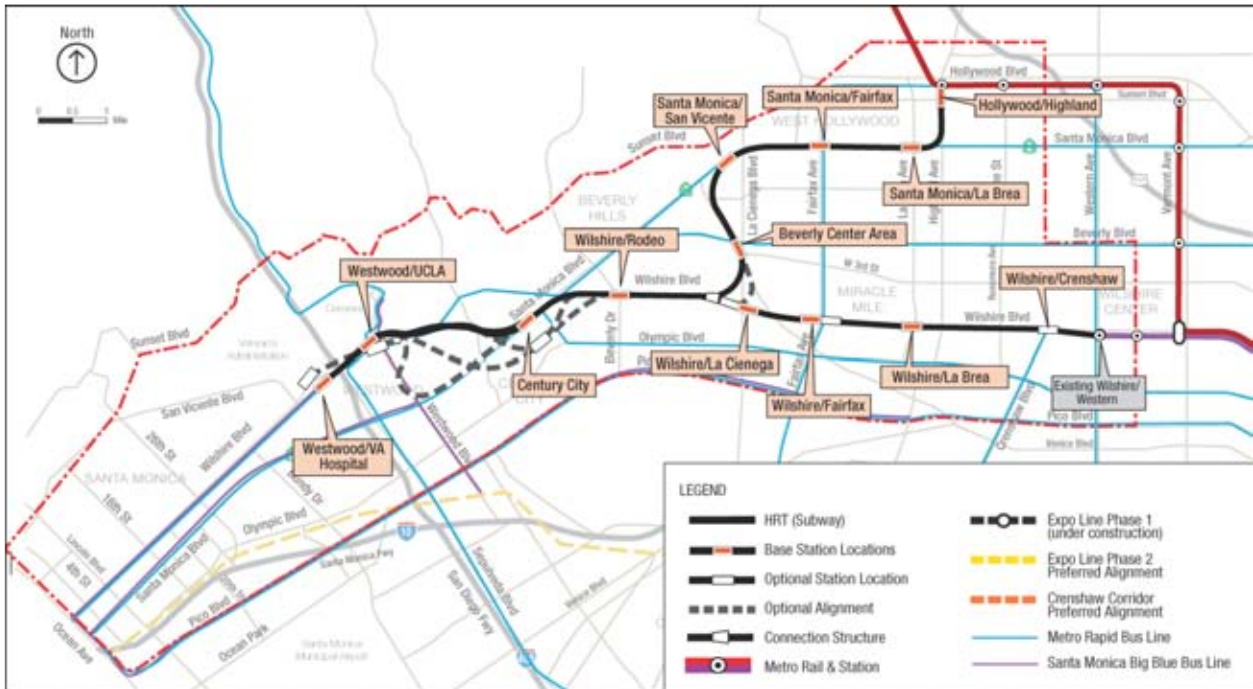


Figure 2-4. Alternative 4—Westwood/VA Hospital Extension plus West Hollywood Extension

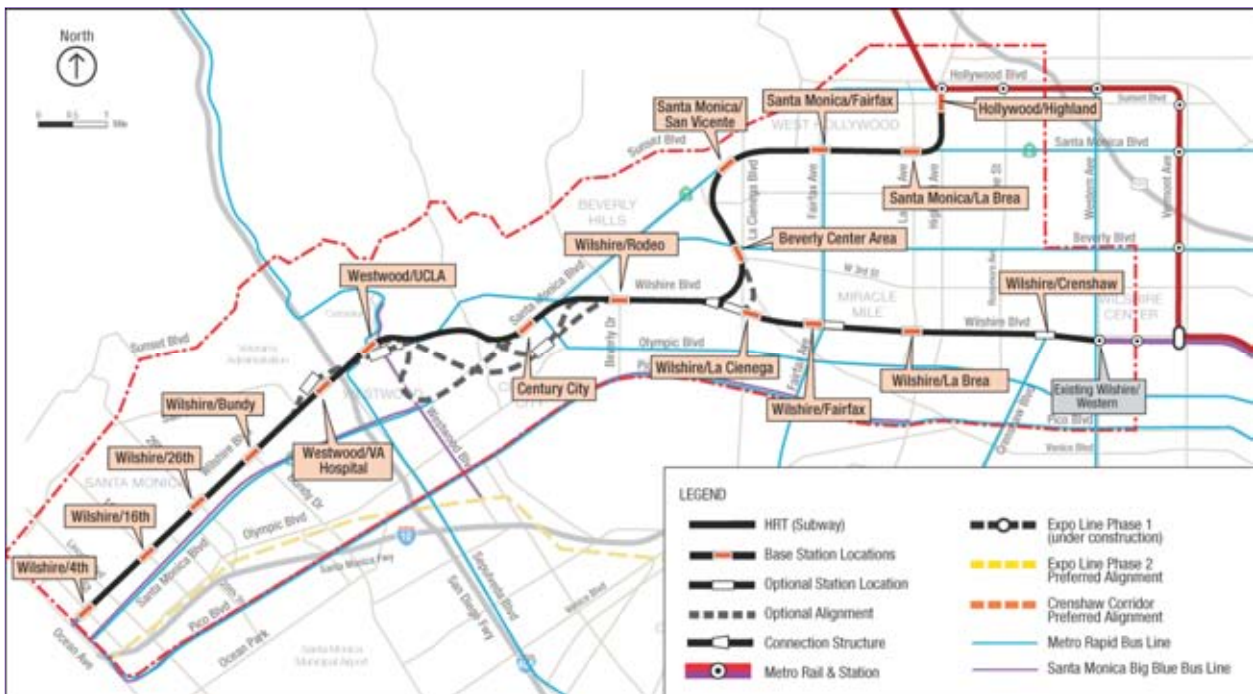


Figure 2-5. Alternative 5—Santa Monica Extension plus West Hollywood Extension



2.4 Stations and Segment Options

HRT stations consist of a station “box,” or area in which the basic components are located. The station box can be accessed from street-level entrances by stairs, escalators, and elevators that would bring patrons to a mezzanine level where the ticketing functions are located. The 450-foot platforms are one level below the mezzanine level and allow level boarding (i.e., the train car floor is at the same level as the platform). Stations consist of a center or side platform. Each station is equipped with under-platform exhaust shafts, over-track exhaust shafts, blast relief shafts, and fresh air intakes. In most stations, it is anticipated that only one portal would be constructed as part of the Project, but additional portals could be developed as a part of station area development (by others). Stations and station entrances would comply with the *Americans with Disabilities Act of 1990*, Title 24 of the California Code of Regulations, the California Building Code, and the Department of Transportation Subpart C of Section 49 CFR Part 37.

Platforms would be well-lighted and include seating, trash receptacles, artwork, signage, safety and security equipment (closed-circuit television, public announcement system, passenger assistance telephones), and a transit passenger information system. The fare collection area includes ticket vending machines, fare gates, and map cases.

Table 2-1 lists the stations and station options evaluated and the alternatives to which they are applicable. Figure 2-6 shows the proposed station and alignment options. These include:

- Option 1—Wilshire/Crenshaw Station Option
- Option 2—Fairfax Station Option
- Option 3—La Cienega Station Option
- Option 4—Century City Station and Alignment Options
- Option 5—Westwood/UCLA Station Option
- Option 6—Westwood/VA Hospital Station Option

Table 2-1. Alternatives and Stations Considered

Stations	Alternatives				
	1	2	3	4	5
	Westwood/ UCLA Extension	Westwood/ VA Hospital Extension	Santa Monica Extension	Westwood/ VA Hospital Extension Plus West Hollywood Extension	Santa Monica Extension Plus West Hollywood Extension
Base Stations					
Wilshire/Crenshaw	•	•	•	•	•
Wilshire/La Brea	•	•	•	•	•
Wilshire/Fairfax	•	•	•	•	•
Wilshire/La Cienega	•	•	•	•	•
Wilshire/Rodeo	•	•	•	•	•
Century City (Santa Monica Blvd)	•	•	•	•	•
Westwood/UCLA (Off-street)	•	•	•	•	•
Westwood/VA Hospital		•	•	•	•
Wilshire/Bundy			•		•
Wilshire/26th			•		•
Wilshire/16th			•		•
Wilshire/4th			•		•
Hollywood/Highland				•	•
Santa Monica/La Brea				•	•
Santa Monica/Fairfax				•	•
Santa Monica/San Vicente				•	•
Beverly Center Area				•	•
Station Options					
1—No Wilshire/Crenshaw	•	•	•	•	•
2—Wilshire/Fairfax East	•	•	•	•	•
3—Wilshire/La Cienega (Transfer Station)	•	•	•	•	•
4—Century City (Constellation Blvd)	•	•	•	•	•
5—Westwood/UCLA (On-street)	•	•	•	•	•
6—Westwood/VA Hospital North		•	•	•	•

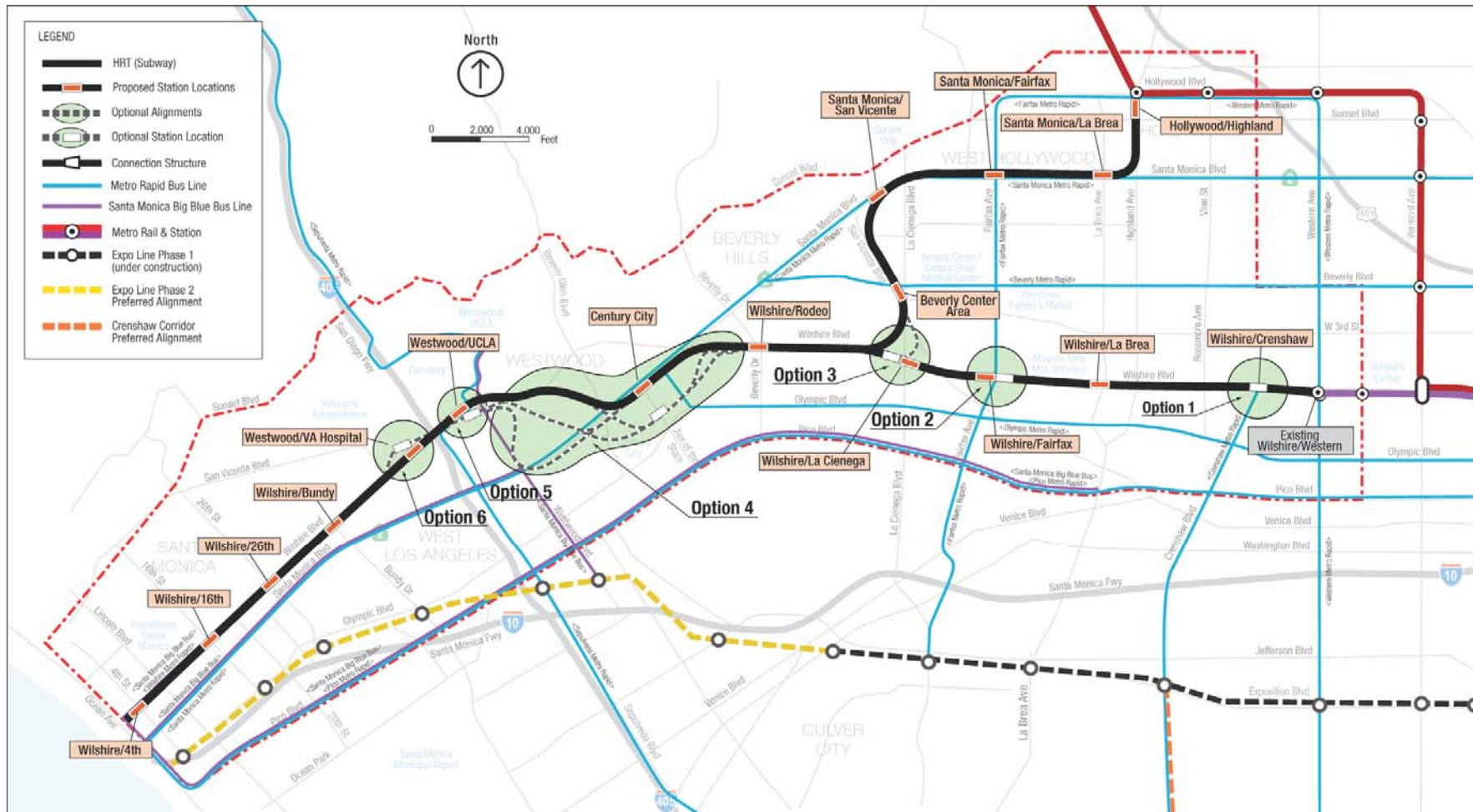


Figure 2-6. Station and Alignment Options

2.4.1 Option 1—Wilshire/Crenshaw Station Option

Base Station: Wilshire/Crenshaw Station—The base station straddles Crenshaw Boulevard, between Bronson Avenue and Lorraine Boulevard.

Station Option: Remove Wilshire/Crenshaw Station—This station option would delete the Wilshire/Crenshaw Station. Trains would run from the Wilshire/Western Station to the Wilshire/La Brea Station without stopping at Crenshaw. A vent shaft would be constructed at the intersection of Western Avenue and Wilshire Boulevard (Figure 2-7).

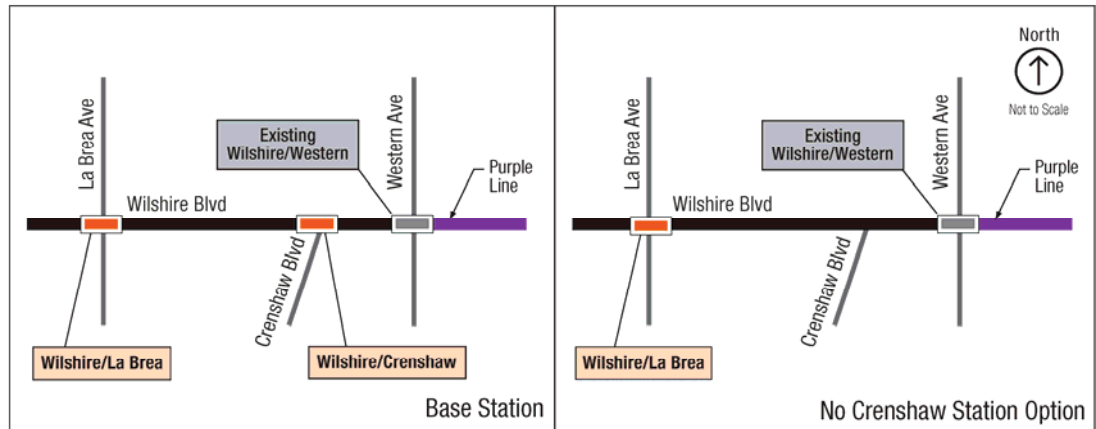


Figure 2-7. Option 1—No Wilshire/Crenshaw Station Option

2.4.2 Option 2—Wilshire/Fairfax Station East Option

Base Station: Wilshire/Fairfax Station—The base station is under the center of Wilshire Boulevard, immediately west of Fairfax Avenue.

Station Option: Wilshire/Fairfax Station East Station Option—This station option would locate the Wilshire/Fairfax Station farther east, with the station underneath the Wilshire/Fairfax intersection (Figure 2-8). The east end of the station box would be east of Orange Grove Avenue in front of LACMA, and the west end would be west of Fairfax Avenue.

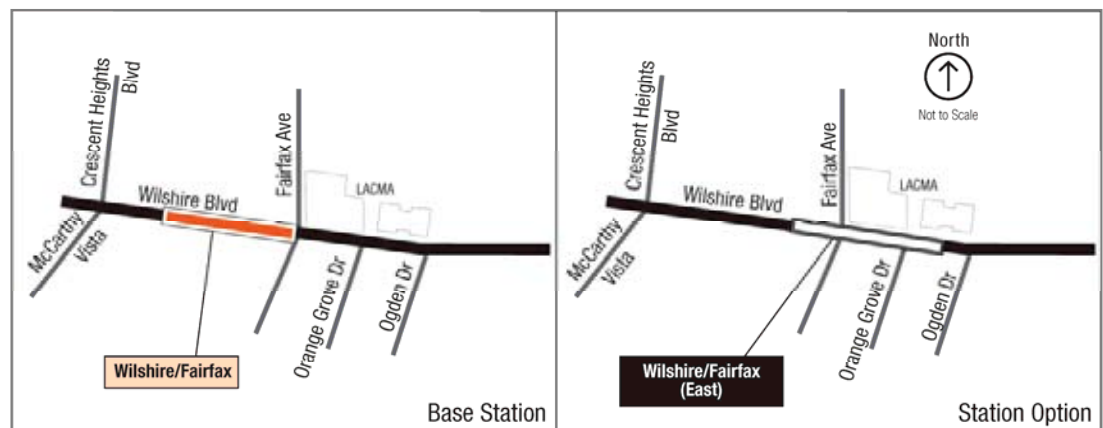


Figure 2-8. Option 2—Fairfax Station Option

2.4.3 Option 3—Wilshire/La Cienega Station Option

Base Station: Wilshire/La Cienega Station—The base station would be under the center of Wilshire Boulevard, immediately east of La Cienega Boulevard. A direct transfer between the Metro Purple Line and the potential future West Hollywood Line is not provided with this station. Instead, a connection structure is proposed west of Robertson Boulevard as a means to provide a future HRT connection to the West Hollywood Line.

Station Option: Wilshire/La Cienega Station West with Connection Structure—The station option would be located west of La Cienega Boulevard, with the station box extending from the Wilshire/Le Doux Road intersection to just west of the Wilshire/Carson Road intersection (Figure 2-9). It also contains an alignment option that would provide an alternate HRT connection to the future West Hollywood Extension. This alignment portion of Option 3 is only applicable to Alternatives 4 and 5.

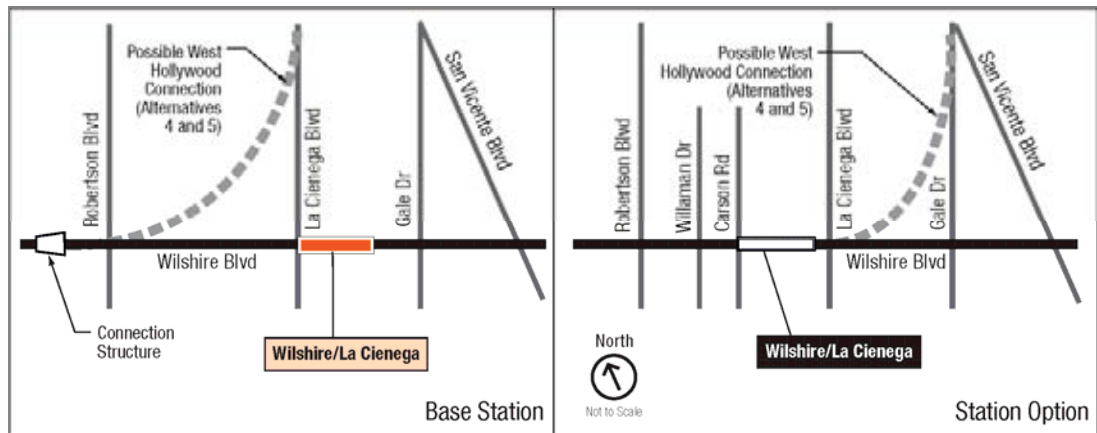


Figure 2-9. Option 3—La Cienega Station Option

2.4.4 Option 4—Century City Station and Segment Options

2.4.4.1 Century City Station and Beverly Hills to Century City Segment Options

Base Station: Century City (Santa Monica) Station—The base station would be under Santa Monica Boulevard, centered on Avenue of the Stars.

Station Option: Century City (Constellation) Station—With Option 4, the Century City Station has a location option on Constellation Boulevard (Figure 2-10), straddling Avenue of the Stars and extending westward to east of MGM Drive.

Segment Options: Two route options are proposed to connect the Wilshire/Rodeo Station to Century City (Constellation) Station: Constellation North and Constellation South. As shown in Figure 2-10, the base segment to the base Century City (Santa Monica) Station is shown in the solid black line and the segment options to Century City (Constellation) Station are shown in the dashed grey lines.

2.4.4.2 Century City to Westwood Segment Options

Three route options considered for connecting the Century City and Westwood stations include: East, Central, and West. As shown in Figure 2-10, each of these three segments would be accessed from both Century City Stations and both Westwood/UCLA Stations. The



base segment is shown in the solid black line and the options are shown in the dashed grey lines.

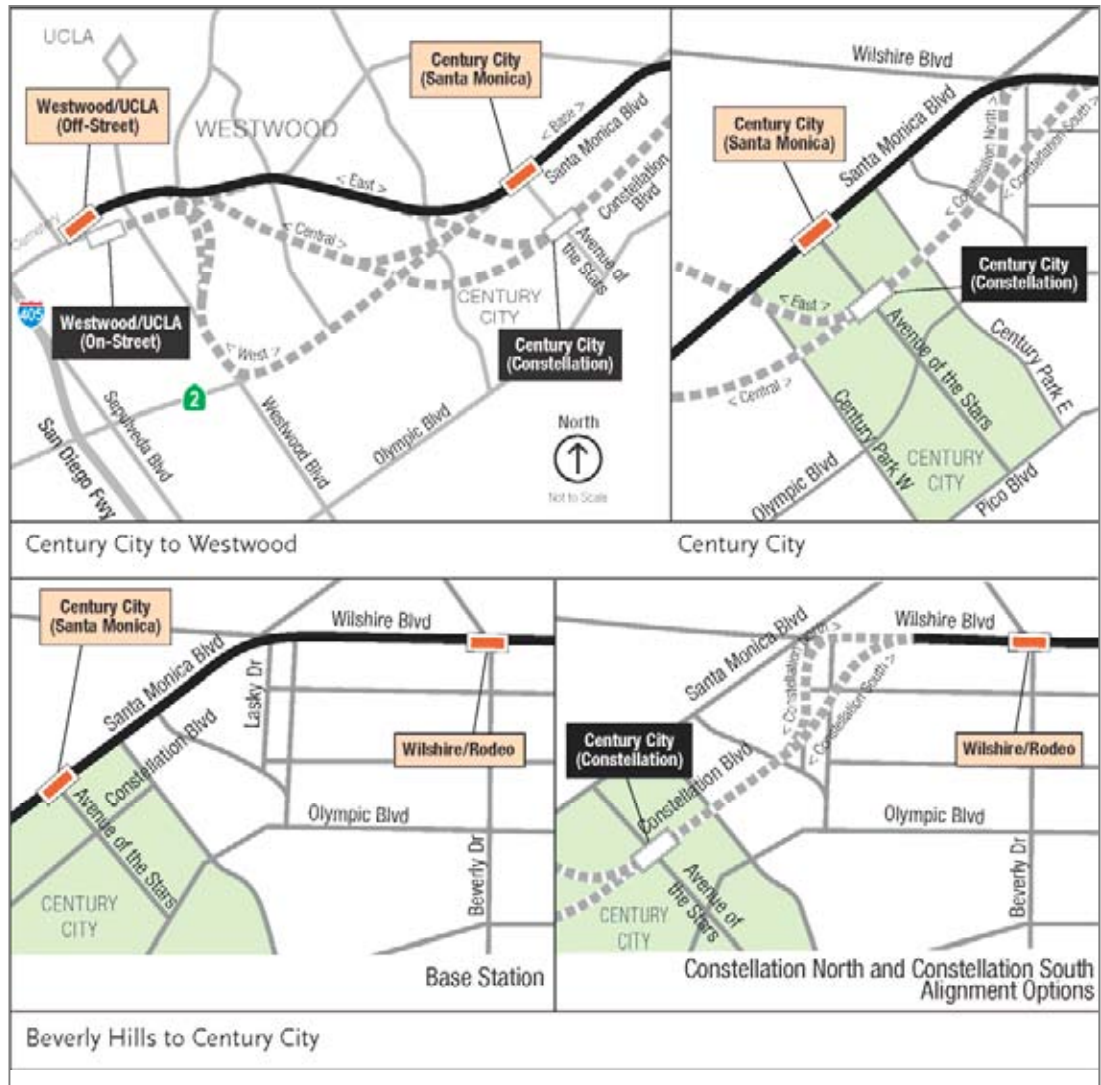


Figure 2-10. Century City Station Options

2.4.5 Option 5—Westwood/UCLA Station Options

Base Station: Westwood/UCLA Station Off-Street Station Option—The base station is located under the UCLA Lot 36 on the north side of Wilshire Boulevard between Gayley and Veteran Avenues.

Station Option: Westwood/UCLA On-Street Station Option—This station option would be located under the center of Wilshire Boulevard, immediately west of Westwood Boulevard (Figure 2-11).

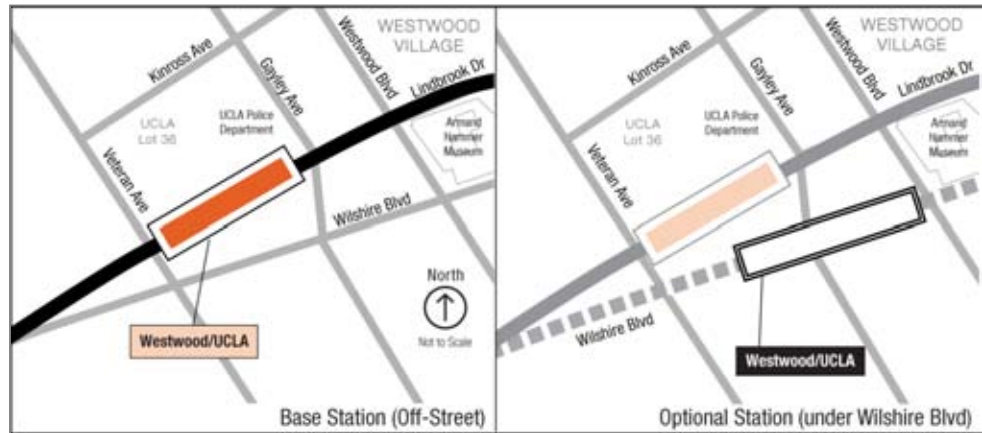


Figure 2-11. Option 5—Westwood/UCLA Station Options

2.4.6 Option 6—Westwood/VA Hospital Station Option

Base Station: Westwood/VA Hospital—The base station would be below the VA Hospital parking lot on the south side of Wilshire Boulevard in between the I-405 exit ramp and Bonsall Avenue.

Station Option: Westwood/VA Hospital North Station—This station option would locate the Westwood/VA Hospital Station on the north side of Wilshire Boulevard between Bonsall Avenue and Wadsworth Theater. (Shown in Figure 2-12)

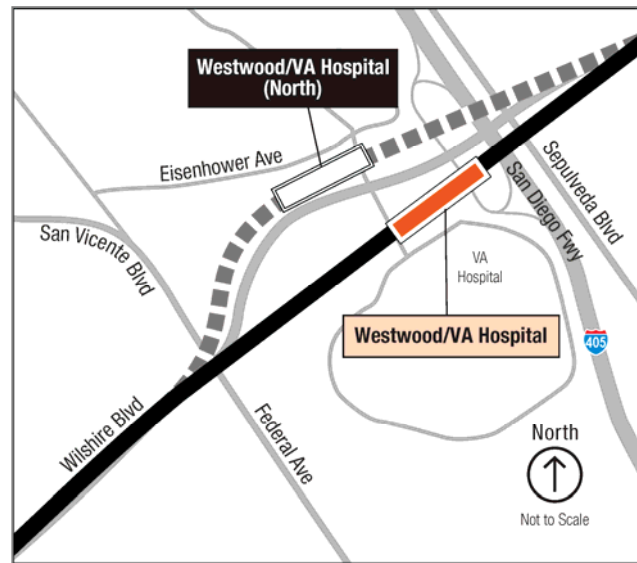


Figure 2-12. Option 6—Westwood/VA Hospital Station North

To access the Westwood/VA Hospital Station North, the alignment would extend westerly from the Westwood/UCLA Station under Veteran Avenue, the Federal Building property, the I-405 Freeway, and under the Veterans Administration property just east of Bonsall Avenue.

2.5 Base Stations

The remaining stations (those without options) are described below.

Wilshire/La Brea Station—This station would be located between La Brea and Cloverdale Avenues.

Wilshire/Rodeo Station—This station would be under the center of Wilshire Boulevard, beginning just west of South Canon Drive and extending to El Camino Drive.



Wilshire/Bundy Station—This station would be under Wilshire Boulevard, east of Bundy Drive, extending just east of Saltair Avenue.

Wilshire/26th Station—This station would be under Wilshire Boulevard, with the eastern end east of 26th Street and the western end west of 25th Street, midway between 25th Street and Chelsea Avenue.

Wilshire/16th Station—This station would be under Wilshire Boulevard with the eastern end just west of 16th Street and the western end west of 15th Street.

Wilshire/4th Station—This station would be under Wilshire Boulevard and 4th Street in Santa Monica.

Hollywood/Highland Station—This station would be located under Highland Avenue and would provide a transfer option to the existing Metro Red Line Hollywood/Highland Station under Hollywood Boulevard.

Santa Monica/La Brea Station—This station would be under Santa Monica Boulevard, just west of La Brea Avenue, and would extend westward to the center of the Santa Monica Boulevard/Formosa Avenue.

Santa Monica/Fairfax Station—This station is under Santa Monica Boulevard and would extend from just east of Fairfax Avenue to just east of Ogden Drive.

Santa Monica/San Vicente Station—This station would be under Santa Monica Boulevard and would extend from just west of Hancock Avenue on the west to just east of Westmount Drive on the east.

Beverly Center Area Station—This station would be under San Vicente Boulevard, extending from just south of Gracie Allen Drive to south of 3rd Street.

2.6 Other Components of the Build Alternatives

2.6.1 Traction Power Substations

Traction power substations (TPSS) are required to provide traction power for the HRT system. Substations would be located in the station box or in a box located with the crossover tracks and would be located in a room that is about 50 feet by 100 feet in a below grade structure.

2.6.2 Emergency Generators

Stations at which the emergency generators would be located are Wilshire/La Brea, Wilshire/La Cienega, Westwood/UCLA, Westwood/VA Hospital, Wilshire/26th, Highland/Hollywood, Santa Monica/La Brea, and Santa Monica/San Vicente. The emergency generators would require approximately 50 feet by 100 feet of property in an off-street location. All would require property acquisition, except for the one at the Wilshire/La Brea Station which uses Metro's property.

2.6.3 Mid-Tunnel Vent Shaft

Each alternative would require mid-tunnel ventilation shafts. The vent shafts are emergency ventilation shafts with dampers, fans, and sound attenuators generally placed at both ends of a station box to exhaust smoke. In addition, emergency vent shafts could be used for station



cooling and gas mitigation. The vent shafts are also required in tunnel segments with more than 6,000 feet between stations to meet fire/life safety requirements. There would be a connecting corridor between the two tunnels (one for each direction of train movement) to provide emergency egress and fire-fighting ingress. A vent shaft is approximately 150 square feet; with the opening of the shaft located in a sidewalk and covered with a grate about 200 square feet.

Table 2-2. Mid-Tunnel Vent Shaft Locations

Alternative/Option	Location
Alternatives 1 through 5, MOS 2	Part of the connection structure on Wilshire Boulevard, west of Robertson Boulevard
Alternatives 2 through 5	West of the Westwood/VA Hospital Station on Army Reserve property at Federal Avenue and Wilshire Boulevard
Option 4 via East route	At Wilshire Boulevard/Manning Avenue intersection
Option 4 to Westwood/UCLA Off-Street Station via Central route	On Santa Monica Boulevard just west of Beverly Glen Boulevard
Option 4 to Westwood/UCLA On-Street Station via Central route	At Santa Monica Boulevard/Beverly Glen Boulevard intersection
Options 4 via West route	At Santa Monica Boulevard/Glendon Avenue intersection
Options 4 from Constellation Station via Central route	On Santa Monica Boulevard between Thayer and Pandora Avenues
Option from Constellation Station via West route	On Santa Monica Boulevard just east of Glendon Avenue

2.6.4 Trackwork Options

Each Build Alternative requires special trackwork for operational efficiency and safety (Table 2-3):

Tail tracks—a track, or tracks, that extends beyond a terminal station (the last station on a line)

Pocket tracks—an additional track, or tracks, adjacent to the mainline tracks generally at terminal stations

Crossovers—a pair of turnouts that connect two parallel rail tracks, allowing a train on one track to cross over to the other

Double crossovers—when two sets of crossovers are installed with a diamond allowing trains to cross over to another track

Table 2-3. Special Trackwork Locations

Station	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
	Westwood/ UCLA Extension	Westwood/ VA Hospital Extension	Santa Monica Extension	Westwood/VA Hospital Extension Plus West Hollywood Extension	Santa Monica Extension Plus West Hollywood Extension
Special Trackwork Locations—Base Trackwork Alternatives					
Wilshire/Crenshaw	None	None	None	None	None
Wilshire/La Brea	Double Crossover	Double Crossover	Double Crossover	Double Crossover	Double Crossover
Wilshire/Fairfax	None <i>MOS 1 Only; Terminus Station with Tail tracks</i>	None <i>MOS 1 Only; Terminus Station with Tail tracks</i>	None <i>MOS 1 Only; Terminus Station with Tail tracks</i>	None <i>MOS 1 Only; Terminus Station with Tail tracks</i>	None <i>MOS 1 Only; Terminus Station with Tail tracks</i>
Wilshire/La Cienega	None	None	None	None	None
<i>Station Option 3 - Wilshire/La Cienega West</i>	Turnouts	Turnouts	Turnouts		
Wilshire/Robertson Connection Structure	Equilateral Turnouts—for future West Hollywood connection	Equilateral Turnouts—for future West Hollywood connection	Equilateral Turnouts—for future West Hollywood connection	Equilateral Turnouts	Equilateral Turnouts
Wilshire/Rodeo	None	None	None	None	None
Century City	Double Crossover <i>MOS 2 Only; Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS 2 Only; Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS 2 Only; Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS 2 Only; Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS 2 Only; Terminus Station with Double Crossover and tail tracks</i>
Westwood/UCLA	End Terminal with Double Crossover and tail tracks	Double Crossover	Double Crossover	Double Crossover	Double Crossover
Westwood/VA Hospital	N/A	End Terminal with Turnouts and tail tracks	Turnouts	End Terminal with Turnouts and tail tracks	Turnouts
Wilshire/Bundy	N/A	N/A	None	N/A	None
Wilshire/26th	N/A	N/A	None	N/A	None
Wilshire/16th	N/A	N/A	None	N/A	None
Wilshire/4th	N/A	N/A	End Terminal with Double Crossover. Pocket Track with Double Crossover, Equilateral Turnouts and tail tracks	N/A	End Terminal with Double Crossover, Pocket Track with Double Crossover, Equilateral Turnouts and tail tracks
Hollywood/ Highland	N/A	N/A	N/A	Double Crossover and tail tracks	Double Crossover and tail tracks
Santa Monica/La Brea	N/A	N/A	N/A	None	None
Santa Monica/Fairfax	N/A	N/A	N/A	None	None
Santa Monica/ San Vicente	N/A	N/A	N/A	Double Crossover	Double Crossover
Beverly Center	N/A	N/A	N/A	None	None
Additional Special Trackwork Location (Optional Trackwork)					
Wilshire/Fairfax	Double Crossover	Double Crossover	Double Crossover	Double Crossover	Double Crossover
Wilshire/La Cienega	Double Crossover	Double Crossover	Double Crossover	Double Crossover	Double Crossover
Wilshire/ Rodeo	Pocket Track	Pocket Track	Pocket Track	Pocket Track	Pocket Track
Wilshire/26th	N/A	N/A	Double Crossover	N/A	Double Crossover



2.6.5 Rail Operations Center

The existing Rail Operations Center (ROC), shown on Figure -2-13, located in Los Angeles near the intersection of Imperial Highway and the Metro Blue Line does not have sufficient room to accommodate the new transit corridors and line extensions in Metro’s expansion program. The Build Alternatives assume an expanded ROC at this location.

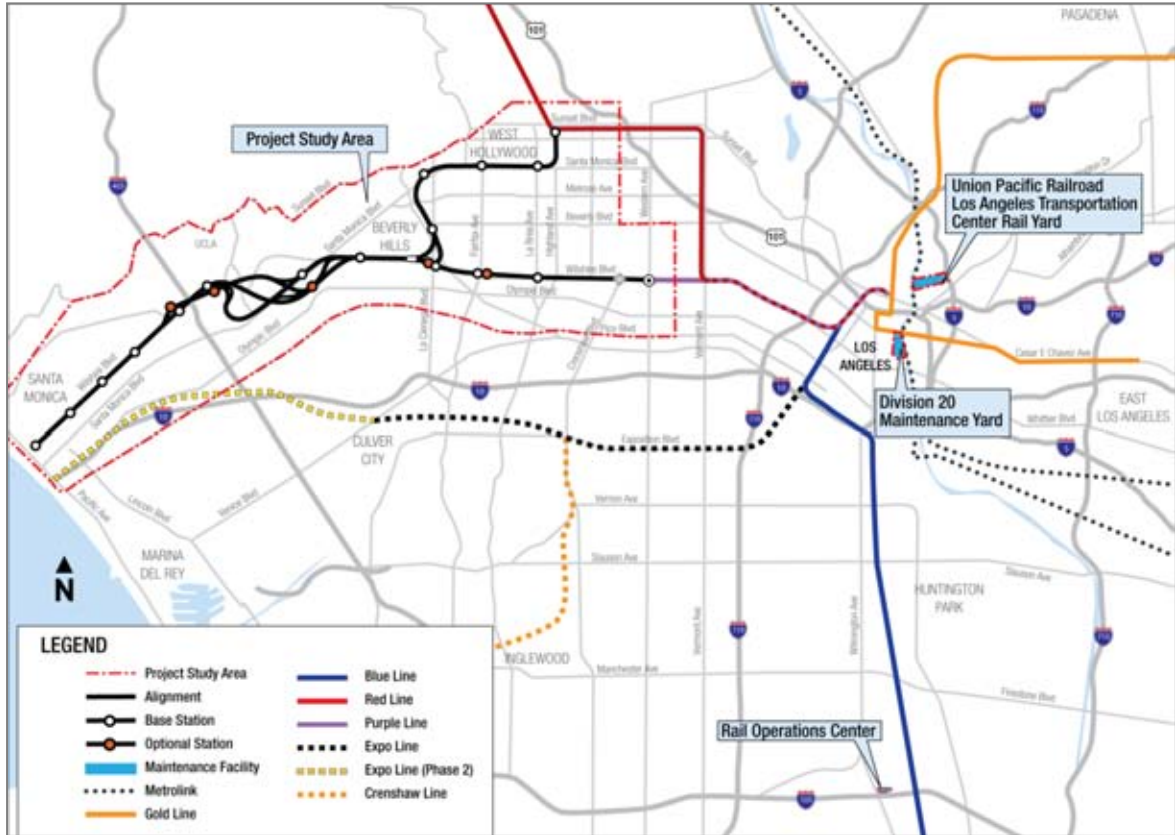


Figure -2-13: Location of the Rail Operations Center and Maintenance Yards

2.6.6 Maintenance Yards

If any of the Build Alternatives are chosen, additional storage capacity would be needed. Two options for providing this expanded capacity are as follows (Figure 2-14 and Figure 2-15):

The first option requires purchasing 3.9 acres of vacant private property abutting the southern boundary of the Division 20 Maintenance and Storage Facility, which is located between the 4th and 6th Street Bridges. Additional maintenance and storage tracks would accommodate up to 102 vehicles, sufficient for Alternatives 1 and 2.

The second option is a satellite facility at the Union Pacific (UP) Los Angeles Transportation Center Rail Yard. This site would be sufficient to accommodate the vehicle fleet for all five Build Alternatives. An additional 1.3 miles of yard lead tracks from the Division 20 Maintenance and Storage Facility and a new bridge over the Los Angeles River would be constructed to reach this yard.



Figure 2-14. Maintenance Yard Options



Figure 2-15. UP Railroad Rail Bridge

2.7 Minimum Operable Segments

Due to funding constraints, it may be necessary to construct the Westside Subway Extension in shorter segments. A Minimum Operable Segment (MOS) is a phasing option that could be applied to any of the Build Alternatives.

2.7.1 MOS 1—Fairfax Extension

MOS 1 follows the same alignment as Alternative 1, but terminates at the Wilshire/Fairfax Station rather than extending to a Westwood/UCLA Station. A double crossover for MOS 1 is located on the west end of the Wilshire/La Brea Station box, west of Cloverdale Avenue. The alignment is 3.10 miles in length.

2.7.2 MOS 2—Century City Extension

MOS 2 follows the same alignment as Alternative 1, but terminates at a Century City Station rather than extending to a Westwood/UCLA Station. The alignment is 6.61 miles from the Wilshire/Western Station.



3.0 REGULATORY FRAMEWORK

This section describes the regulatory framework for protection of ecosystems and biological resources, the standards of significance that are applied to impact evaluations, the study area, and the methodology used in evaluating potential impacts related to each alternative. Biological resources within 0.25 mile of either side of the proposed alignments, stations, and maintenance and operations facility sites are protected by several Federal, State, and local laws and policies, as described in this section.

3.1 Federal

3.1.1 Endangered Species Act

The Endangered Species Act (ESA) and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend (USC 1995). Section 7 of the ESA requires Federal agencies to aid in the conservation of listed species, and to ensure that the activities of Federal agencies will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. At the Federal level, the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service (NOAA/FS) are responsible for administration of the ESA.

3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act decrees that all migratory birds and their parts (including eggs, nests and feathers) are fully protected (USC 1918). Under the Migratory Bird Treaty Act, taking, killing, or possessing migratory birds is unlawful. Projects that are likely to result in the taking of birds protected under the Migratory Bird Treaty Act will require the issuance of take permits from the USFWS. Activities that would require such a permit would include, but not be limited to, the destruction of migratory bird nesting habitat during the nesting season when eggs or young are likely to be present. In accordance with the Migratory Bird Treaty Act, surveys are required to determine if nests will be disturbed and, if so, a buffer area with a specified radius around the nest would be established so that no disturbance or intrusion would be allowed until the young had fledged and left the nest. If not otherwise specified in the permit, the size of the buffer area would vary with species and local circumstances (e.g. presence of busy roads), and would be based on the professional judgment of the monitoring biologist.

3.2 State

3.2.1 California Coastal Act

The California Coastal Act of 1976 established policies for the protection of the distinct and valuable natural resources and sensitive ecosystems within the coastal zone. The California Coastal Act established the California Coastal Commission as a permanent entity which has the responsibility to utilize a balanced approach between conservation, economic needs, and private property rights with regard to development in the coastal zone. Development activities are broadly defined by the Coastal Act to include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, and generally require a coastal permit from either the Coastal Commission or the local government. In the City of Santa Monica, the coastal zone extends inland to 4th



Street between San Vicente Boulevard and Pico Boulevard. Thus, the Coastal Act would apply to the small portion of the project area that lies within the coastal zone.

3.2.2 California Endangered Species Act

The California Department of Fish and Game (CDFG) is responsible for the administration of the California Endangered Species Act. Unlike the Federal Endangered Species Act, there are no State agency consultation procedures under the California Endangered Species Act. For projects that affect both a State and Federal listed species, compliance with the Federal Endangered Species Act will satisfy the California Endangered Species Act if the CDFG determines that the Federal incidental take authorization is "consistent" with the California Endangered Species Act. Projects that result in a take of a State-only listed species require a take permit under the California Endangered Species Act. The Federal and/or State acts also lend protection to species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, or other essential habitat.

3.2.3 California Fish and Game Code Sections 3500 - 3705, Migratory Bird Protection

Sections 3500 through 3705 of the California Fish and Game Code regulate the taking of migratory birds and their nests. These codes prohibit the taking of nesting birds, their nests, eggs, or any portion thereof during the nesting season. Typically, the breeding/nesting season is from March 1st through August 30th. Depending on each year's seasonal factors, the breeding season can start earlier or end later.

3.3 Local

The Westside Extension Transit Corridor Project area is east-west oriented and includes portions of five jurisdictions: the Cities of Los Angeles, West Hollywood, Beverly Hills, Santa Monica, as well as portions of unincorporated County of Los Angeles. The Project corridor generally includes the area bounded by Sunset/Hollywood/San Vicente Boulevards on the north, Western Avenue on the east, Pico Boulevard to the south, and Ocean Avenue on the west.

3.3.1 County of Los Angeles

3.3.1.1 Los Angeles County General Plan

The Los Angeles County General Plan Conservation and Open Space Element identifies Significant Ecological Areas containing biological resources and sets forth the goal of conserving these areas. While development within a Significant Ecological Areas is not prohibited, the Plan does require development to be limited and controlled in order to avoid impacting valuable biological resources (County of Los Angeles 1993).

3.3.2 City of Los Angeles

3.3.2.1 City of Los Angeles General Plan

The City of Los Angeles General Plan Conservation Element sets forth several objectives and policies for the protection of biological resources, including endangered species and habitats (City of Los Angeles 2001).



For endangered species, the General Plan states the following objective:

Protect and promote the restoration, to the greatest extent practical, of sensitive plant and animal species and their habitats.

Policies to achieve this objective include the following:

Continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities

Continue to administer city-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent

Continue to support legislation that encourages and facilitates protection of endangered, threatened, sensitive and rare species and their habitats and habitat corridors

For habitats, the General Plan objective is to:

Preserve, protect, restore and enhance natural plant and wildlife diversity, habitats, corridors and linkages so as to enable the healthy propagation and survival of native species, especially those species that are endangered, sensitive, threatened or species of special concern.

The established policies regarding protection of habitats are as follows:

Continue to identify significant habitat areas, corridors and buffers and to take measures to protect, enhance and/or restore them

Continue to protect, restore and/or enhance habitat areas, linkages and corridor segments, to the greatest extent practical, within city owned or managed sites

Continue to work cooperatively with other agencies and entities in protecting local habitats and endangered, threatened, sensitive and rare species

Continue to support legislation that encourages and facilitates protection of local native plant and animal habitats

3.3.2.2 City of Los Angeles Native Tree Protection Ordinance

In an effort to slow the decline of native tree habitat, the City of Los Angeles passed a Native Tree Protection Ordinance (Ordinance No. 177,404), which became law on April 23, 2006 (City of Los Angeles 2006). The Native Tree Protection Ordinance:

Protects all native oak tree species (*Quercus* spp.), excluding the Scrub oak (*Quercus berberidifolia*), Western Sycamore (*Platanus racemosa*), California Bay (*Umbellularia californica*), and California Black Walnut (*Juglans californica*)

Applies to protected trees four inches or greater in diameter, at 4.5 feet above ground (multiple trunk trees are calculated by cumulative diameter)

Applies to protected trees on private lots

Requires that a protected tree report be submitted by a registered consulting arborist, landscape architect, or pest control advisor who is also a certified arborist



Protected tree removal requires a removal permit by the Board of Public Works, and any act that may cause the failure or death of a protected tree requires inspection by the City’s Urban Forestry Division. The tree removal permit may require replanting of native trees within the project area or at another location within the City of Los Angeles to mitigate for the removal of these trees. Replacement of protected trees could be required at a 2:1 ratio and other trees at a 1:1 ratio. Although the ordinance does not require a permit for the pruning of protected trees, the City of Los Angeles recommends consultation with a certified arborist to ensure that the pruning of protected trees is performed carefully.

3.3.3 City of West Hollywood

3.3.3.1 City of West Hollywood Municipal Code

The City of West Hollywood Municipal Code (City of West Hollywood 2000) contains the following ordinance protecting trees on public property:

It is unlawful for any person, firm or corporation (other than the city, or persons acting under the city’s authority) to plant, trim, prune, cut, break, deface, destroy, burn or remove any shade or ornamental tree, hedge, plant, shrub, or flower growing, or planted to grow upon any public highway, public ground or public property within the City of West Hollywood without a permit. (Ord. 00-585 § 2, 2000)

The permit may require tree replacement with another tree, of a type and quality to be determined by the Director of Public Works.

3.3.4 City of Beverly Hills

3.3.4.1 City of Beverly Hills General Plan

The City of Beverly Hills is in the process of amending all elements of their current adopted General Plan. The current Open Space Element was originally adopted in 1977, and the City is in the process of amending this existing document. Final draft goals and policies have been approved for Natural Resources (City of Beverly Hills 2009a). The following goals apply to the protection of biological and ecological resources within the Study Area:

Goal NR 1: Natural and Open Space Protection. Protection and enhancement of open space resources, remaining natural areas, and significant wildlife vegetation in the City as integral parts of a sustainable environment within a larger regional ecosystem.

Goal NR 2: Urban Forest. Management of the City’s urban forest as an environmental, economic, and aesthetic resource to maintain the unique character of the City and the quality of life of its residents.

NR 2.1: Trees of Significance. Require the retention of trees of significance (such as heritage trees) by promoting stewardship of such trees and ensuring that the design of development and reuse projects provide for the retention of these trees wherever possible. Where tree removal cannot be avoided, require replacements with an appropriate species.

While the City of Beverly Hills General Plan does not define or map trees of significance, the City of Beverly Hills Municipal Code requires a tree removal permit for removal or damage to a protected tree, as described below. Protected trees are defined as native trees (from the City’s official list of 16 local native tree species) with a circumference of 24 inches or more located in a street side yard or front yard, and heritage trees which are trees with a



circumference of 48 inches or more located in a street side yard or front yard (Article 29.10-3-2900).

3.3.4.2 City of Beverly Hills Municipal Code

Chapter 3, Article 29, Regulation of Trees on Private Property, of the city’s municipal code (Section 10-3-2901) implements the General Plan goals and establishes the need for a tree removal permit in the case that any protected tree would be damaged or removed (City of Beverly Hills 2009b). A permit is applicable to native or heritage trees located in private yards and in urban groves on single-family residential property. Additionally, native trees that are removed must be replaced on a 1:1 basis by another native tree of any species and of the same size pursuant to Ordinance 93-O-2176. Section 10-3-2905 requires the protection of native trees during construction through the following measures:

Installation of a fence which encloses the extended drip line area of the protected tree

Prohibition of penetration or abrasion of the protected tree

Any other measures deemed necessary by the director of building and safety

3.3.5 City of Santa Monica

3.3.5.1 City of Santa Monica Municipal Code

Similar to the above-mentioned ordinances, Article 7, Chapter 7.40 (Tree Code) of the Santa Monica Municipal Code protects trees from damage or removal during construction projects (City of Santa Monica 1982). Additionally, any removal or damage must be permitted by the City’s Director of Recreation and Parks or the Director of General Services (Section 7.40.110). Although unspecified in the code, the permit may require the replacement of trees, as determined by the Director of Recreation and Parks.

3.4 Significance Criteria

The National Environmental Policy Act (NEPA) (42 USC 4321-4347) requires an evaluation of potential impacts to Federally-listed endangered species, the ecological importance and distribution of affected species, and the intensity of potential impacts from the alternatives, including the No Build Alternative. The NEPA process is considered the framework for compliance with Federal laws for the protection of endangered species and biological resources, such as the Endangered Species Act and Executive Order 11990, Protection of Wetlands.

The California Environmental Quality Act (CEQA) (PRC 21000-21177) thresholds with regard to biological resources are identified in Section C of the *Los Angeles CEQA Thresholds Guide*. The *Los Angeles CEQA Thresholds Guide* (page C-6) states that a project would normally have a significant impact on biological resources if it could:

Result in the loss of individuals, or the reduction of existing habitat, of a State- or Federally-listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern, or Federally-listed critical habitat

Result in the loss of individuals, the reduction of existing habitat of a locally designated species, or a reduction in a locally designated natural habitat or plant community

Interfere with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species



Result in the alteration of an existing wetland habitat

Interfere with habitat such that normal species behaviors are disturbed (e.g., from the introduction of noise, light) to a degree that may diminish the chances for long-term survival of a sensitive species

In addition, Appendix G of the *CEQA Guidelines* (as revised) indicates that a project would have a significant effect on the environment if it would:

Fundamentally conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan

Because no wildlife corridors, wetlands, or adopted habitat conservation plans (HCPs) exist within the proposed alignments, the thresholds described in the third, fourth, and sixth bullets above are not applicable. However, because protected and sensitive species (e.g., migratory birds), have the potential to occur within 0.25 mile of the proposed alignments, and because locally protected native trees are known to exist, potential impacts to these biological resources were evaluated for each of the alternatives, MOSs, and maintenance and operations facility sites.



4.0 AFFECTED ENVIRONMENT

For the evaluation of potential impacts to ecosystems/biological resources, the Study Area was first defined. For the No Build Alternative, the Study Area includes the overall Project area. For the Build Alternatives, the Study Area includes the area within 0.25 mile of either side of the proposed alignments, stations, and maintenance and operations facility sites for each of the alternatives. This is a conservative approach for evaluating potential impacts to biological resources such as disturbance of nesting birds. Since the proposed alignments differ among alternatives, the Study Area also varies.

Information in this section was obtained from the following sources:

A search of the California Natural Diversity Database (CNDDDB) was conducted to identify sensitive plants and animals with the potential to occur in the project area.

A field review of parks and other public open spaces within 0.25 mile of either side of the proposed alignments, stations, and maintenance and operations facility sites was conducted to identify the presence of ecosystems and biological resources, including wetlands, oak woodlands, and coastal sage scrub habitat. The field review consisted of observation and photographic documentation of parks and open space areas as well as mature trees within the project area. A survey was not conducted (i.e., numbers of birds or other wildlife were not counted and the field review was not conducted during nighttime hours when nocturnal wildlife would be active); rather, habitat was generally assessed as to its quality and suitability for wildlife species, including threatened and endangered species. Tree species and wildlife, including birds, observed during the field review were noted.

In general, the proposed alignments, stations, and storage and maintenance facilities are located within a highly developed and urbanized area and biological resources are limited. The following sections describe, in greater detail, the existing conditions within the areas that could be affected by each alternative.

4.1 No Build Alternative

The Study Area for the No Build Alternative is represented by the entire Project area. The land cover in the Project area is predominantly urban development and landscaping. Vegetation within this urban landscape includes ornamental trees, shrubs, groundcovers, herbaceous cultivars, and grass lawns. This vegetation is irrigated and subject to regular maintenance activities that may include mowing and the use of fertilizers, pesticides, and/or herbicides. These landscape plantings occur along surface streets, sidewalks, and medians as well as at commercial businesses and residences.

Among these landscaped plantings, mature trees exist in the project area along the proposed alignments and within roadway medians. Due to their mobility, some migratory bird species may utilize these mature trees during migration. While unlikely due to the high level of disturbance in this urban setting, there is potential for migratory birds, including raptors, to utilize existing mature trees within the Study Area for breeding. For instance, many resident and migratory bird species in Los Angeles are known to nest in palm trees, including hooded oriole, barn owl, and Northern flicker. Red-tailed hawk, great-horned owl and other raptors may nest in large pines. Smaller songbird species, including lesser



goldfinch, house finch, Western scrub jay, bushtit, Northern mockingbird, and American robin, may nest in mature trees and shrubs in urban environments.

The CNDDDB search, discussed below, identified Southern coast live oak riparian forest, California walnut woodland, Southern sycamore alder riparian and walnut forest as potentially occurring in the Study Area. However, no sensitive vegetation communities were observed in the project area.

There are no wetland areas in the vicinity of proposed stations, station construction footprints, and maintenance and operations facility sites. However, the Project would require crossing the Los Angeles River, which is considered a water of the United States subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). This impact is also analyzed in the Water Resources Technical Report. The river channel in the vicinity of the proposed maintenance facility is a concrete lined channel with no natural riparian vegetation.

Based on recent studies of fish species conducted by the Friends of the Los Angeles River, there are no native fish species inhabiting the concrete-lined channel of the river in the vicinity of the proposed maintenance and storage facilities (FOLAR 2008). Therefore, the Los Angeles River is not considered to provide suitable habitat to support sensitive aquatic species, although migratory birds may inhabit nearby vegetation.

The Study Area is composed of and surrounded by residential, commercial, and industrial uses and heavily-travelled arterials. As such, the project area does not link significant wildlife habitat and does not contain wildlife corridors that would support movement of wildlife species other than birds. The only possible exception to this would be the Los Angeles River, which can be considered to be a wildlife corridor along the natural, unchannelized areas through which aquatic species can move. However, as the channelized reach of the Los Angeles River within the Study Area presents a barrier to movement of fish and other aquatic species, it would not be considered a wildlife corridor. There are no Habitat Conservation Plans (HCPs) for this area, and no Significant Ecological Areas located in the Study Area.

Table 4-1 presents special-status wildlife and plant species and ecosystems (plant communities) listed on the CNDDDB as having the potential to occur within three 7.5-minute U.S. Geological Survey (USGS) topographic quadrangles associated with the alternatives (the Los Angeles, Hollywood, and Beverly Hills quadrangles). A 7.5-minute quadrangle is an area that spans 7.5 minutes of latitude and 7.5 minutes of longitude, which ranges from 64 square miles at latitude 30 degrees north to 49 square miles at latitude 49 degrees north. The three project-area 7.5-minute quadrangles encompass approximately 60 square miles each, while the project area includes approximately 10 square miles. Thus, the 7.5-minute quadrangles cover a much larger area than the Study Area and not all species listed for the three quadrangles would be expected to occur within the project area, even if suitable habitat was present.

Based on the literature review, 41 Federally- and/or State-listed threatened, endangered, and/or candidate plant or wildlife species were reported by the CNDDDB as occurring within the 7.5 minute USGS topographic quadrangles comprising the Study Area (Table 4-1). However, none of these special status species were observed in the Study Area, including in

the vicinity of proposed station areas, within station construction footprints, or in the vicinity of the maintenance and operations facility sites. In addition, no suitable habitat for any of these special status species was observed in the Study Area. Due to their mobility, some sensitive bird species may utilize existing mature trees during migration, but would not be supported as residents within this urbanized setting.

Table 4-1. Ecosystems and Special Status Wildlife and Plant Species Potentially in the Project Area

Common Name	Scientific Name	Status
Ecosystems (Vegetation Communities)		
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	None
California Walnut Woodland	California Walnut Woodland	None
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None
Walnut Forest	Walnut Forest	None
Birds		
Burrowing Owl	<i>Athene cunicularia</i>	SC
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	FE, CE
Coastal California Gnatcatcher	<i>Polioptila californica californica</i>	FT, SC
Mammals		
Pallid Bat	<i>Antrozous pallidus</i>	SC ¹
Western Mastiff Bat	<i>Eumops perotis californicus</i>	SC ¹
Silver-haired bat	<i>Lasionycteris noctivagans</i>	None
Hoary Bat	<i>Lasiurus cinereus</i>	None
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	SC
South Coast Marsh Vole	<i>Microtus californicus stephensi</i>	SC
American Badger	<i>Taxidea taxus</i>	SC
Reptiles		
Coast (San Diego) Horned Lizard	<i>Phrynosoma coronatum (blainvillii population)</i>	SC
Coastal whiptail	<i>Aspidoscelis tigris stejnegeri</i>	None
Invertebrates		
Busck's Gallmoth	<i>Carolella busckana</i>	None
Sandy Beach Tiger Beetle	<i>Cicindela hirticollis gravida</i>	None
Globose Dune Beetle	<i>Coelus globosus</i>	None
Monarch Butterfly	<i>Danaus plexippus</i>	None
Gertsch's socialchemmis spider	<i>Socalchemmis gertschi</i>	None
Plants		
Marsh Sandwort	<i>Arenaria paludicola</i>	FE, CE, PEC
Braunton's Milk-vetch	<i>Astragalus brauntonii</i>	FE, PEC
Ventura Marsh Milk-vetch	<i>Astragalus pycnostachyus var. lanosissimus</i>	FE, CE, PEC
Coastal Dunes Milk-vetch	<i>Astragalus tenervar. titi</i>	FE, CE, PEC
Parish's Brittle-scale	<i>Atriplex parishii</i>	PEC
Davidson's Saltscale	<i>Atriplex serenana var. davidsonii</i>	FEC



Common Name	Scientific Name	Status
Round-leaved Filaree	<i>California macrophylla</i>	PEC
Plummer's Mariposa-lily	<i>Calochortus plummerae</i>	FEC
Santa Barbara Morning-glory	<i>Calystegia sepium</i> ssp. <i>binghamiae</i>	PEC
Southern Tarplant	<i>Centromadia parryi</i> ssp. <i>australis</i>	SEC
Salt Marsh Bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	FE, CE, FEC
Beach Spectaclepod	<i>Dithyrea maritima</i>	CT, SEC
Many-stemmed Dudleya	<i>Dudleya multicaulis</i>	FEC
Los Angeles Sunflower	<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	PEC
Mesa Horkelia	<i>Horkelia cuneata</i> ssp. <i>puberula</i>	SEC
Orcutt's Linanthus	<i>Linanthus orcuttii</i>	NVEC
Mud Nama	<i>Nama stenocarpum</i>	RTECCE
Gambel's Water Cress	<i>Nasturtium gambelii</i>	FE, CT, SEC
Prostrate Vernal Pool Navarretia	<i>Navarretia prostrata</i>	SEC
White Rabbit-tobacco	<i>Pseudognaphalium leucocephalum</i>	RTECCE
Parish's Gooseberry	<i>Ribes divaricatum</i> var. <i>parishii</i>	PEC
Salt Spring Checkerbloom	<i>Sidalcea neomexicana</i>	RTECCE
San Bernardino Aster	<i>Symphyotrichum defoliatum</i>	FEC
Greata's Aster	<i>Symphyotrichum greatae</i>	NVEC

Source: California Natural Diversity Database (CNDDDB), July 31, 2009

CE = California Endangered (CDFG)

CT = California Threatened (CDFG)

FE = Federally Endangered (USFWS)

FEC = Fairly Endangered in California (CNPS)

FT = Federally Threatened (USFWS)

NVEC = Not Very Endangered in California (CNPS)

PEC = Presumed Extinct in California (California Native Plant Society, CNPS)

RTECCE = Rare, Threatened or Endangered in California but More Common Elsewhere (CNPS)

SC = Species of Concern in California (CDFG)

SEC = Seriously Endangered in California (CNPS)

4.2 Transportation System Management (TSM) Alternative

Existing conditions for the area potential affected by the TSM Alternative are the same as that described under the No Build Alternative.

4.3 Alternative 1—Westwood/UCLA Extension

The Alternative 1 alignment runs along Wilshire Boulevard from the existing Wilshire/Western Station to the proposed Westwood/University of California, Los Angeles (UCLA) Station. Biological resources are primarily trees and shrubs that exist along the proposed alignment and in the footprint of the proposed stations (Figure 4-1). This vegetation provides limited habitat to wildlife, primarily migratory birds. While most of this vegetation consists of non-native species, four native California sycamore trees were observed at the proposed Wilshire/La Brea Station on Sycamore Avenue near the northwest intersection with Wilshire Boulevard. These sycamore trees are the only native plant species



that were observed along the Wilshire Boulevard alignment. Other trees along the alignment include palm, pine, jacaranda, ficus, magnolia and eucalyptus trees.



Figure 4-1: Non-Native Trees and Shrubs along Wilshire Boulevard at Crenshaw Boulevard

There are two locations along Wilshire Boulevard where biological resources exist in the form of open space supporting mature trees and other vegetation. The first of these is the Rancho La Brea tar pits. The Rancho La Brea tar pits are located along Wilshire Boulevard between La Brea and Fairfax Avenues, approximately 0.5 miles from the intersection of La Brea Avenue and Wilshire Boulevard, the proposed site of the Wilshire/La Brea Station under Alternative 1. The tar pits are large pools of asphalt tar that contain the largest and most diverse assemblage of fossils of extinct plants and animals from the last Ice Age in the world (Figure 4-2). Surrounding the large pools of tar is Hancock Park, a 23-acre park associated with the George C. Page Museum, the Natural History Museum of Los Angeles County, and the Los Angeles County Museum of Art. This open space supports large grass lawns and shrubs and mature trees, including non-native palms, pines, ficus, and ornamental trees such as jacaranda. While the vegetation within Hancock Park is predominantly non-native, some native trees, including sycamore trees, may be present. Further, the park provides limited habitat for wildlife adapted to living in an urban environment (Figure 4-3).



Figure 4-2. Rancho La Brea Tar Pits



Figure 4-3. Hancock Park Surrounding Rancho La Brea Tar Pits

The second open space area supporting biological resources is the Los Angeles Country Club, which is located adjacent to the proposed Century City Station at Santa Monica Boulevard and Avenue of the Stars. The Los Angeles Country Club provides a large open space area consisting of a manicured golf course with mature vegetation around the periphery that supports bird and wildlife habitat and is the site of an annual Christmas Bird Count. Vegetation within the Los Angeles Country Club is primarily non-native, including eucalyptus, palm, and pine trees, with some native trees and shrubs such as sycamore and toyon.

4.4 **Alternative 2—Westwood/VA Hospital Extension**

In addition to the area described under Alternative 1 above, Alternative 2 would include the area along Wilshire Boulevard from the proposed Westwood/UCLA Station to the proposed Westwood/U.S. Department of Veterans Affairs (VA) Hospital Station, located just south of Wilshire Boulevard between Bonsall Avenue and Interstate 405. The proposed station would be located under an existing parking lot for the VA Hospital. As depicted on Figure 4-4, the parking lot is bordered by large trees including non-native palms, eucalyptus, and ficus trees and urban landscaping consisting of grass lawns.



Figure 4-4. VA Hospital Parking Lot

Surrounding the VA Hospital buildings and parking lots is Westwood Park, a large open space area consisting of grass lawns and landscaped areas of trees and shrubs (Figure 4-5). This vegetation is predominantly non-native and consists of palms, pines, ficus, and eucalyptus trees, but may provide limited habitat for urban wildlife, including migratory birds.



Figure 4-5. Westwood Park Surrounding VA Hospital

4.5 Alternative 3—Santa Monica Extension

Alternative 3 would extend the alignment described for Alternative 2 from the proposed Westwood/VA Hospital Station down Wilshire Boulevard to Santa Monica, ending at the proposed Wilshire/4th Station. Biological resources along Wilshire Boulevard in this area are limited to mature trees and shrubs that may provide limited wildlife habitat. No native tree species were observed along Wilshire Boulevard or in the vicinity of the proposed stations. Non-native palm trees and ficus trees are common trees along the alignment.

The proposed Wilshire/4th Station would be located approximately 1,200 feet (0.23 miles) from Palisades Park and 1,600 feet (0.3 miles) from Santa Monica Beach. Palisades Park is a narrow strip of landscaped areas with mature palm trees and other, predominantly non-native, species of trees and shrubs such as ficus trees that provide limited habitat for wildlife. Santa Monica Beach is a wide sandy beach that provides some foraging habitat for coastal and marine species, including many species of birds. Heavy human use of the beach limits its use by native wildlife, and grooming of the sand by large machinery prohibits nesting of special-status bird species such as least tern and snowy plover.

4.6 Alternative 4—Westwood/UCLA Extension Plus West Hollywood Extension

Biological resources associated with Alternative 4 include those discussed for Alternative 1 in addition to those existing along the proposed alignment that runs from the existing Hollywood/Highland Station along Santa Monica and San Vicente Boulevards to Wilshire Boulevard. Biological resources along Santa Monica and San Vicente are primarily limited to trees and shrubs that exist along these roadways and in the footprint of the proposed stations. While most of these trees and shrubs are non-native including palms and ficus, native California Sycamore trees were observed at three proposed stations. At the proposed Santa Monica/La Brea Station, native sycamores are located along Formosa Avenue, just

west of the proposed station location. At the proposed Santa Monica/San Vicente Station, native sycamores are located along Westbourne Drive north of the proposed station location (Figure 4-6). At the proposed Beverly Center Area Station, native sycamore trees are located near the corner of Third Street and Holt Avenue, just west of the proposed station location.



Figure 4-6. Native California Sycamore Trees near the Proposed Santa Monica/San Vicente Station

4.7 Alternative 5—Santa Monica Extension Plus West Hollywood Extension

Existing biological resources associated with Alternative 5 include those described for Alternative 3 and those associated with the alignment along Santa Monica and San Vicente Boulevards as described for Alternative 4.

4.8 MOS 1—Fairfax Extension

Biological resources under MOS-1 would be limited to those located along Wilshire from the existing Wilshire/Western Station to the proposed Wilshire/Fairfax Station. These biological resources include: the predominantly non-native trees and shrubs such as palms, pines, ficus, and ornamental trees such as jacaranda, located along Wilshire Boulevard; the native sycamore trees that exist near the proposed Wilshire/La Brea Station; and the large open space and landscaped areas of Hancock Park adjacent to the Rancho La Brea tar pits.

4.9 MOS 2—Century City Extension

Biological resources under MOS-2 would include those associated with MOS-1 as well as additional trees and shrubs, including non-native palms, pines, and ficus, along Wilshire Boulevard to Century City. Wildlife habitat provided by the open space and vegetated areas of the Los Angeles Country Club would also be included.



4.10 Station Options

Biological resources associated with the various station options are described below.

4.10.1 Option 1—Wilshire/Crenshaw Station Option

Option 1 consists of the removal of the Wilshire/Crenshaw Station. Biological Resources existing at the proposed Wilshire/Crenshaw Station location are discussed in Section 4.3 above.

4.10.2 Option 2—Wilshire/Fairfax Station East Option

Option 2 consists of a slightly more easterly location for the proposed Wilshire/Fairfax Station on Wilshire Boulevard. Biological resources at this location consist of non-native trees and shrubs, including palms, pines, and ficus. No native tree species were observed in this area.

4.10.3 Option 3—Wilshire/La Cienega Station Option

Option 3 consists of a more westerly location for the proposed Wilshire/La Cienega Station on Wilshire Boulevard. Biological resources at this location consist of non-native trees and shrubs, including palms, pines, and ficus. No native tree species were observed in this area.

4.10.4 Option 4—Century City Station and Segment Options

Option 4 consists of locating the proposed Century City Station on Constellation Boulevard. Biological resources at this location are very limited and consist of a small number of non-native trees, including palm and ficus. No native tree species were observed. Also associated with Option 4 are segment options consisting of variations on the underground route to connect Beverly Hills to Century City and the underground route to connect Century City to Westwood. As such, potential biological resources associated with the various segments are described elsewhere where access points occur for the proposed station locations in Century City and Westwood.

4.10.5 Option 5—Westwood/UCLA Station Options

Option 5 consists of locating the proposed Westwood/UCLA Station on the street, along Wilshire Boulevard. Biological resources at this location consist of non-native trees, including palms and ficus.

4.10.6 Option 6—Westwood/VA Hospital Station Option

Option 6 consists of locating the proposed VA Hospital Station north of Wilshire Boulevard. Biological resources in this location consist of grass lawns with predominantly non-native vegetation consisting of palms, pines, ficus, and eucalyptus trees. Mature trees in this location may provide limited habitat for urban wildlife, including migratory birds.

4.11 Maintenance and Operations Facility Sites

4.11.1 Division 20 Maintenance and Storage Facility

The proposed Division 20 Maintenance and Storage Facility was previously developed for rail car use and storage. The majority of land in the area is paved and does not support



vegetation. Small areas of bare soil do occur at the site, and vegetation within these areas consists of non-native grasses with a few small trees and shrubs (Figure 4-7).



Figure 4-7. Non-native Palm Tree Located at Division 20 Maintenance and Storage Facility

4.11.2 Union Pacific Los Angeles Transportation Center Rail Yard

In contrast to the Division 20 Maintenance and Storage Facility, the Union Pacific Los Angeles Transportation Center Rail Yard supports some native vegetation and limited wildlife habitat. The site is located on the eastern shore of the Los Angeles River northeast of the East Cesar Chavez Avenue Bridge and adjacent to North Mission Road. Several large, non-native ficus trees line North Mission Road at the southern periphery of the site. The bluff along the southern portion of the Union Pacific Los Angeles Transportation Center Rail Yard supports native vegetation including toyon, mulefat, and other species (Figure 4-8). Several common bird species, including house finch, Western scrub jay, bushtit, and Northern mockingbird, were observed utilizing this habitat during field surveys.



Figure 4-8. Native Vegetation at the Union Pacific Los Angeles Transportation Center Rail Yard

The Los Angeles River is considered navigable waters and is channelized as it flows through the heavily urbanized area surrounding the Union Pacific Los Angeles Transportation Center Rail Yard. However, upstream sections of the River such as the Glendale Narrows have natural bottoms that support riparian vegetation and wildlife. Glendale Narrows is over four miles north (upstream) from the Union Pacific Los Angeles Transportation Center Rail Yard site. Recent surveys of fish and other aquatic organisms conducted by Friends of the Los Angeles River (FOLAR) found eight species of fish from four sampling sites in the vicinity of the Glendale Narrows section of the river (FOLAR 2008). All of these fish species, including fathead minnow, carp, black bullhead, Amazon sailfin catfish, mosquito fish, green sunfish, largemouth bass, and tilapia, were non-native species; no native fish or other aquatic organisms were detected during the surveys. The presence of non-native fish, bullfrogs, and crayfish, which are predators of native fish, as well as poor habitat quality, have contributed to the extirpation of native fish species from the river. The FOLAR study concludes that, although native fish species are no longer present in the Study Area, there is value in the exotic fishery that exists there for recreation as well as a food source for terrestrial wildlife and birds. However, this fishery exists over four miles north of the Study Area. The concrete channel of the River in the Study Area is a barrier to fish species and thus no fish are expected to be present in the river reach within the Study Area.

4.11.3 Rail Operations Center

The Metro Rail Operations Center (ROC) is located in the Community of Willowbrook in Los Angeles County, approximately eight miles south of downtown Los Angeles. The ROC borders the eastern side of the Metro Blue Line between the East Imperial Highway and Interstate 105. The area surrounding the ROC is dense, developed, urban land. Vegetation at the ROC is non-native and consists of landscaped areas of grass, shrubs, and ornamental trees (Figure 4-9).



Figure 4-9. Landscaping at the ROC



5.0 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

5.1 Introduction

This section evaluates potential impacts from construction and operation of the Project on ecosystems and biological resources. As described in section 4.1, the 0.25 mile area surrounding the proposed alignments, stations, maintenance and storage, and ROC sites is heavily urbanized. There is little or no suitable habitat present for the sensitive species listed by the CNDDDB for the USGS topographic quadrangles in which the alternatives are located. Therefore, no sensitive species are anticipated to occur in the Study Area and there would be no potential for impacts to sensitive species from any of the alternatives.

In general, biological resources within the Study Area consist of mature trees or other vegetation which could support wildlife species that are adapted to the urban environment. Mature trees may be used by migratory birds, including raptors, for nesting. Migratory birds are protected under Federal and State laws, including the Migratory Bird Treaty Act and California Fish and Game Code.

Native trees within the City of Los Angeles are protected under ordinance. In addition, the Cities of West Hollywood, Beverly Hills, and Santa Monica all have tree protection policies in their municipal codes. Therefore, potential impacts to these biological resources must be evaluated.

5.2 Evaluation Methodology

The methodology used to evaluate impacts to biological resources entailed a review of the CNDDDB to identify sensitive plants and animals with the potential to occur in the project area. The alternatives are located in three different USGS 7.5 minute quadrangles: the Los Angeles, Hollywood, and Beverly Hills quads. These quadrangles encompass approximately 60 square miles each, while the project area includes approximately 10 square miles.

A field review was conducted on August 11 through August 13, 2009, and consisted of visual observation and photographic documentation of all parks and open space areas within 0.25 mile of either side of the proposed alignments, stations, and maintenance and operations facility sites. During the field review, mature trees and shrubs existing in roadway medians directly within the proposed alignments were also noted. Results of the field review were used to determine whether biological resources, including sensitive ecological areas, wetlands, wildlife migratory corridors, and/or habitat conservation areas, occur within the Study Area and if those resources could potentially support any of the sensitive species identified by the CNDDDB.

If the Project could potentially impact biological resources, through effects on species or habitat, there could be a potential for direct or indirect impacts. Direct impacts would include removal or disturbance of vegetation during the nesting season if active migratory bird nests are present. The nesting season is typically considered to be from March 1 through August 31, with raptors nesting as early as February 1. Indirect impacts would include increased competition for food and nesting habitat if migratory birds are forced to relocate to new areas during the nesting season.



Potential impacts of the Project on landscaping and landscaped urban vegetation areas, which are not special ecosystems and do not contain significant biological resources, are also discussed in the Visual and Aesthetic Resources Technical Report prepared for this project.

5.3 Environmental Impacts/Environmental Consequences

5.3.1 No Build Alternative

The No Build Alternative would not result in any impacts to sensitive species, habitat, or locally protected trees. Therefore, there would be no impacts to biological resources from the No Build Alternative.

5.3.2 TSM Alternative

As with the No Build Alternative, the TSM Alternative would not result in any substantial physical impacts to sensitive species, habitat, or locally protected trees. Therefore, there would be no adverse impacts to biological resources from the TSM Alternative.

5.3.3 Alternative 1—Westwood/UCLA Extension

Alternative 1 would extend from the existing Wilshire/Western Station along Wilshire Boulevard to a proposed station at Westwood/UCLA. Construction of the alignment is assumed to occur wholly underground via tunneling primarily within the public street right-of-way. Surface disturbance would occur at entry and exit points for the tunnel boring machine. In addition, construction of all proposed stations is assumed to employ a cut-and-cover method, whereby all surface conditions within the footprint of the station would be completely disturbed (i.e., all structures, concrete and other surfaces would be demolished and all vegetation removed). Construction staging sites would also be utilized for storage of construction equipment and materials. Following construction of each underground station, surface conditions would be restored as much as possible at station locations and construction staging sites. As described in Section 4.1.3, there are no sensitive species, sensitive habitat or wetlands located directly within the Study Area. Construction of Alternative 1 could require removal or disturbance of mature trees located along Wilshire Boulevard within the footprint(s) of the proposed stations. These include the following:

Wilshire/Crenshaw Station: approximately 12 non-native trees, including palm, pine, and jacaranda trees, are located within the proposed station footprint. Approximately 25 additional non-native trees exist within 100 feet of the proposed station footprint, including palm, pine, jacaranda, ficus, and eucalyptus trees.

Wilshire/La Brea Station: approximately five non-native trees, including palm and jacaranda trees, are located within the proposed station footprint. Approximately 15 additional non-native palm trees are located within 100 feet of the proposed station footprint, along with approximately four native California sycamore trees. These additional trees would not be directly impacted.

Wilshire/Fairfax Station: approximately three non-native palm trees are located within the proposed station footprint, with an additional three non-native palm trees located within 100 feet.

Wilshire/La Cienega Station: approximately 25 non-native palm trees and one non-native pine tree are located within the proposed station footprint. Approximately 15 additional



non-native palms and two non-native ficus trees are located within 100 feet of the proposed station footprint.

Wilshire/Rodeo Station: approximately 10 non-native palm trees are located within the proposed station footprint, with an additional 15 non-native palms located within 100 feet.

Century City Station: approximately 10 non-native eucalyptus trees are located within the proposed station footprint, and approximately 15 non-native palms are located within 100 feet. In addition, at least 20 trees are located within the Los Angeles Country Club grounds, directly adjacent to and behind a large fence from the proposed station footprint. Due to the fence, it was not possible to count the number or identify the types of trees.

Westwood/UCLA Station: approximately eight non-native ficus trees are located within the proposed station footprint, and approximately 10 additional non-native trees, including palm, ficus, and magnolia, are located within 100 feet.

An adverse impact could occur if an active migratory bird nest located in any of these trees is disturbed during construction. Trees within 100 feet of the construction footprint would not be directly impacted through removal or pruning, but there could still be disturbance of nesting birds due to increased noise and vibration during construction activities.

As the proposed Wilshire/La Brea Station is located approximately 0.5 miles from the Rancho La Brea tar pits and Hancock Park, no impacts to the biological resources located within this open space area would occur.

Because the majority of the project area provides only low quality habitat for migratory birds, indirect impacts are not expected to be substantial, as only a small number of migratory birds would be displaced, if any. However, indirect impacts could occur during construction of the proposed Century City Station, where some habitat of moderate quality exists within the large open space of the adjacent Los Angeles Country Club.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all applicable tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance and related municipal codes of the City of Beverly Hills.

During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations. If ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.4 Alternative 2—Westwood/VA Hospital Extension

Alternative 2 would extend Alternative 1 to the proposed Westwood/VA Hospital Station. Impacts to biological resources would include those described for Alternative 1 above. In addition, at the proposed Westwood/VA Hospital Station, there are approximately 25 non-native trees, including palm, eucalyptus, and pine trees, located within the proposed station footprint. At least an additional 40 non-native trees of the same type are located within 100 feet of the proposed footprint. These trees are associated with Westwood Park, located



adjacent to the VA Hospital as described in Section 4.1.4. Trees within 100 feet of the construction footprint would not be directly impacted through removal or pruning, but there could still be disturbance of nesting birds due to increased noise and vibration during construction activities. As this large open space area provides some habitat of moderate quality, indirect impacts could also occur during construction through the potential displacement of migratory birds during the nesting season.

During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all applicable tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance and related municipal codes of the City of Beverly Hills. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.5 Alternative 3—Santa Monica Extension

Alternative 3 would extend the alignment described for Alternative 2 along Wilshire Boulevard to the proposed Wilshire/4th Station in Santa Monica. Impacts to biological resources would include those described for Alternative 2 above. Additional direct impacts could occur through the removal or disturbance of mature trees located along Wilshire Boulevard within the footprint(s) of the proposed stations. These include the following:

Wilshire/Bundy Station: approximately six non-native trees, primarily palms, are located within the proposed station footprint, and an additional five non-native trees are located within 100 feet.

Wilshire/26th Station: approximately 15 non-native palm trees are located within the proposed station footprint and an additional 20 non-native palms are located within 100 feet.

Wilshire/16th Station: approximately eight non-native palm trees are located within the proposed station footprint and an additional 15 non-native trees, including palm and ficus trees, are located within 100 feet.

Wilshire/4th Station: approximately 15 non-native palm trees are located within the proposed station footprint and an additional 15 non-native palm and ficus trees are located within 100 feet.

Trees within 100 feet of the construction footprint would not be directly impacted through removal or pruning, but there could still be disturbance of nesting birds due to increased noise and vibration during construction activities. Direct impacts could occur if active nests of migratory birds are present in any of these trees during construction. No indirect impacts are anticipated, as the alignment along Wilshire Boulevard provides only low quality habitat for migratory birds and would displace only a small number of migratory birds, if any.



Due to the distance from the proposed Wilshire/4th Station to Palisades Park and Santa Monica Beach (approximately 1,200 feet (0.23 miles) and 1,600 feet (0.3 miles), respectively), no direct or indirect impacts to biological resources in these areas would occur.

During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all applicable tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance and related municipal codes of the Cities of Beverly Hills and Santa Monica. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.6 Alternative 4—Westwood/UCLA Extension Plus West Hollywood Extension

Impacts to biological resources under Alternative 4 would include those described for Alternative 1 above. In addition, direct impacts could occur through the removal or disturbance of mature trees within the footprint of the proposed stations along Santa Monica and San Vicente Boulevards, including the following:

Santa Monica/La Brea Station: approximately 20 non-native trees, including palm, ficus, jacaranda, olive, and carob trees, are located within the proposed station footprint. An additional 10 non-native trees of the same types, as well as approximately 6 native California sycamores, are located within 100 feet.

Santa Monica/Fairfax Station: approximately 20 non-native trees, including palm, jacaranda, olive, and eucalyptus trees, are located within the proposed station footprint, and an additional 10 non-native trees of the same types are within 100 feet.

Santa Monica/San Vicente Station: approximately 10 non-native trees, including olive and palm trees, are located within the proposed station footprint. Approximately 10 additional trees, including five non-native palms and five native California sycamore trees, are located within 100 feet.

Beverly Center Area Station: approximately 15 non-native trees, include pine, jacaranda, and eucalyptus trees, are located within the proposed station footprint. In addition, two native California sycamores and an additional 10 non-native trees are located within 100 feet.

Trees within 100 feet of the construction footprint would not be directly impacted through removal or pruning, but there could still be disturbance of nesting birds due to increased noise and vibration during construction activities. Direct impacts could occur if active nests of migratory birds are present in any of these trees during construction.

No indirect impacts are anticipated, as the alignment along Santa Monica and San Vicente Boulevards provides only low quality habitat for migratory birds and would displace only a small number of migratory birds, if any.



During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all applicable tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance and related municipal codes of the Cities of West Hollywood, Beverly Hills, and Santa Monica, to ensure impacts would be reduced. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.7 Alternative 5—Santa Monica Extension Plus West Hollywood Extension

Alternative 5 would include the proposed alignment and stations along Wilshire Boulevard to Santa Monica as well as those along Santa Monica and San Vicente Boulevards to Wilshire Boulevard. As such, potential impacts to biological resources under Alternative 5 would include those described for both Alternative 3 and Alternative 4. These impacts would include direct impacts from the removal or disturbance of mature trees if active migratory bird nests are present during construction, as well as indirect impacts if migratory birds are displaced from areas of moderate habitat quality during the nesting season.

During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all applicable tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.8 MOS-1—Fairfax Extension

Impacts to biological resources under MOS-1 would include direct impacts from the removal or disturbance of mature trees located along Wilshire Boulevard, if active migratory bird nests are present during construction. As the proposed Wilshire/La Brea Station is located approximately 0.5 miles from the Rancho La Brea tar pits and Hancock Park, no direct or indirect impacts to the biological resources located within this area of moderate habitat quality would occur.

During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance. In addition,



during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.9 MOS-2—Century City Extension

Under MOS-2, direct impacts would include those associated with MOS-1 as well as direct impacts to additional mature trees located along Wilshire Boulevard to Century City. Under MOS-2, indirect impacts could also occur, as the proposed Century City Station on Santa Monica Boulevard would be located adjacent to the Los Angeles Country Club, an area that provides moderate habitat for migratory birds. If active bird nests are present during construction of the Century City Station, indirect impacts to migratory birds could occur through displacement of birds during the nesting season. Mitigation would be required to reduce these impacts.

During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

5.3.10 Station and Alignment Options

Direct and indirect impacts to biological resources could occur during construction of the various station options. These potential impacts would be related to the removal or disturbance of mature trees during the migratory bird nesting season, from March 1 through August 31 and as early as February 1 for raptors. During operation, no direct or indirect impacts to migratory birds would be anticipated, as habitat alteration and human use would likely prohibit nesting of migratory birds near stations.

No native trees were observed directly within the proposed station footprints associated with Options 1 through 6. However, as project design progresses and construction plans are finalized, native trees may be identified that would be removed or pruned. This would require compliance with all tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

For Option 4, as the segment options consist of various underground routes, and impacts to biological resources are related only to surface disruptions, there would be no additional impacts related to the various segment options themselves.

5.3.11 Maintenance and Operations Facility Sites

5.3.11.1 Division 20 Maintenance and Storage Facility

Biological resources at the Division 20 Maintenance and Storage Facility are very limited. The Los Angeles River, which is located near the facility, is channelized and does not



support biological resources. Therefore, no impacts to biological resources are anticipated to occur from the Project. In addition, no native tree species were observed at the Division 20 Maintenance and Storage Facility.

While it does not support biological resources in this location, the Los Angeles River is considered a Waters of the United States. Therefore, construction of the river crossing would require a permit to comply with Section 404 of the CWA. In addition, in accordance with California Fish and Game Code Section 1600, a Streambed Alteration Agreement would be required for construction within the Los Angeles River.

5.3.11.2 Union Pacific Los Angeles Transportation Center Rail Yard

Native vegetation, including several toyon and laurel sumac trees located along the southern portion of the Union Pacific Los Angeles Transportation Center Rail Yard provides moderate quality habitat for wildlife and migratory birds. As such, both direct and indirect impacts could occur during construction from the removal or disturbance of mature trees if active migratory bird nests are present. Native tree species were observed at the Union Pacific Los Angeles Transportation Center Rail Yard, so compliance with the City of Los Angeles Native Tree Protection Ordinance would be required. In addition, during operation, if ongoing maintenance activities require pruning of native trees, compliance with all applicable tree protection codes would be required.

As shown in Figure 5-1, construction of the proposed improvements at the Union Pacific Los Angeles Transportation Center Rail Yard would involve a new crossing the Los Angeles River to the north of the East Cesar Chavez Bridge. The Los Angeles River is considered navigable waters by the USACE. No impacts related to sensitive biological resources associated with the Los Angeles River adjacent to the Union Pacific Los Angeles Transportation Center Rail Yard are anticipated, as the River is channelized and lacking native vegetation to support wildlife. The piers and abutments are expected to result in approximately 74,260 square feet (1.7 acres) of temporary impact and 4,312 square feet (0.1 acres) of permanent impact within the river channel. Therefore, the project would require a CWA Section 401 Water Quality Certification from LARQWCB, CWA Section 404 Permit from USACE and a Streambed Alteration Agreement from CDFG. Coordination and an encroachment permit from Los Angeles County Flood Control District may also be required. Compliance with applicable permits and implementation of best management practices in the Storm Water Pollution Prevention Plan would minimize impacts associated with construction in the Los Angeles River. Impacts related to water quality are discussed in the Water Quality Technical Report.

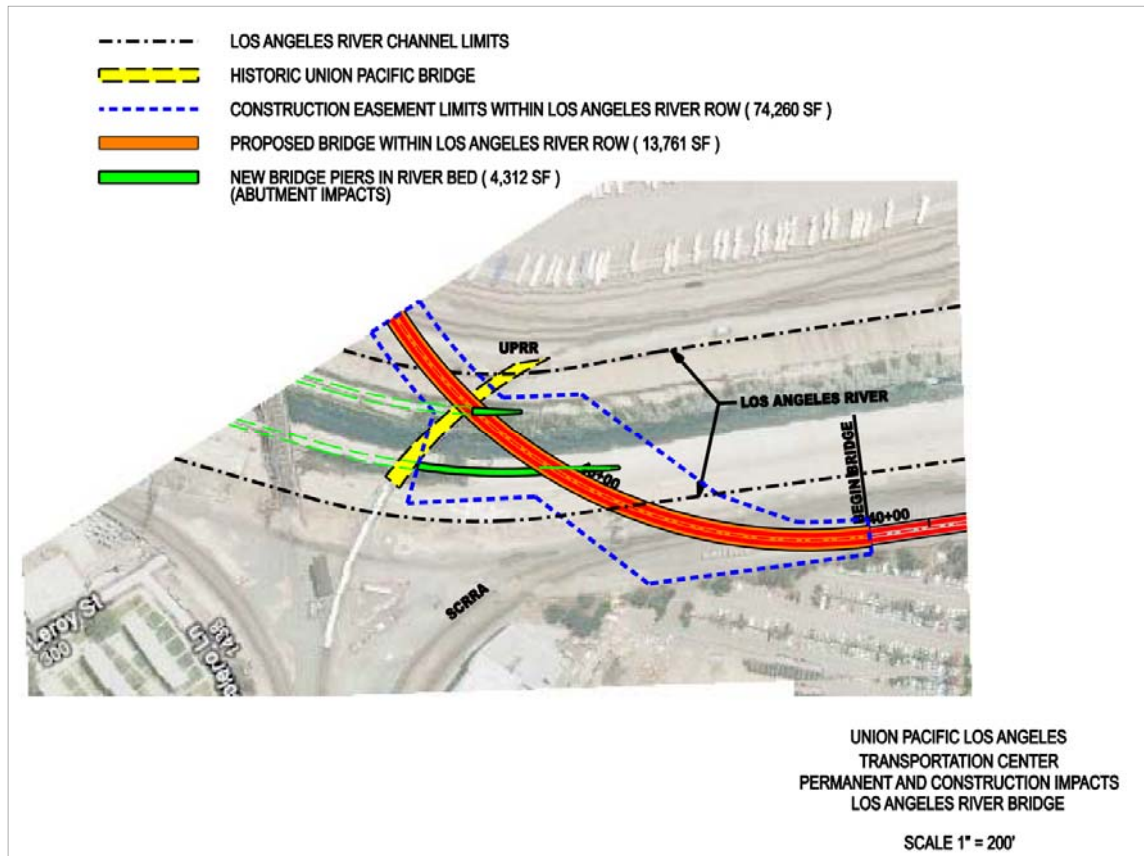


Figure 5-1: Permanent and Temporary Impacts at the Los Angeles River Bridge

The nearest reach of the river that supports fish and wildlife is the Glendale Narrows, which is over four miles upstream. Thus, no impacts to biological resources at the Glendale Narrows are anticipated.

5.3.11.3 Rail Operations Center

Approximately 20 non-native trees, primarily palm trees, are located in the northern and western portions of the ROC. No native tree species were observed at the ROC. Direct impacts could occur during construction if an active migratory bird nest is present in any tree that is removed or disturbed during construction at the ROC. Mitigation would be required to reduce this potential impact. No indirect impacts would be anticipated, as construction would displace only a small number of migratory birds, if any.



6.0 MITIGATION MEASURES

6.1 No Build Alternative

The No Build Alternative would not result in impacts to biological resources. Therefore, no impacts to sensitive species, habitat, or locally protected trees are anticipated and no mitigation measures would be required.

6.2 TSM Alternative

Similar to the No Build Alternative, there would be no impacts to biological resources from the TSM Alternative. Since there would be no impacts to sensitive species, habitat, or locally protected trees, no mitigation measures would be required.

6.3 Build Alternatives

Mitigation measures would be required for compliance with the Migratory Bird Treaty Act and State migratory bird protection and to avoid and minimize impacts to bird species that may utilize trees that could be removed or disturbed during construction of the Build Alternatives. Construction activities that involve tree removal or trimming would be timed as much as possible to occur outside the migratory bird nesting season, which occurs generally from March 1st through August 31st and as early as February 1st for raptors. However, if construction must occur during the nesting season, the following mitigation measure would be implemented:

6.3.1 EB1

Two biological surveys shall be conducted, one 15 days prior and a second 72 hours prior to construction that would remove or disturb suitable nesting habitat. The surveys shall be performed by a biologist with experience conducting breeding bird surveys. The biologist shall prepare survey reports documenting the presence or absence of any protected native bird in the habitat to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors). If a protected native bird is found, surveys will be continued in order to locate any nests. If an active nest is located, construction within 300 feet of the nest (500 feet for raptor nests) will be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.

As construction or operation of the Build Alternatives could result in removal or pruning of protected trees, the following mitigation measure would be implemented:

6.3.2 EB2

If construction or operation of the Project requires removal or pruning of a protected tree, a removal permit would be required in accordance with applicable municipal codes and ordinances of the city in which the affected tree is located. Within the City of Los Angeles, compliance with the Native Tree Protection Ordinance would require a tree removal permit from the Los Angeles Board of Public Works. Similarly, within the Cities of West Hollywood, Beverly Hills, and Santa Monica applicable tree protection requirements, such as tree removal permits, would be followed. Tree removal requires replanting of protected trees within the project area or at another location to mitigate for the removal of these trees.



Replanting would be done using a ratio of three new trees for every one removed and in a size not less than 24 inch box. In addition, planted trees would be maintained such that ninety percent are in good condition after six months and irrigation would be carried out until the tree is established. Further, if construction or operation would entail pruning of any protected tree, the pruning would be performed in a manner that does not cause permanent damage or adversely affect the health of the trees.

Mitigation measures **EB1** and **EB2** would apply to all the Build Alternatives.

6.3.3 Maintenance and Operations Facility Sites

6.3.3.1 Division 20 Maintenance and Storage Facility

Construction of a maintenance and operations facility at the Division 20 Maintenance and Storage Facility could require the removal or disturbance (including trimming) of mature trees located at the site. These trees may provide nesting and roosting habitat for sensitive migratory bird species, including raptors, and mitigation measure **EB1** would be implemented to reduce impacts.

6.3.3.2 Union Pacific Los Angeles Transportation Center Rail Yard

Mitigation measure **EB1** would be required to reduce impacts to migratory birds during construction at the Union Pacific Los Angeles Transportation Center Rail Yard. In addition, since construction or operation at the Union Pacific Los Angeles Transportation Center Rail Yard could require the removal or disturbance of native tree species, implementation of mitigation measure **EB2** would also be required.

6.3.3.3 Rail Operations Center

Construction of a maintenance and operations facility at the ROC could require the removal or disturbance (including trimming) of mature trees located in the northern and western portions of the site. As these trees may provide nesting and roosting habitat for sensitive migratory bird species, mitigation measure **EB1** would be implemented to ensure impacts are reduced.



7.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION

Anticipated changes that would result from implementation of the proposed project are compared to the CEQA thresholds outlined in Section 3.4. Impacts identified fall within one of the following categories:

Less-Than-Significant Impact: No substantial adverse change to existing

Significant Mitigable Impact: Substantial adverse change to environmental conditions that can be mitigated to less-than-significant levels by implementation of mitigation measures

Significant Unavoidable Impact: Substantial adverse change to environmental conditions that cannot be fully mitigated by implementation of mitigation measures; and

Beneficial Impact: Positive change to environmental conditions

7.1.1 No Build Alternative

There would be no impacts to biological resources under the No Build Alternative.

7.1.2 TSM Alternative

There would be no impacts to biological resources under the TSM Alternative.

7.1.3 Alternative 1—Westwood/UCLA Extension

Mitigation measure **EB1** would be implemented to ensure adverse impacts to migratory birds during construction of Alternative 1 are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.4 Alternative 2—Westwood/VA Hospital Extension

As with Alternative 1, implementation of mitigation measure **EB1** would be required to ensure impacts to biological resources during construction of Alternative 2 are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.5 Alternative 3—Santa Monica Extension

Mitigation measures **EB1** would be implemented to ensure impacts to biological resources during construction of Alternative 3 are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.6 Alternative 4—Westwood/UCLA Extension Plus West Hollywood Extension

Implementation of mitigation measures **EB1** would be required to ensure impacts to biological resources during construction of Alternative 4 are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction,



mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.7 Alternative 5—Santa Monica Extension Plus West Hollywood Extension

Mitigation measures **EB1** would be required to ensure impacts to biological resources during construction of Alternative 5 are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.8 MOS 1—Fairfax Extension

During construction of MOS-1, implementation of mitigation measures **EB1** would be required to ensure impacts to migratory birds and native trees, respectively, are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.9 MOS 2—Century City Extension

Mitigation measures **EB1** would be required to ensure impacts to biological resources during construction of MOS-2 are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.10 Design Options

Construction of the design options would require implementation of mitigation measures **EB1** to ensure impacts to biological resources are less-than-significant. If it is determined that a protected tree would be removed or pruned during construction, mitigation measure **EB2** would be required to ensure impacts to protected trees are less-than-significant.

7.1.11 Maintenance and Operations Facility Sites

Construction of a maintenance and operations facilities could require the removal or disturbance (including trimming) of mature trees located at the site. These trees may provide nesting and roosting habitat for sensitive migratory bird species, including raptors, and mitigation measure **EB1** would be implemented to ensure impacts are less-than-significant. In addition, since construction at the Union Pacific Los Angeles Transportation Center Rail Yard could require the removal or disturbance of native tree species, implementation of mitigation measure **EB2** would also be required.

The piers and abutments are expected to result in approximately temporary and permanent impact to the river channel. No impacts related to sensitive biological resources associated with the Los Angeles River adjacent to the Union Pacific Los Angeles Transportation Center Rail Yard are anticipated, as the River is channelized and lacking native vegetation to support wildlife. Compliance with applicable permits and implementation of best management practices in the Storm Water Pollution Prevention Plan would minimize impacts associated with construction in the Los Angeles River to less-than-significant.



8.0 IMPACTS REMAINING AFTER MITIGATION

Following implementation of mitigation measures **EB1** and **EB2**, potential impacts to biological resources from all Build Alternatives would be reduced to less-than-significant levels.

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