



WESTSIDE SUBWAY EXTENSION

Real Estate/Acquisitions Technical Report



August 2010



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APPENDIX – DETAIL FOR STATION AND ALIGNMENT OPTIONS



Acronyms and Abbreviations

<u>Acronym</u>	<u>Definition</u>
AIN	Assessor's Identification Number (County of Los Angeles Assessor's Office)
Ave	Avenue
Blvd	Boulevard
California Act	California Relocation Act
CEQA	California Environmental Quality Act
LACMA	Los Angeles County Museum of Art
Metro	Los Angeles County Metropolitan Transportation Authority
NEPA	National Environmental Policy Act
PE	Permanent Easement
PUE	Permanent Underground Easement
ROW	Right-of-way
St	Street
SW	Southwest
TCE	Temporary Construction Easement
UCLA	University of California Los Angeles
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
VA	Veterans Affairs



1.0 INTRODUCTION

This section addresses the land ownership and leasing agreements that will change due to the proposed project. Although the Westside Subway Extension Project maximizes the use of publically-owned rights-of-ways, this analysis discusses the proposed project's impacts to persons and businesses with leases of Metro-owned property and to privately-owned properties along the corridor.



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 Metro LRTP and the SCAG 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.

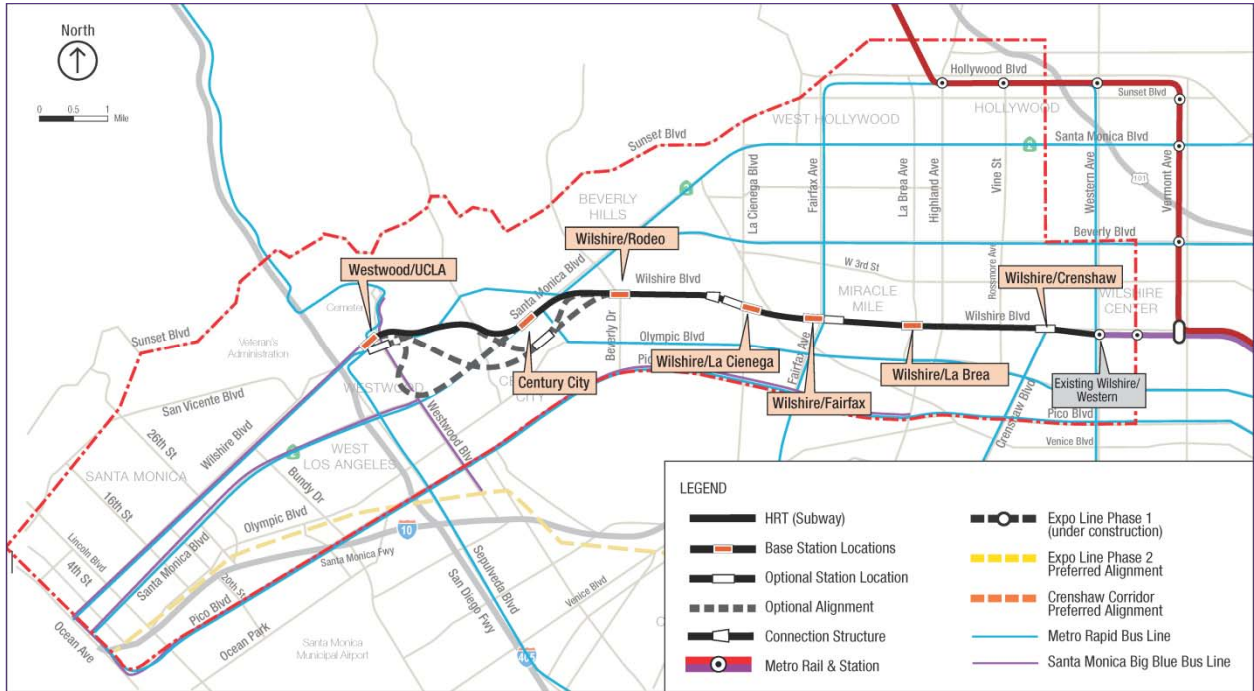


Figure 2-1. Alternative 1—Westwood/UCLA Extension

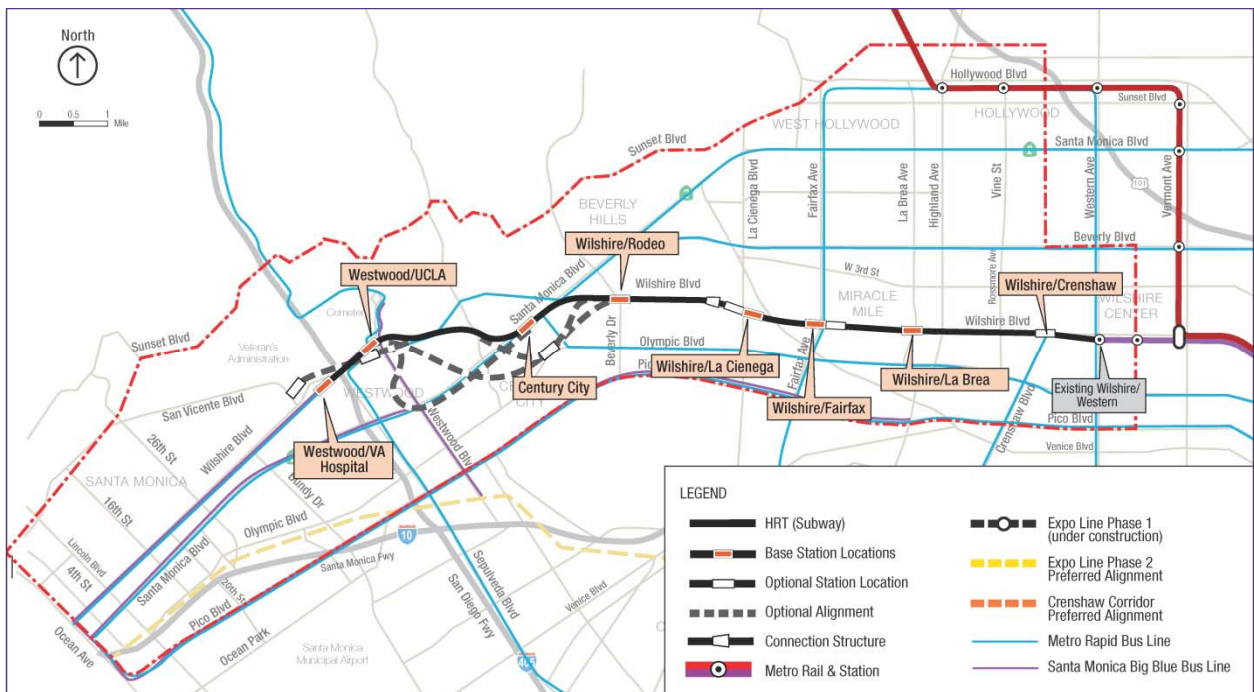


Figure 2-2. Alternative 2—Westwood/Veterans Administration (VA) Hospital Extension

WESTSIDE SUBWAY EXTENSION

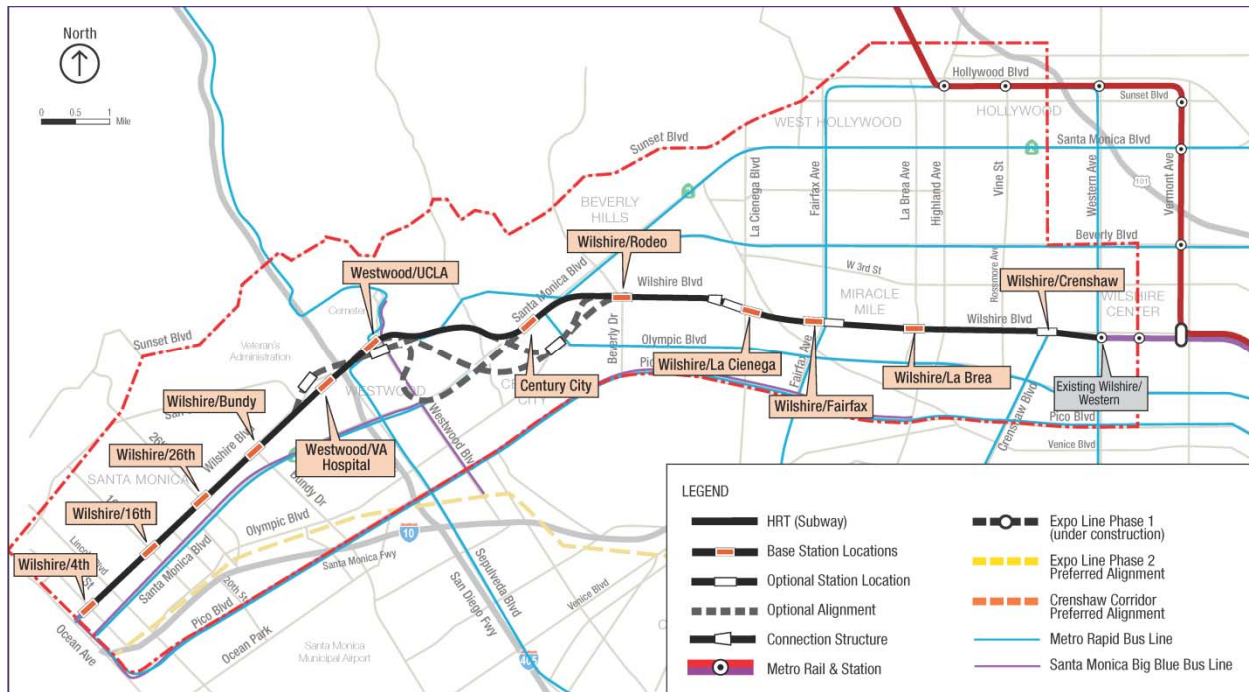


Figure 2-3. Alternative 3—Santa Monica Extension

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.

2.3.6 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.

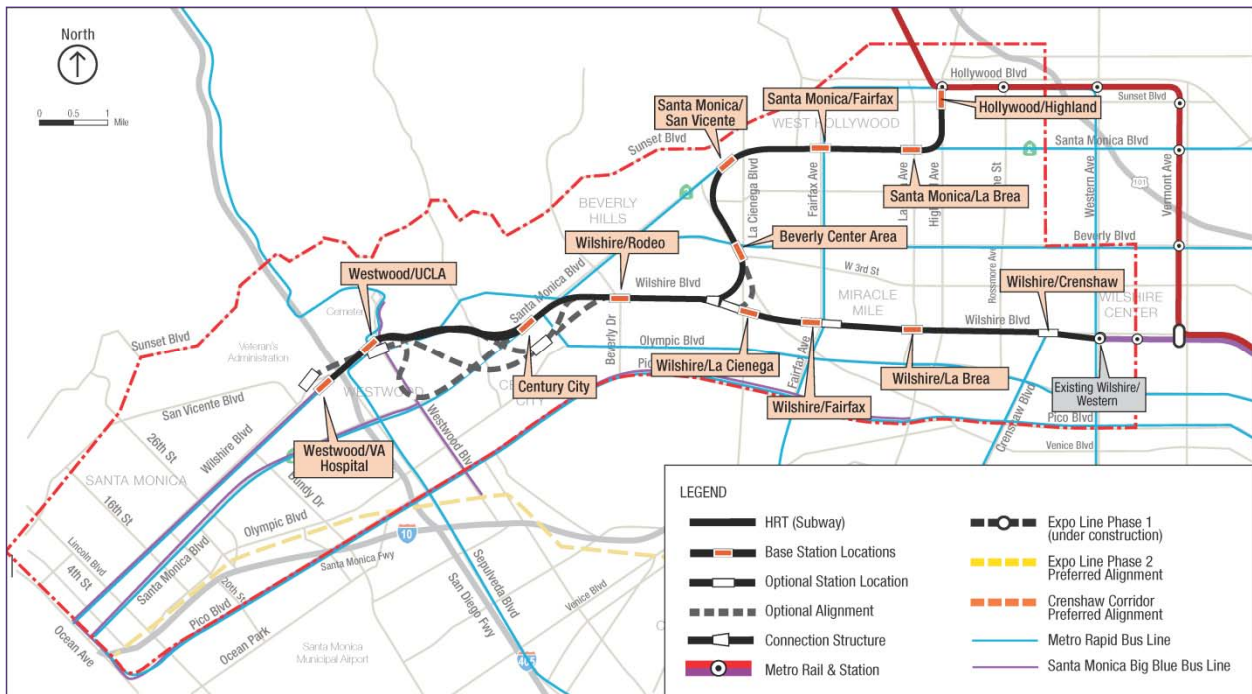


Figure 2-4. Alternative 4—Westwood/VA Hospital Extension plus West Hollywood Extension

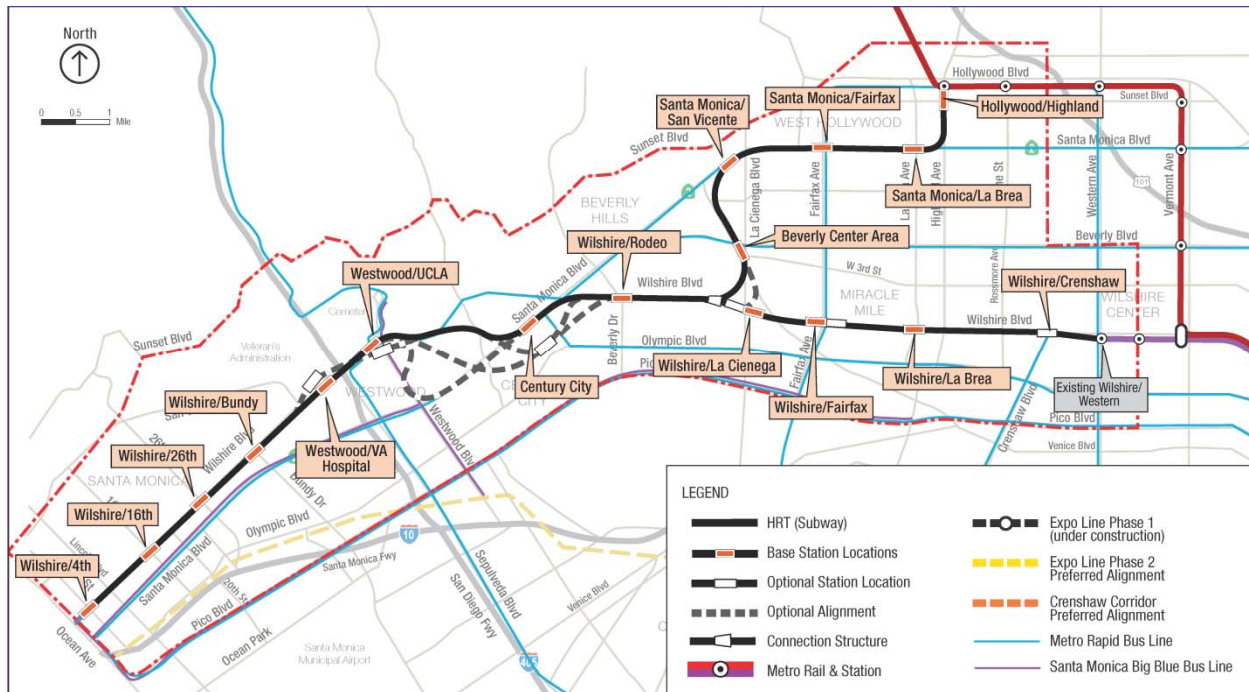


Figure 2-5. Alternative 5—Santa Monica Extension plus West Hollywood Extension

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		•	•	•	•

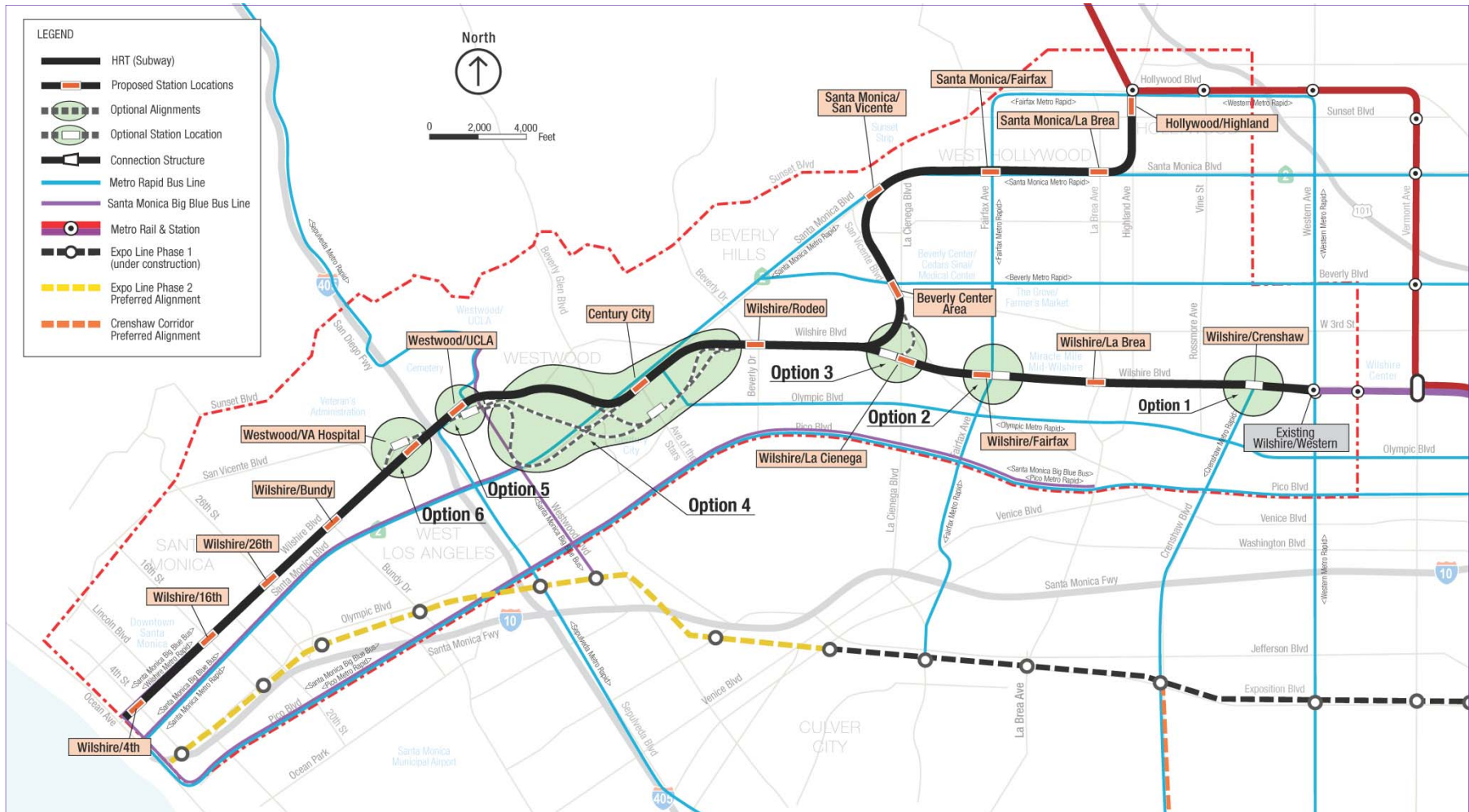


Figure 2-6. Station and Alignment Options

2.3.7 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).

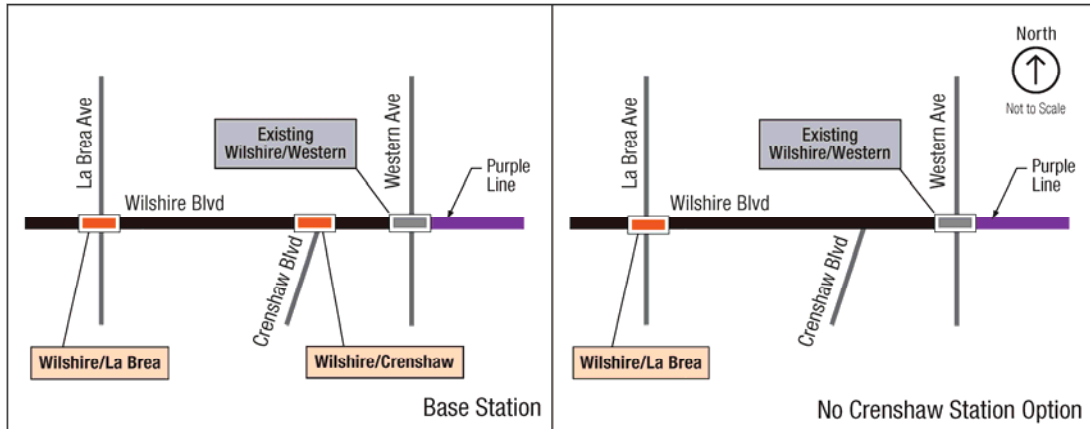


Figure 2-7. Option 1—No Wilshire/Crenshaw Station Option

2.3.8 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.

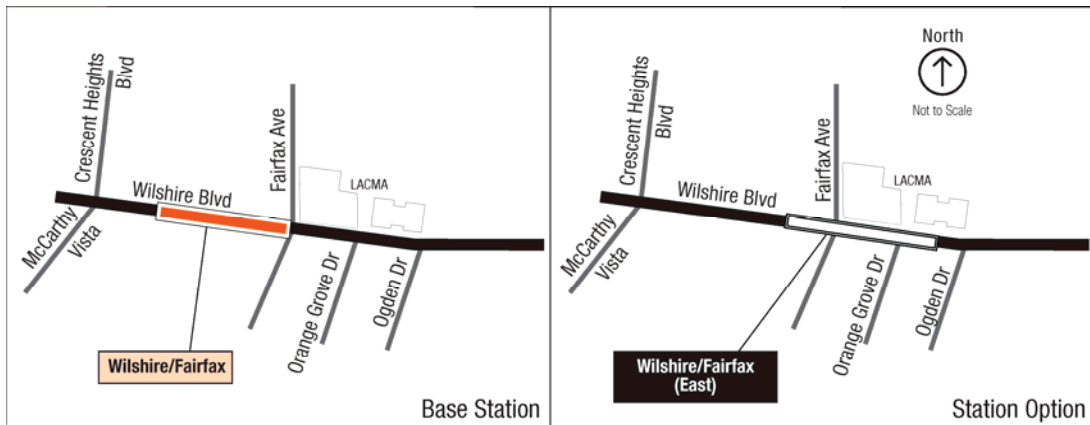


Figure 2-8. Option 2—Fairfax Station Option

2.3.9 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.

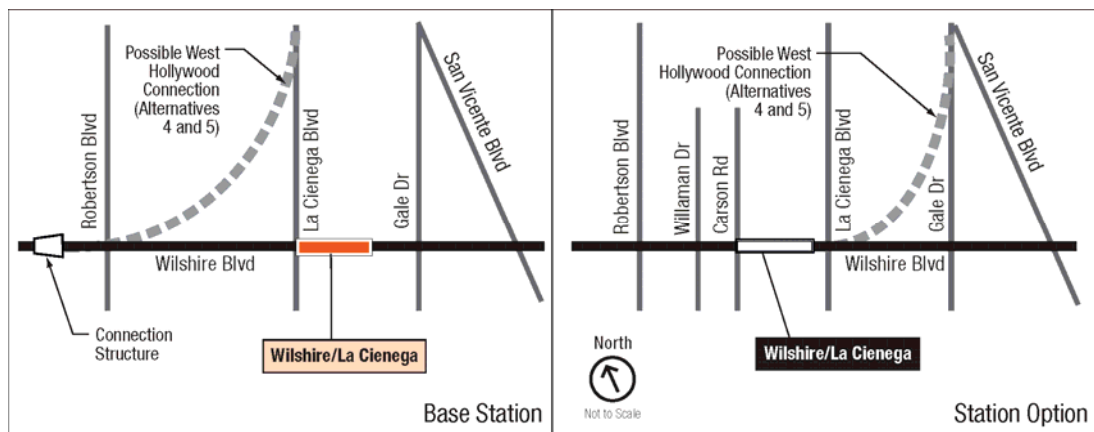


Figure 2-9. Option 3—La Cienega Station Option

2.3.10 Option 4—Century City Station and Segment Options

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:** Three 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.



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.

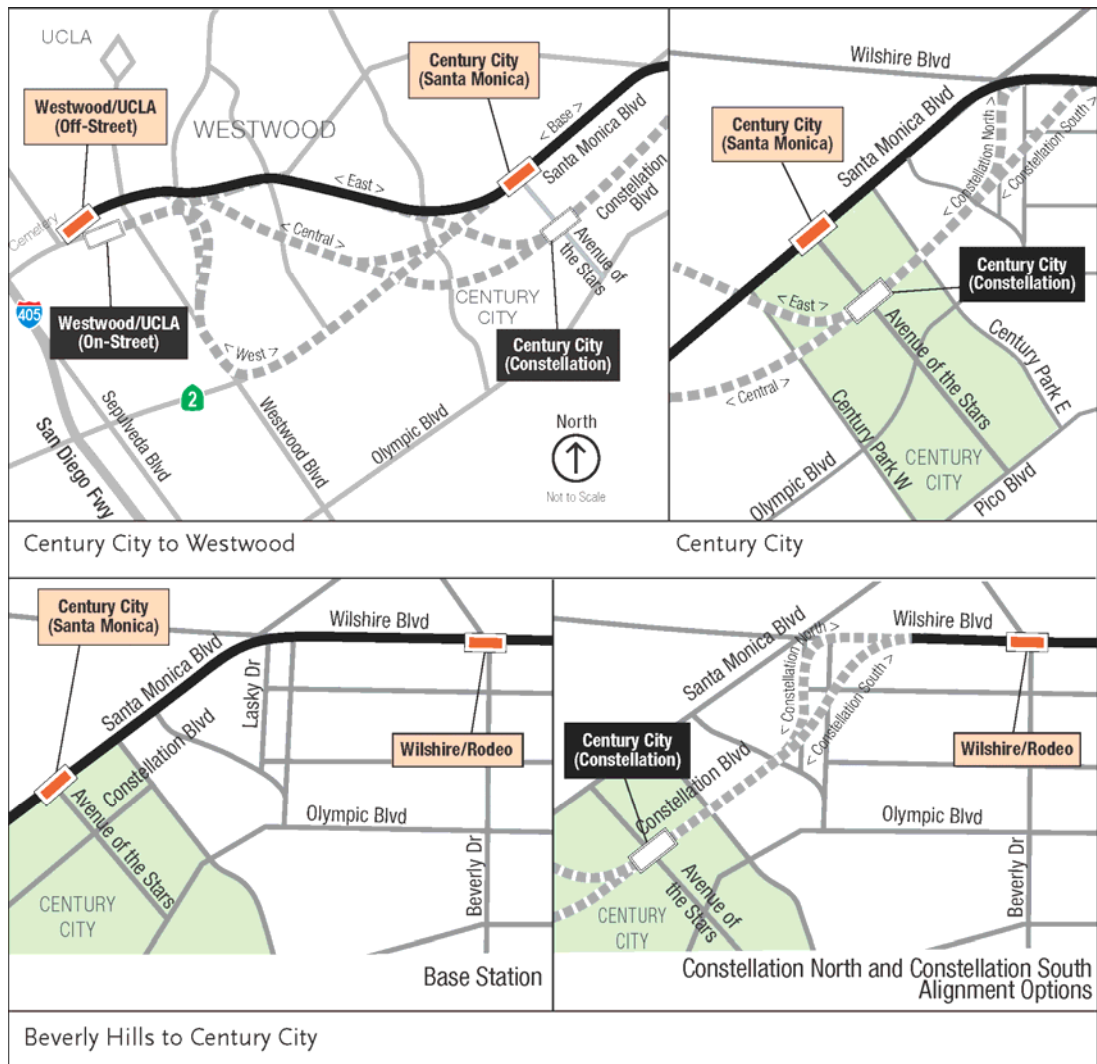


Figure 2-10. Century City Station Options

2.3.11 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).

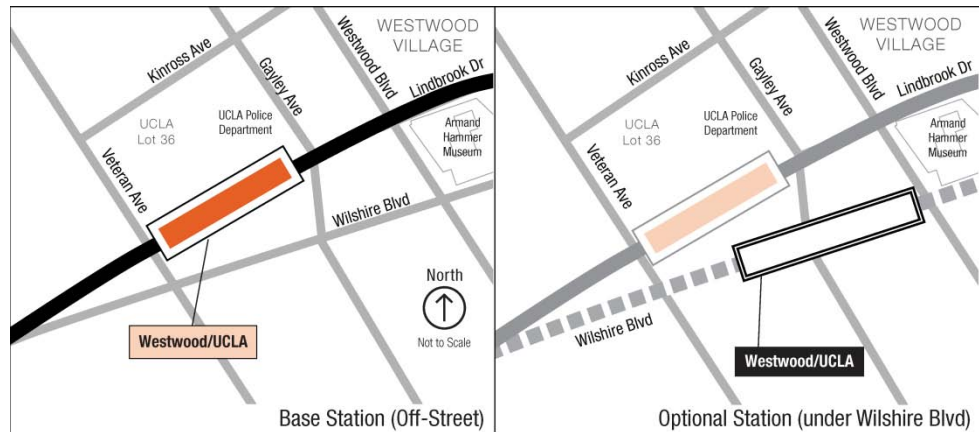


Figure 2-11. Option 5—Westwood/UCLA Station Options

2.3.12 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)
- 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.

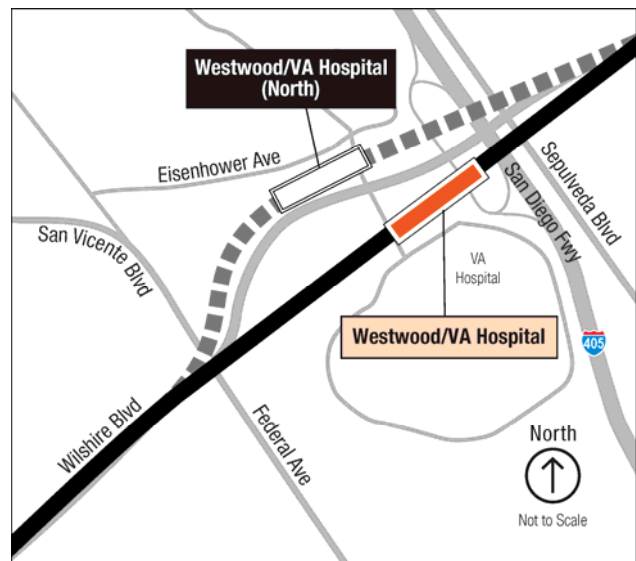


Figure 2-12. Option 6—Westwood/VA Hospital

2.4 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.

2.5 Other Components of the Build Alternatives

2.5.1 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.

2.5.2 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.

2.5.3 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

2.5.4 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	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
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>MOS2 Only: Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS2 Only: Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS2 Only: Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS2 Only: Terminus Station with Double Crossover and tail tracks</i>	Double Crossover <i>MOS2 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,	N/A	End Terminal with Double Crossover, Pocket Track with Double Crossover,

Station	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
			Equilateral Turnouts and tail tracks		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

2.5.5 Rail Operations Center

The existing Rail Operations Center (ROC), shown on the figure below, 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.

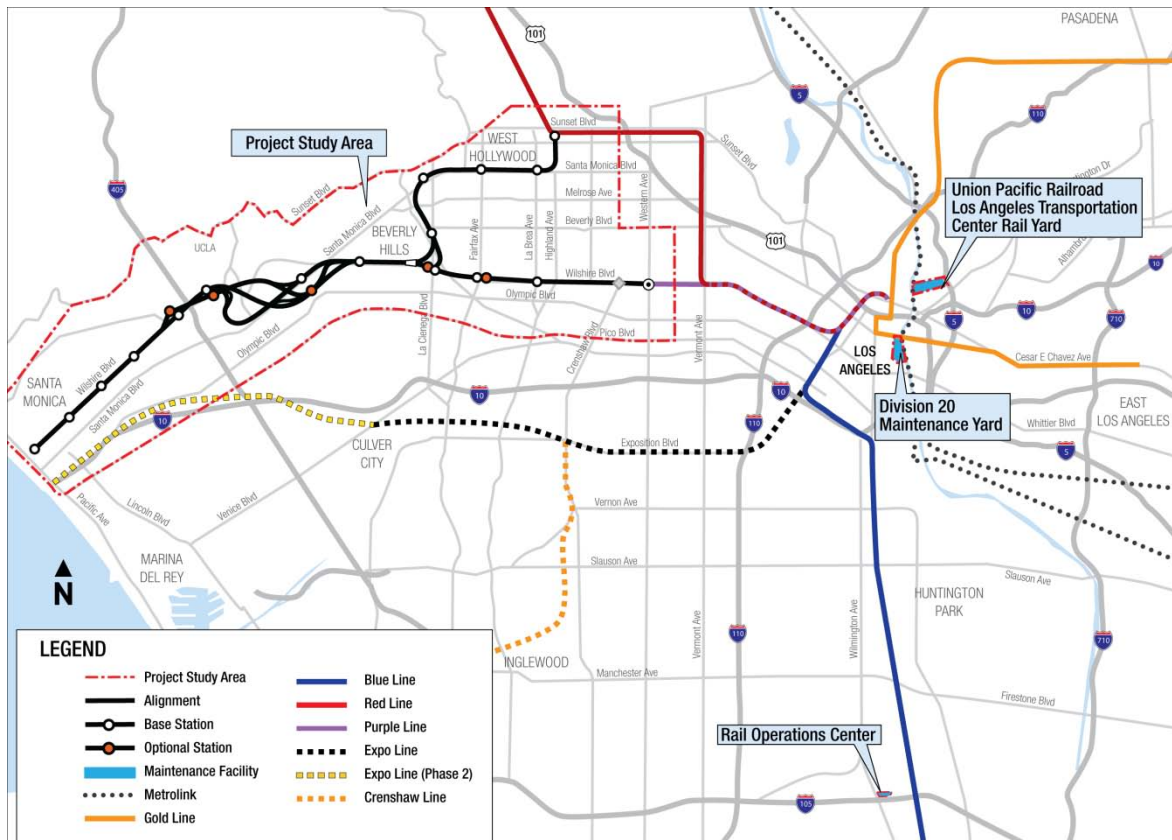


Figure -2-13: Location of the Rail Operations Center and Maintenance Yards

2.5.6 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:

- 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 2-15).

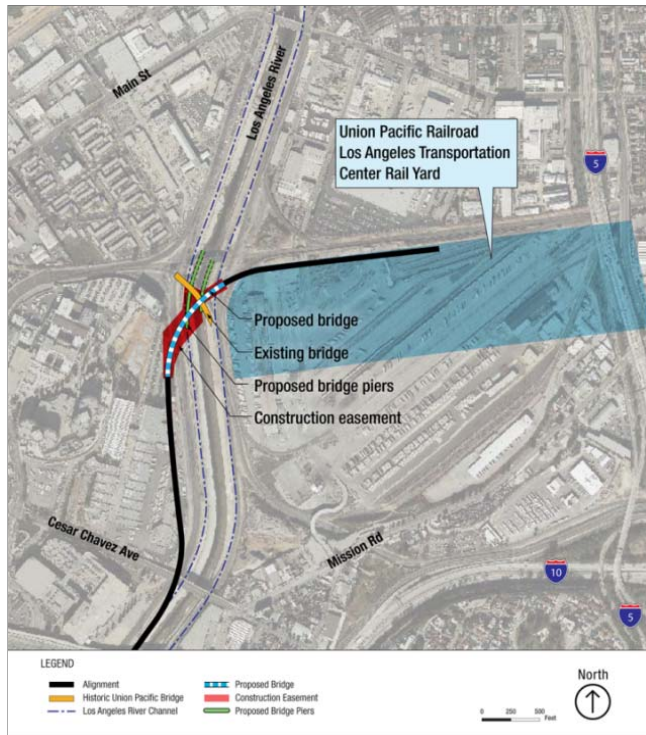


Figure 2-15. UP Railroad Rail Bridge

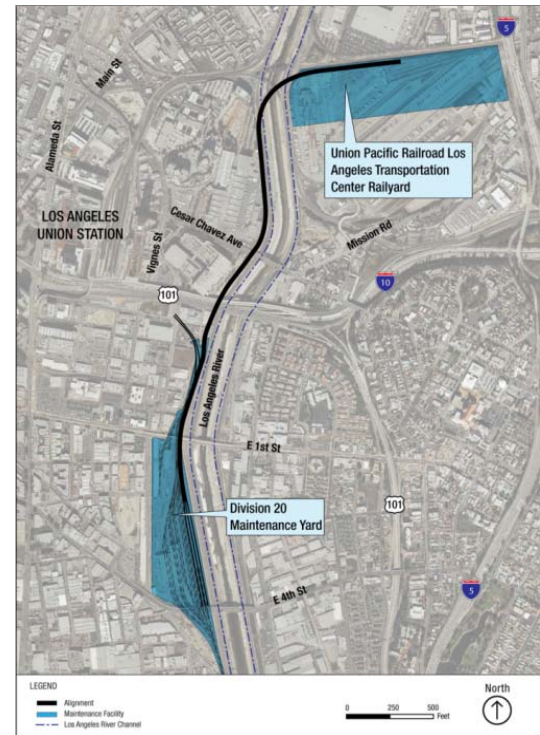


Figure 2-15. Maintenance Yard Options

2.6 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.

2.6.1 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.

2.6.2 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

3.1 National Environmental Policy Act (NEPA) Guidance

3.1.1 Federal

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), mandates that certain relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced as a direct result of projects undertaken by a federal agency or with federal financial assistance. The Uniform Act provides for uniform and equitable treatment for persons displaced from their homes and businesses and establishes uniform and equitable land acquisition policies.

Where acquisition and relocation are unavoidable, owners of private property have federal constitutional guarantees that their property would not be taken or damaged for public use unless they first receive just compensation. Just compensation is measured by the “fair market value” of the property taken, where “fair market value” is considered to be the:

“highest price on the date of valuation that would be agreed to by a seller, being willing to sell, but under no particular or urgent necessity for so doing, nor obliged to sell; and a buyer, being ready, willing and able to buy, but under no particular necessity for so doing, each dealing with the other with the full knowledge of all the uses and purposes for which the property is reasonably adaptable and available.” (Code of Civil Procedure Section 1263.320a)

3.1.2 State

The provisions of the California Relocation Act (California Act) apply if a public entity undertakes a project for which federal funds are not present. In this case, the public entity must provide relocation assistance and benefits. The California Act, which is consistent with the intent and guidelines of the Uniform Act, seeks to:

- (1) Ensure the consistent and fair treatment of owners and occupants of real property;
- (2) Encourage and expedite acquisition by agreement to avoid litigation and relieve congestion in the courts; and
- (3) Promote confidence in the public land acquisitions.

As stated above, under federal regulations, owners of private property have similar state constitutional guarantees regarding property acquisitions, damages, and just compensation.

3.2 California Environmental Quality Act (CEQA) Guidance

According to the CEQA Guidelines, a project would have a significant impact if it would:



- Displace substantial numbers of existing housing units, particularly affordable housing units, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

CEQA does not have specific thresholds for displacement impacts on employment. However, given the character of the project area, it is anticipated that the proposed project could impact businesses. Therefore, a similar threshold for employment displacement will be utilized in this analysis as for population and housing.

3.3 Methodology

Conceptual engineering plans for the proposed alignments, station options, staging areas, and rights-of-way were reviewed in order to assess the types of potential displacement due to any of the project build alternatives. Site reconnaissance of the project area, particularly of the parcels that would potentially be taken fully or partially was undertaken, and the existing businesses were documented. Appropriate scale satellite photography was utilized to determine information regarding parking spaces and location of parcels. The Los Angeles County Assessor's Office parcel information was utilized in this analysis as well. The impact analyses contained in other technical reports were also reviewed and the findings incorporated as appropriate.

In order to assess impacts, the type of acquisition was analyzed, as well as how much of the properties on the parcels would be impacted. Full takes and partial takes have the highest potential for impacts, whereas temporary construction easements and permanent underground easements have the least. All types of acquisitions would be subject to application of Uniform Relocation Act guidelines. A type of acquisition was determined to have an adverse affect if it displaced a substantial number of jobs, residents, and residences.

The format of figures and tables presenting properties affected by displacement was chosen to best represent this data, given the large geographic area and number of properties that would be affected by the proposed project alternatives and options. Specifically, the figures include the parcels and each parcel has a number attached to it. The parcel number in the graphic is referenced in the tables in the same section.



4.0 AFFECTED ENVIRONMENT

For purposes of this evaluation of potential land acquisition impacts, the affected environment is limited to the areas within and directly adjacent to the proposed alternative alignments. Property acquisition may be phased over time, depending on project funding and schedule.

4.1 Typical Sources and Causes of Displacement

Table 4-1 shows typical sources and causes of land acquisition and displacement that could potentially occur with a project. With the proposed project, most of the acquisitions would occur at or near proposed station areas. When an acquisition occurs, it typically results in either a partial or full take of a parcel. A partial take would occur if a portion of the parcel is necessary to accommodate the project. This would occur if, for example, a portion of a commercial parking lot fronting the alignment is required, but not the adjacent commercial building. Partial property takes may result from the widening of a street or intersection due to inadequate right-of-way widths or vertical circulation needs adjacent to subway stations. Vertical circulation is necessary near subway stations as additional land is needed to bring passengers to the surface.

Table 4-1: Sources and Causes of Displacement

Source	Type of Acquisition	Cause/Process
Horizontal alignment	Full/Partial	Not enough right-of-way for alignment
Vertical circulation above subway station	Partial	Additional area needed adjacent to subway station to bring passengers to surface
Street widening	Partial	Aerial structures requiring columns, at-grade trackway and stations
Illegal encroachment	Full	Unauthorized use of private property
Access to a businesses (driveway or road)	Full	Damages resulting from reduced or restricted access
Storage Yards	Full	Additional area required to perform maintenance, for ancillary Facilities, and TPSS sites
Widening of intersections	Partial	Additional area to maintain traffic volumes, turn lanes, or platforms
Station Entrances	Full/Partial/Permanent Easement	Access to new rail line, at-grade or underground
Tunneling easement	Permanent Underground Easement	Subway travels off public right-of-way
Construction activities	Temporary Construction Easement	Staging materials and equipment during the construction period
Cross over tracks	Temporary Construction Easement	Cut and Cover Activities

Source: TAHA, 2010

A full take would occur under two circumstances: (1) when the majority of the property is required for the horizontal alignment because of insufficient right-of-way or the need to construct storage or maintenance facilities; and (2) when a severe loss of access reduces the useful operation of the property (e.g., driveway access to a property is eliminated or reduced due to the construction of transit that travels down the side of a street, as opposed to the median).

An easement is the right to use another person's land for a stated purpose. An easement can involve a general or specific portion of the property and can be either at the surface level or beneath the property. Easements can be temporary, during construction for example, or permanent. Temporary construction easements are necessary when there is a need to utilize a portion of a property for construction staging or equipment use. Permanent underground easements are utilized when tunneling for a subway and during its operation. A permanent underground easement would be obtained for each parcel the tunnel passes beneath. The study area has numerous residential condominium buildings, and each condominium unit requires a separate permanent subsurface easements. In contrast, each multi-family residential apartment building requires only



one permanent subsurface easement, regardless of the number of units in the building. Likewise, each single-family residence would result in a single permanent underground easement. For informational purposes, this report includes data regarding the number of units in affected multi-family apartment buildings, but this does not impact the analysis.

Using these criteria for the types of acquisitions that may be required for the proposed project, a list of properties that could be affected has been compiled for each alternative and option. These lists are presented in detail below and in the technical appendix for the options.

4.2 Existing Land Uses

The current land uses adjacent to the proposed project alignments are presented in detail in the Land Use and Development Technical Report. In general, the project area is heavily urbanized with few vacant lots scattered throughout. The project area has a mix of residential and commercial uses, with few industrial uses.



5.0 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

The proposed project has five build alternatives and two Minimum Operable Segments (MOS). The acquisitions and easements for each alternative are summarized in Table 5-1.

Table 5-1: Displacement and Acquisitions Associated with Each Alternative

Alternative	Affected Parcels					
	FT	PT	PE	TCE	PUE	Total
No Build Alternative						0
TSM Alternative						0
Alternative 1 – Westwood/UCLA Extension	40	5	12	2	218	277
Alternative 2 – Westwood/VA Hospital Extension	40	5	12	2	219	278
Alternative 3 – Santa Monica Extension	59	5	13	2	219	298
Alternative 4 – Wilshire/UCLA Extension plus West Hollywood Extension	64	6	16	3	328	417
Alternative 5 – Santa Monica Extension plus West Hollywood Extension	83	6	17	3	328	437
MOS 1 – Fairfax Extension	32	1	2			35
MOS 2 – Century City Extension	40	2	12		4	58

Note: FT=Full Take; PT=Partial Take; PE=Permanent Easement; TCE=Temporary Construction Easement; PUE=Permanent Underground Easement

Source: TAHA, 2010

5.1 No Build Alternative

The No Build Alternative includes all existing highway and transit services and facilities, and the committed highway and transit projects in the 2009 Metro LRTP and the 2008 SCAG RTP. By 2035, several approved urban rail projects are expected to be in operation and are considered as part of the No Build Alternative. These projects will be funded in part by revenues provided by Measure R, a half-cent sales tax for Los Angeles County passed by voters in November 2008. Measure R commits a projected \$40 billion to traffic relief and funds dozens of critical transit projects throughout the county over the next 30 years. The Exposition Light Rail Phase 2 is the only one of these projects that would be constructed within the Westside Corridor. The alignment enters the project area in the southwest boundary along the Exposition right-of-way and generally follows Olympic Boulevard near the southern edge of the project area. The No Build Alternative also considers future plans for restructuring the Metro bus system by 2035. Metro plans to restructure its bus routes system-wide by eliminating duplicate service or reducing service of bus routes that will be serviced by the urban rail lines. An estimated 600,000



annual revenue bus hours are expected to be reduced. Metro Rapid Bus lines 711, 714, 715, 740, 757, 760, 762, 770, 794, and 920 are expected to be discontinued. The 715, 757 and 920 provide service within the project corridor.

Under the No Build Alternative, there would be minimal construction along the proposed project alignments associated. As such, displacement of properties would not occur in the areas adjacent to the proposed project alignments as a result of traffic improvements. Therefore, no adverse impacts associated with displacement and relocation are anticipated under the No Build Alternative.

5.2 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.

Under the TSM Alternative, there would be minimal construction in the Study Area associated with expanded bus service. As such, displacement of properties for transit infrastructure would not occur. Therefore, no direct adverse impacts associated with displacement and relocation are anticipated under the TSM Alternative.

5.3 Alternative 1 – Westwood/UCLA Extension

Alternative 1 – Westwood/UCLA Extension includes an 8.60-mile alignment that extends from the existing Metro Purple Line Wilshire/Western Station and travels westerly from this station, centered below Wilshire Boulevard, to the Wilshire Boulevard/Santa Monica Boulevard intersection. At this location, the alignment curves northwesterly from Wilshire Boulevard to Santa Monica Boulevard, to a station in Century City beneath Santa Monica Boulevard. From there, the alignment begins to turn northwesterly beneath several streets and properties before turning west under Wilshire Boulevard near Westholme Avenue. The alignment continues westerly under Wilshire Boulevard, turns northerly at Malcolm Avenue, then westerly under Lindbrook Drive, and continues centered under Lindbrook Drive, crossing under Glendon Avenue, Westwood Boulevard, and Gayley Avenue to the Wilshire/Westwood Station under UCLA’s Parking Lot 36.

For this alternative (and Alternative 4) that ends at the Westwood/UCLA Station, a cross-over would be located west of the station, east of Sepulveda Boulevard to allow for trains to “switch” tracks to begin a “turn.” Tail tracks would be located on the west side of the I-405 Freeway with a vent shaft just on the VA Hospital property that will not preclude a



future station location. Trains would enter the cross-over from the east, extend along one of the tail/pocket tracks and head back to the Westwood/UCLA Station to travel eastward.

Although Alternative 1 – Westwood/UCLA Extension would attempt to maximize the public ROW for its alignment, stations, and ancillary structures, the following acquisitions and easements are anticipated (Table 5-2 through Table 5-6 and Figure 5-1 through Figure 5-10):

- 40 Full Takes
- 5 Partial Takes
- 12 Permanent Easements
- 2 Temporary Construction Easements
- 218 Permanent Underground Easements

These parcels would be utilized for construction staging, below grade tunneling, station locations, generator locations, and vent locations. Some station plans have multiple entrance options, though not all of them would be constructed. In these cases, all potential acquisitions and easements for station entrances are evaluated.

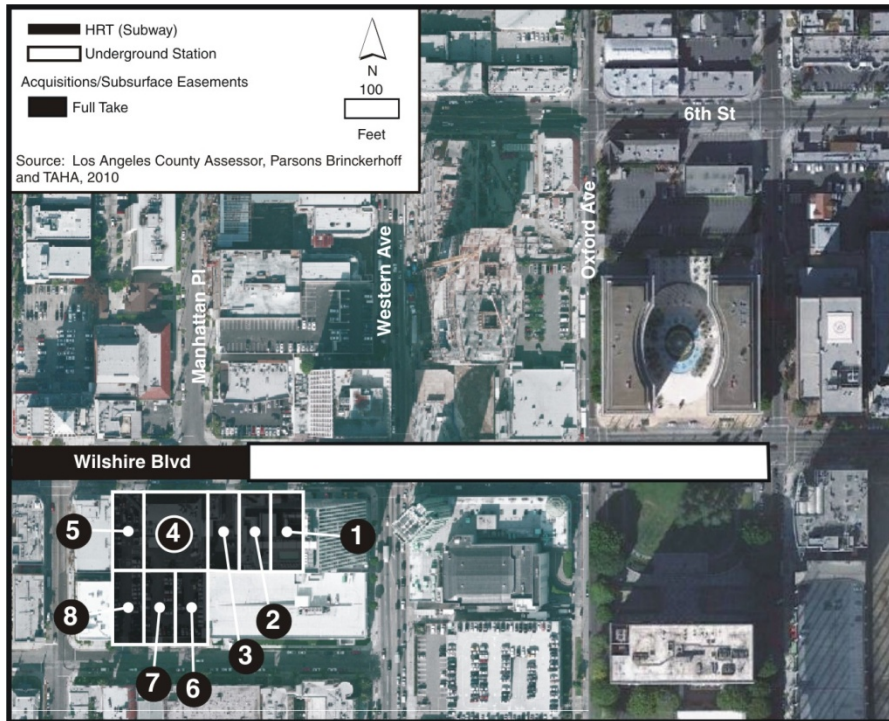


Figure 5-1: Alternative 1 Potentially Displaced Parcels – Wilshire/Western Station Area



Figure 5-2: Alternative 1 Potentially Displaced Parcels – Wilshire/Crenshaw Station Area



Figure 5-3: Alternative 1 Potentially Displaced Parcels—
Wilshire/La Brea Station Area



Figure 5-4: Alternative 1 Potentially Displaced Parcels—
Wilshire/Fairfax Station Area

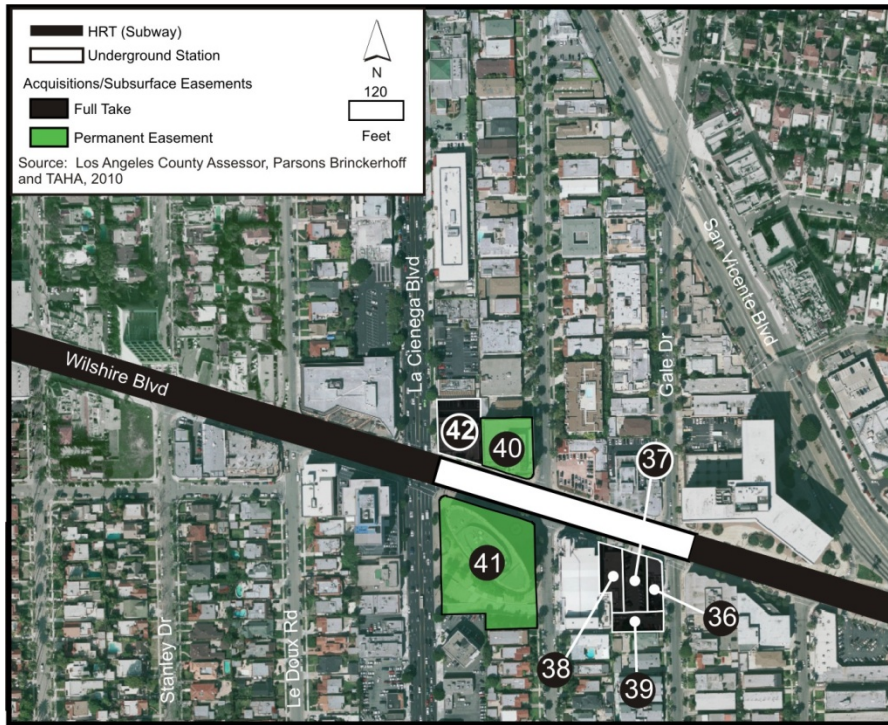


Figure 5-5: Alternative 1 Potentially Displaced Parcels—Wilshire/La Cienega Station Area

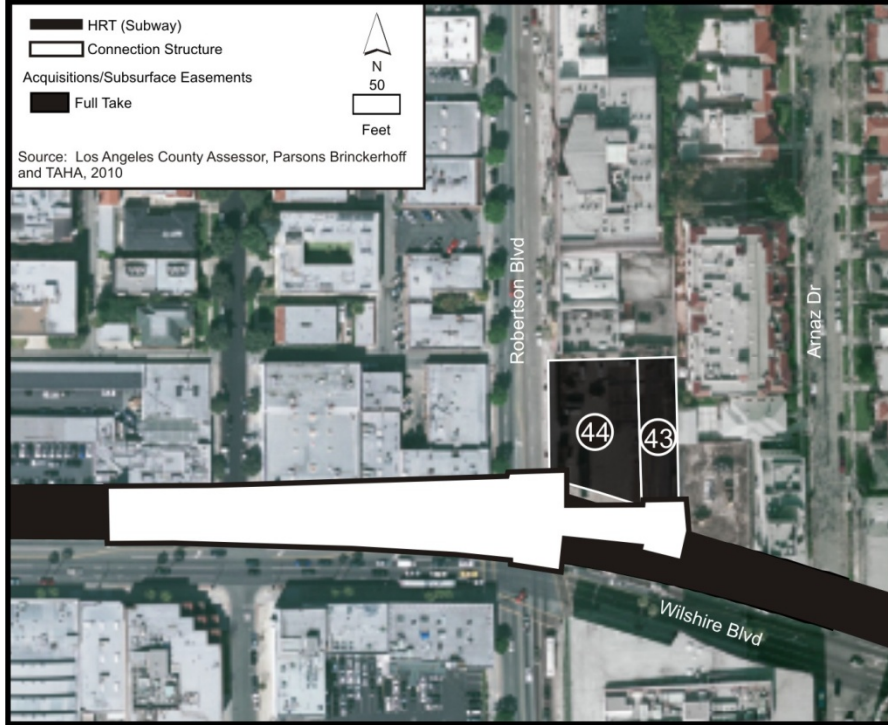


Figure 5-6: Alternative 1 Potentially Displaced Parcels—Wilshire/Robertson Connection