

WESTSIDE SUBWAY EXTENSION

Transit Impact Assessment Report



August 2010





Table of Contents

- 1.0 INTRODUCTION 1-1**
- 2.0 PROJECT DESCRIPTION 2-1**
 - 2.1 No Build Alternative..... 2-1
 - 2.2 TSM Alternative 2-1
 - 2.3 Build Alternatives..... 2-1
 - 2.3.1 Alternative 1—Westwood/UCLA Extension..... 2-2
 - 2.3.2 Alternative 2—Westwood/Veterans Administration (VA) Hospital Extension
..... 2-2
 - 2.3.3 Alternative 3—Santa Monica Extension 2-2
 - 2.3.4 Alternative 4—Westwood/VA Hospital Extension plus West Hollywood
Branch 2-4
 - 2.3.5 Alternative 5—Santa Monica Extension plus West Hollywood Branch 2-4
 - 2.3.6 Stations and Segment Options..... 2-5
 - 2.3.7 Option 1—Wilshire/Crenshaw Station Option 2-0
 - 2.3.8 Option 2—Wilshire/Fairfax Station East Option 2-0
 - 2.3.9 Option 3—Wilshire/La Cienega Station Option 2-1
 - 2.3.10 Option 4—Century City Station and Segment Options 2-2
 - 2.3.11 Option 5—Westwood/UCLA Station Options..... 2-3
 - 2.3.12 Option 6—Westwood/VA Hospital Station Option 2-4
 - 2.4 Base Stations 2-4
 - 2.5 Other Components of the Build Alternatives..... 2-5
 - 2.5.1 Traction Power Substations..... 2-5
 - 2.5.2 Emergency Generators 2-5
 - 2.5.3 Mid-Tunnel Vent Shaft..... 2-6
 - 2.5.4 Trackwork Options 2-6
 - 2.5.5 Rail Operations Center 2-8
 - 2.5.6 Maintenance Yards..... 2-9
 - 2.6 Minimum Operable Segments 2-9
 - 2.6.1 MOS 1—Fairfax Extension 2-10
 - 2.6.2 MOS 2—Century City Extension..... 2-10
- 3.0 EXISTING CONDITIONS..... 3-1**
 - 3.1 Regional Transit Network 3-1
 - 3.2 Study Area Transit Network..... 3-1
 - 3.3 Station-Area Transit Service..... 3-7
 - 3.3.1 Peak Hour Roadway Congestion Underlies the Need for Transit
Improvements 3-7
- 4.0 FUTURE TRANSIT CONDITIONS 4-1**
 - 4.1 No Build Alternative..... 4-1
 - 4.2 TSM Alternative 4-1
 - 4.3 Build Alternatives..... 4-1
 - 4.3.1 Service Characteristics..... 4-2
 - 4.4 Regional Performance Measures 4-2
 - 4.5 Build Alternatives Ridership Analysis..... 4-3



4.5.1 Project Trips 4-3

4.5.2 Station Boardings 4-3

4.6 Mode of Access 4-3

4.7 Study Corridor Travel Time Comparison 4-5

4.8 Transit Travel Times, Speed, and Reliability: Regional Travel 4-7

4.8.1 Transit Travel Times..... 4-7

4.8.2 Transit Speed and Reliability..... 4-13

4.9 Summary..... 4-15

5.0 PEDESTRIAN/BICYCLE/BUS-RAIL INTERFACE..... 5-1

5.1 Wilshire/Crenshaw Station..... 5-1

5.1.1 Pedestrian & Bicycle Interface..... 5-1

5.1.2 Bus Interface..... 5-4

5.2 Wilshire/La Brea Station..... 5-4

5.2.1 Pedestrian & Bicycle Interface..... 5-4

5.2.2 Bus Interface..... 5-6

5.3 Wilshire/Fairfax Station..... 5-6

5.3.1 Pedestrian & Bicycle Interface..... 5-6

5.3.2 Bus Interface..... 5-8

5.3.3 Wilshire/Fairfax Optional Station (Option B) 5-8

5.4 Wilshire/La Cienega Station 5-9

5.4.1 Pedestrian & Bicycle Interface..... 5-11

5.4.2 Bus Interface..... 5-11

5.4.3 Wilshire/La Cienega Optional Station (Option C)..... 5-13

5.5 Wilshire/Rodeo Station..... 5-15

5.5.1 Pedestrian & Bicycle Interface..... 5-15

5.5.2 Bus Interface..... 5-17

5.6 Century City Station..... 5-17

5.6.1 Pedestrian & Bicycle Interface..... 5-17

5.6.2 Bus Interface..... 5-19

5.6.3 Century City Optional Station 5-19

5.7 Westwood/UCLA Station..... 5-21

5.7.1 Pedestrian & Bicycle Interface..... 5-21

5.7.2 Bus Interface..... 5-23

5.7.3 Westwood/UCLA Optional Station (Option E)..... 5-23

5.8 Westwood/VA Hospital Station 5-26

5.8.1 Pedestrian & Bicycle Interface..... 5-26

5.8.2 Bus Interface..... 5-27

5.8.3 Westwood/VA Hospital Optional Station (Option F)..... 5-29

5.9 Wilshire/Bundy Station 5-29

5.9.1 Pedestrian & Bicycle Interface..... 5-29

5.9.2 Bus Interface..... 5-32

5.10 Wilshire/26th Station..... 5-32

5.10.1 Pedestrian & Bicycle Interface..... 5-32

5.10.2 Bus Interface..... 5-34

5.11 Wilshire/16th Station..... 5-34

5.11.1 Pedestrian & Bicycle Interface..... 5-34



5.11.2 Bus Interface..... 5-36

5.12 Wilshire/4th Station..... 5-36

5.12.1 Pedestrian & Bicycle Interface..... 5-36

5.12.2 Bus Interface..... 5-38

5.13 Hollywood/Highland Station..... 5-38

5.13.1 Pedestrian & Bicycle Interface..... 5-38

5.13.2 Bus Interface..... 5-40

5.14 Santa Monica/La Brea Station..... 5-40

5.14.1 Pedestrian & Bicycle Interface..... 5-40

5.14.2 Bus Interface..... 5-40

5.15 Santa Monica/Fairfax Station..... 5-42

5.15.1 Pedestrian & Bicycle Interface..... 5-42

5.15.2 Bus Interface..... 5-44

5.16 Santa Monica/San Vicente Station 5-44

5.16.1 Pedestrian & Bicycle Interface..... 5-44

5.16.2 Bus Interface..... 5-46

5.17 Beverly Center Area Station 5-46

5.17.1 Pedestrian & Bicycle Interface..... 5-46

5.17.2 Bus Interface..... 5-48

6.0 IMPACT ASSESSMENT..... 6-1

6.1 Methodology..... 6-1

6.2 No-Build Alternative Impact Determination..... 6-1

6.3 TSM Alternative Impact Determination 6-1

6.3.1 Criteria 1 and 2 6-1

6.4 Build Alternatives Impact Determination..... 6-1

6.4.1 Wilshire/Crenshaw Station 6-1

6.4.2 Wilshire/La Brea Station 6-2

6.4.3 Wilshire/Fairfax..... 6-3

6.4.4 Wilshire/Fairfax (Optional Station)..... 6-4

6.4.5 Wilshire/La Cienega Station..... 6-4

6.4.6 Wilshire/La Cienega (Optional Station) 6-5

6.4.7 Wilshire/Rodeo Station 6-5

6.4.8 Century City Station 6-6

6.4.9 Century City (Optional Station)..... 6-7

6.4.10 Westwood/UCLA Station 6-8

6.4.11 Westwood/UCLA (Optional Station)..... 6-9

6.4.12 Westwood/VA Hospital Station..... 6-9

6.4.13 Westwood/VA Hospital (Optional Station) 6-10

6.4.14 Wilshire/Bundy Station..... 6-10

6.4.15 Wilshire/26th Station 6-11

6.4.16 Wilshire/16th Station 6-11

6.4.17 Wilshire/4th Station 6-12

6.4.18 Hollywood/Highland Station 6-13

6.4.19 Santa Monica/La Brea Station 6-14

6.4.20 Santa Monica/Fairfax Station 6-15

6.4.21 Santa Monica/San Vicente Station..... 6-15



6.4.22 Beverly Center Area Station..... 6-16

6.5 Impact Summary 6-17

7.0 MITIGATION MEASURES7-1

7.1 Wilshire/Crenshaw Station..... 7-1

7.2 Wilshire/La Brea Station..... 7-1

7.3 Wilshire/Fairfax Station..... 7-2

7.4 Wilshire/Fairfax Optional Station..... 7-2

7.5 Wilshire/La Cienega Station 7-3

7.6 Wilshire/La Cienega Optional Station 7-4

7.7 Wilshire/Rodeo Station..... 7-4

7.8 Century City Station..... 7-5

7.9 Century City Optional Station..... 7-6

7.10 Westwood/UCLA Station..... 7-6

7.11 Westwood/UCLA Optional Station..... 7-7

7.12 Westwood/VA Hospital Station 7-7

7.13 Westwood/VA Hospital Optional Station 7-8

7.14 Wilshire/Bundy Station 7-8

7.15 Wilshire/26th Station..... 7-8

7.16 Wilshire/16th Station..... 7-9

7.17 Wilshire/4th Station..... 7-9

7.18 Hollywood/Highland Station..... 7-9

7.19 Santa Monica/La Brea Station..... 7-10

7.20 Santa Monica/Fairfax Station..... 7-10

7.21 Santa Monica/San Vicente Station 7-11

7.22 Beverly Center Area Station 7-11

8.0 IMPACTS REMAINING AFTER MITIGATION.....8-1

9.0 REFERENCES9-1

List of Tables

Table 2-1. Alternatives and Stations Considered..... 2-7

Table 2-2. Mid-Tunnel Vent Shaft Locations 2-6

Table 2-3. Special Trackwork Locations 2-7

Table 3-1. Major East-West Streets/Bus Lines in Study Area 3-4

Table 3-2. Existing Study Area Transit Service and Weekday Boardings..... 3-5

Table 3-3. Station-Area Transit Routes and Headways 3-10

Table 4-1. Regional Performance Measures – Los Angeles County..... 4-2

Table 4-2. Build Alternative Project Trips Comparison 4-3

Table 4-3. Daily Station Boardings 4-4

Table 4-4. Daily Mode of Access Percentages 4-5

Table 4-5. Project Alternative Peak Travel Time Comparison 4-5

Table 4-6. Project Alternative Off-Peak Travel Time Comparison..... 4-6
 Table 6-1. Transit and Non-Motorized Impact Summary..... 6-17

List of Figures

Figure 2-1. Alternative 1—Westwood/UCLA Extension..... 2-3
 Figure 2-2. Alternative 2—Westwood/Veterans Administration (VA) Hospital Extension 2-3
 Figure 2-3. Alternative 3—Santa Monica Extension 2-4
 Figure 2-4. Alternative 4—Westwood/VA Hospital Extension plus West Hollywood Branch 2-5
 Figure 2-5. Alternative 5—Santa Monica Extension plus West Hollywood Branch 2-6
 Figure 2-6. Station and Alignment Options..... 2-8
 Figure 2-7. Option 1—No Wilshire/Crenshaw Station Option..... 2-0
 Figure 2-8. Option 2—Fairfax Station Option..... 2-1
 Figure 2-9. Option 3—La Cienega Station Option 2-1
 Figure 2-10. Century City Station Options..... 2-3
 Figure 2-11. Option 5—Westwood/UCLA Station Options..... 2-4
 Figure 2-12. Option 6—Westwood/VA Hospital Station North..... 2-4
 Figure 2-13. Location of the Rail Operations Center and Maintenance Yards..... 2-8
 Figure 2-15. Maintenance Yard Options 2-9
 Figure 2-15. UP Railroad Rail Bridge..... 2-9
 Figure 1-1: Example of Heavy Rail Vehicle in Subway 2-10
 Figure 1-1: Future Knock-Out Connection Panel 2-10
 Figure 3-3. Major Transfer Points in Study Area..... 3-9
 Figure 3-4. Wilshire/Crenshaw Station-Area Stop-Level Boardings 3-15
 Figure 3-5. Wilshire/La Brea Station-Area Stop-Level Boardings 3-16
 Figure 3-6. Wilshire/Fairfax Station-Area Stop-Level Boardings 3-17
 Figure 3-7. Wilshire/La Cienega Station-Area Stop-Level Boardings 3-18
 Figure 3-8. Wilshire/Rodeo Station-Area Stop-Level Boardings 3-19
 Figure 3-9. Century City Station-Area Stop-Level Boardings 3-20
 Figure 3-10. Westwood/UCLA Station-Area Stop-Level Boardings 3-21
 Figure 3-11. Westwood/VA Hospital Station-Area Stop-Level Boardings 3-22
 Figure 3-12. Wilshire/Bundy Station-Area Stop-Level Boardings..... 3-23
 Figure 3-13. Wilshire/26th Station-Area Stop-Level Boardings 3-24
 Figure 3-14. Wilshire/16th Station-Area Stop-Level Boardings 3-25
 Figure 3-15. Wilshire/4th Station-Area Stop-Level Boardings 3-26
 Figure 3-16. Hollywood/Highland Station-Area Stop-Level Boardings 3-27
 Figure 3-17. Santa Monica/La Brea Station-Area Stop-Level Boardings..... 3-28

Figure 3-18. Santa Monica/Fairfax Station-Area Stop-Level Boardings	3-29
Figure 3-19. Santa Monica/San Vicente Station-Area Stop-Level Boardings.....	3-30
Figure 3-20. Beverly Center Area Station-Area Stop-Level Boardings	3-31
Figure 3-21. Daily Metro, Santa Monica, and Culver City Bus Boardings within ¼-Mile of Station Areas	3-32
Figure 4-1. Origins and Destinations for Transit Travel Times.....	4-9
Figure 4-2. Transit Travel Times— Pasadena to Westside	4-10
Figure 4-3. Transit Travel Times— Downtown Los Angeles to Westside	4-10
Figure 4-4. Transit Travel Times— South Central Los Angeles to Westside.....	4-11
Figure 4-5. Transit Travel Times— Reseda to Westside	4-11
Figure 4-6. Transit Travel Times— Covina to Westside	4-12
Figure 4-7. Transit Travel Times— Wilshire Western to Westside	4-12
Figure 4-8. Transit Travel Times— North Hollywood to Westside.....	4-12
Figure 4-9. Transit Operating Speeds	4-13
Figure 4-10. Extent of Passenger Miles in Exclusive Guideway Service	4-14
Figure 5-1. Wilshire/Crenshaw Station	5-3
Figure 5-2. Wilshire/La Brea Station.....	5-5
Figure 5-3. Wilshire/Fairfax Station.....	5-7
Figure 5-4. Wilshire/Fairfax Optional Station.....	5-10
Figure 5-5. Wilshire/La Cienega Station.....	5-12
Figure 5-6. Wilshire/La Cienega Optional Station.....	5-14
Figure 5-7. Wilshire/Rodeo Station	5-16
Figure 5-8. Century City Station.....	5-18
Figure 5-9. Century City Optional Station.....	5-20
Figure 5-10. Westwood/UCLA Station - Off-Street.....	5-22
Figure 5-11. Westwood/UCLA Optional Station.....	5-24
Figure 5-12. Westwood/VA Hospital Station	5-28
Figure 5-13. Westwood/VA Hospital Optional Station.....	5-30
Figure 5-14. Wilshire/Bundy Station	5-31
Figure 5-15. Wilshire/26th Station.....	5-33
Figure 5-16. Wilshire/16th Station.....	5-35
Figure 5-17. Wilshire/4th Station	5-37
Figure 5-18. Hollywood/Highland Station.....	5-39
Figure 5-19. Santa Monica/La Brea Station	5-41
Figure 5-20. Santa Monica/Fairfax Station	5-43
Figure 5-21. Santa Monica/San Vicente Station	5-45
Figure 5-22. Beverly Center Area Station.....	5-47



Acronyms and Abbreviations

AA	Alternatives Analysis
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FY	Fiscal Year
HRT	Heavy Rail Transit
LPA	Locally Preferred Alternative
L RTP	Long Range Transportation Plan
LUCE	City of Santa Monica Land Use and Circulation Element
Metro	Los Angeles County Metropolitan Transportation Authority
MOS	Minimum Operable Segment
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
TSM	Transportation System Management
UCLA	University of California, Los Angeles



1.0 INTRODUCTION

This report describes the existing transit conditions within the Westside Subway Extension Study Area, projects future transit conditions with and without the project Build Alternatives, and assesses the potential transit impacts of the Build Alternatives and proposes measures to mitigate transit impacts to less than significant levels.

Under existing conditions, there are no fixed-guideway transit facilities on the west side of Los Angeles. However, there is a significant demand for transit, notably in the east-west direction. To analyze the compatibility of the Westside Subway Extension with the current transit system, this report looks at several indicators, including the location of bus routes, the frequency of bus service, and the magnitude of boardings at bus stops near proposed stations. The analysis of future transit conditions examines regional performance measures, subway ridership, mode of station access, and subway travel time as they apply to each minimum operable segment (MOS) and Build Alternative.

The impact analysis in this report looks at the person-level interface between the Westside Subway Extension and the existing transportation system. Feeder bus capacity, transit transfer delays, and pedestrian/bicycle safety are analyzed at each proposed station. As appropriate, measures are identified to mitigate significant and adverse project-related impacts.



This page intentionally left blank.



2.0 PROJECT DESCRIPTION

This section 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 section.

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.

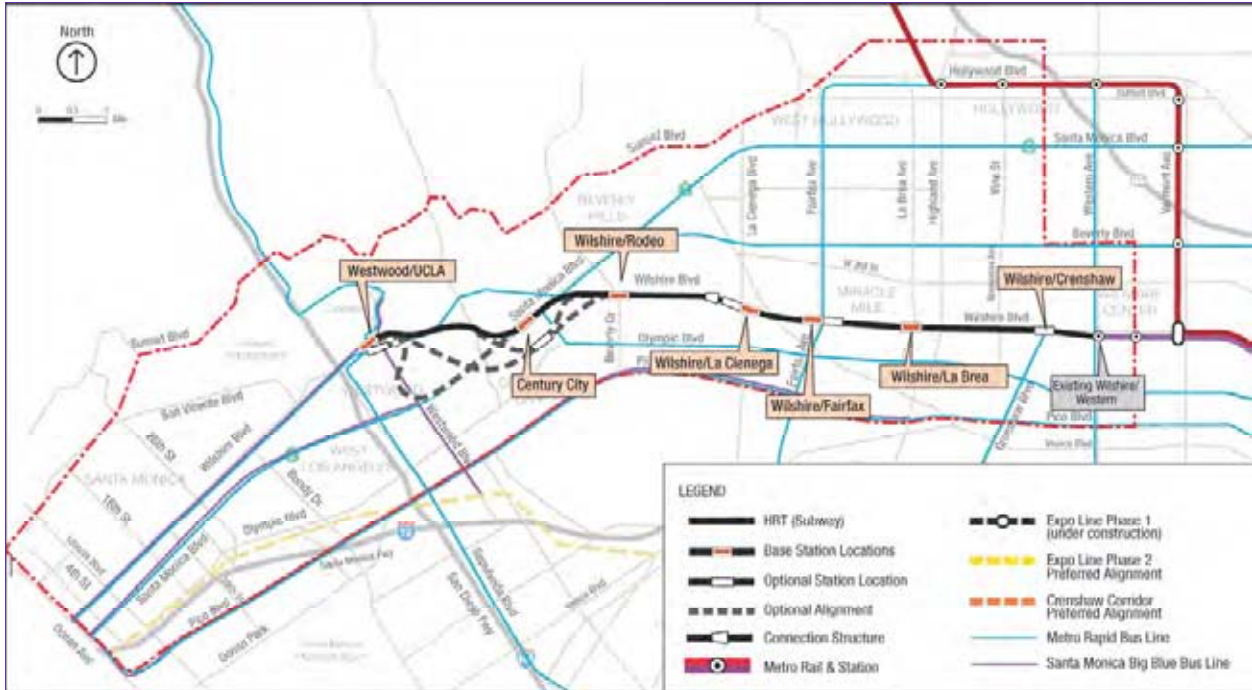

Figure 2-1. Alternative 1—Westwood/UCLA Extension

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

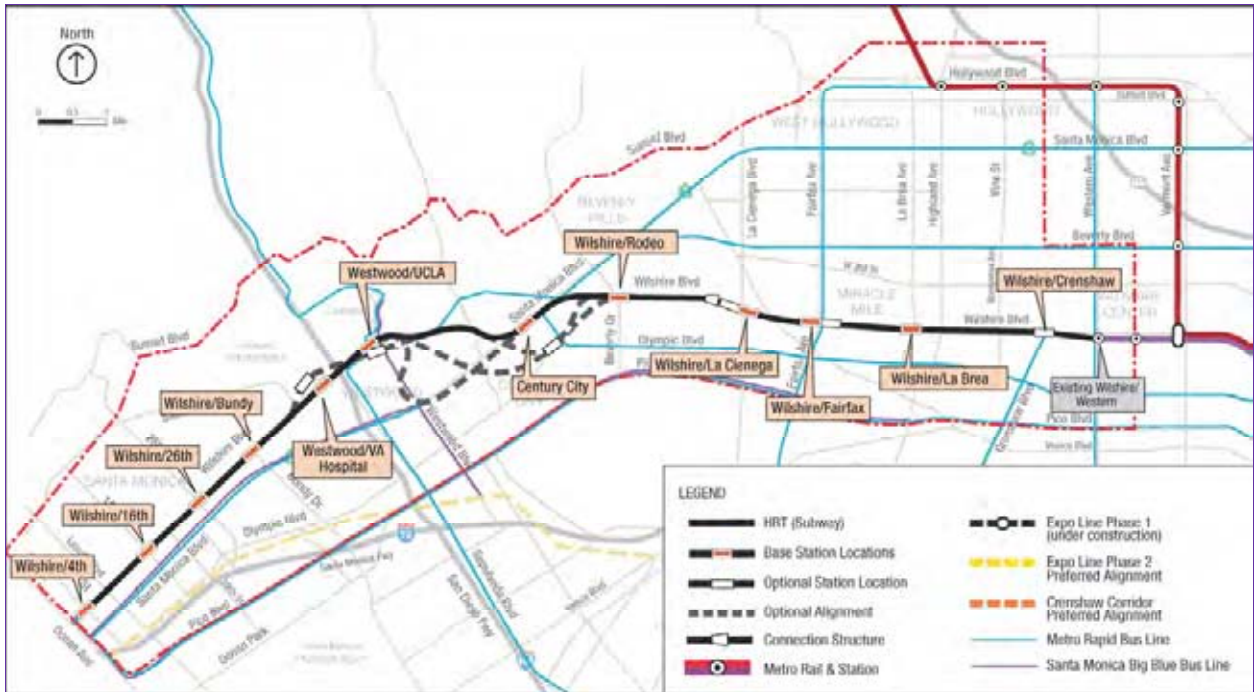


Figure 2-3. Alternative 3—Santa Monica Extension

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

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 Branch 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 Branch 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 Branch

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 Branch 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 Branch 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.

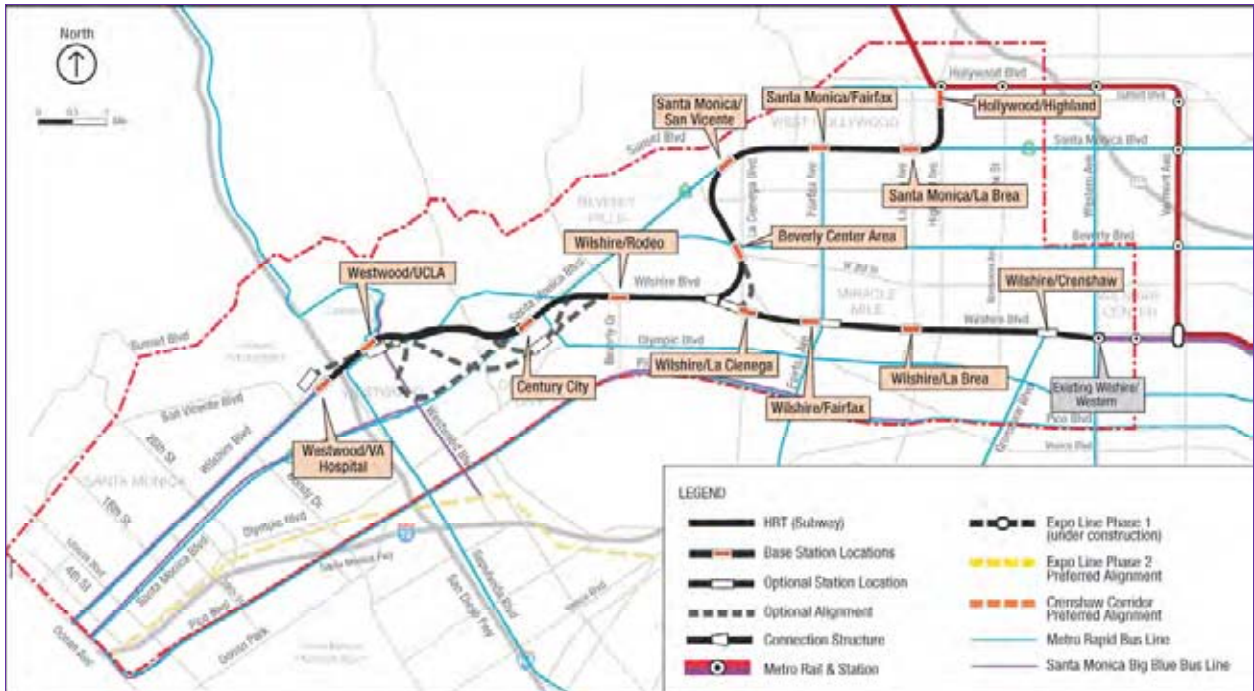


Figure 2-4. Alternative 4—Westwood/VA Hospital Extension plus West Hollywood Branch

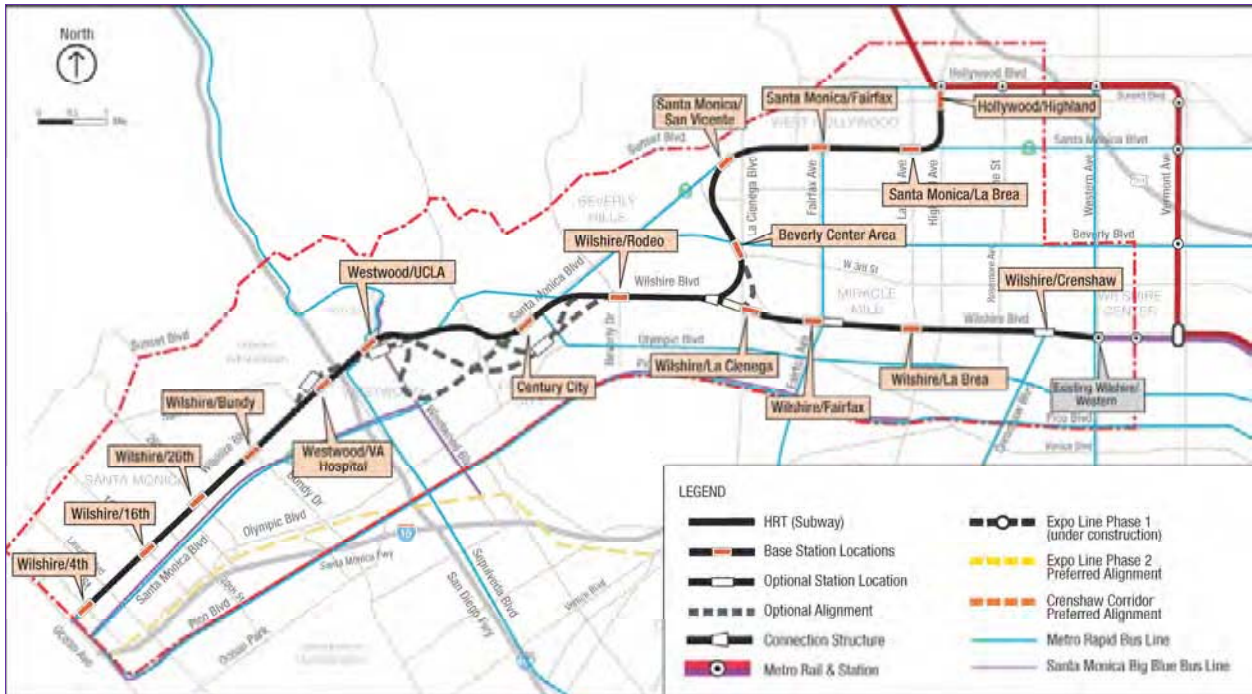


Figure 2-5. Alternative 5—Santa Monica Extension plus West Hollywood Branch

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 Branch	Santa Monica Extension Plus West Hollywood Branch
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		•	•	•	•

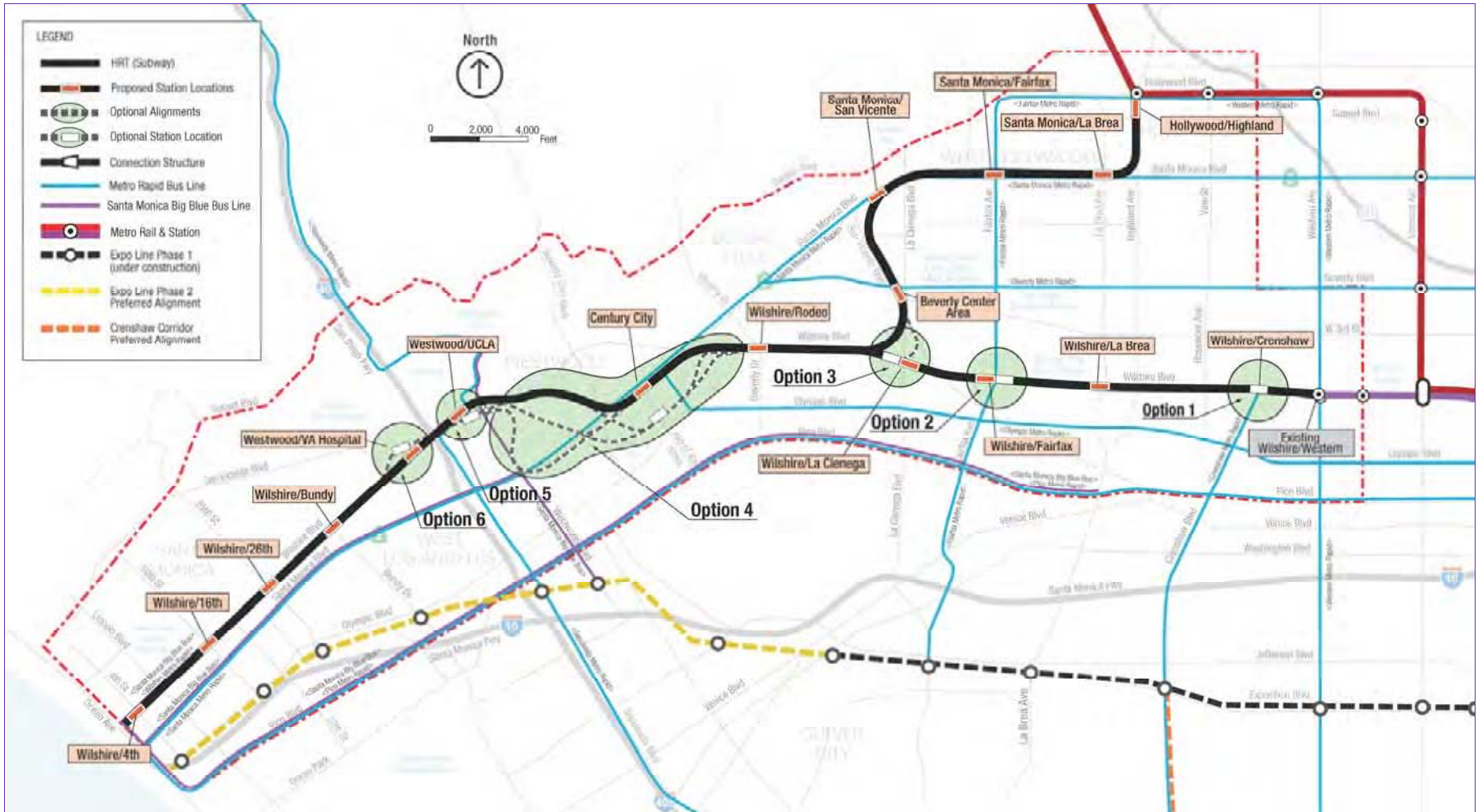


Figure 2-6. Station and Alignment Options



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).

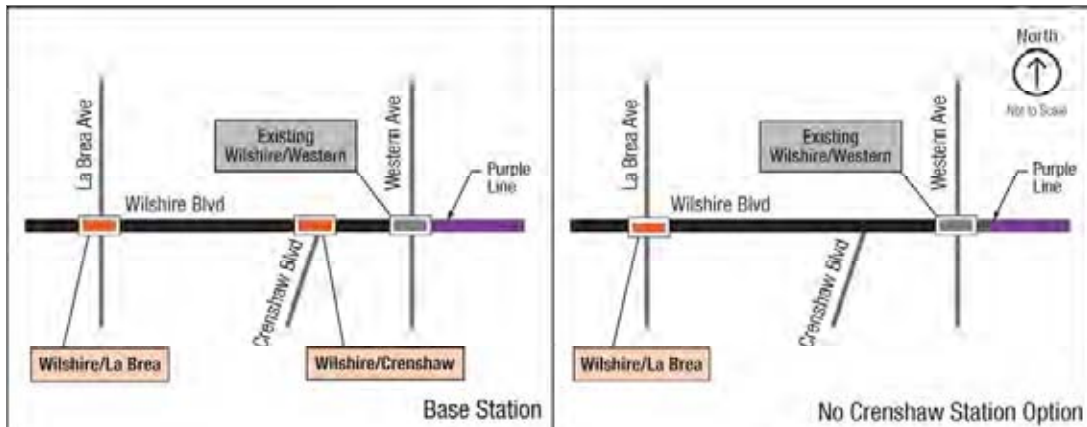


Figure 2-7. Option 1—No Wilshire/Crenshaw Station Option

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.

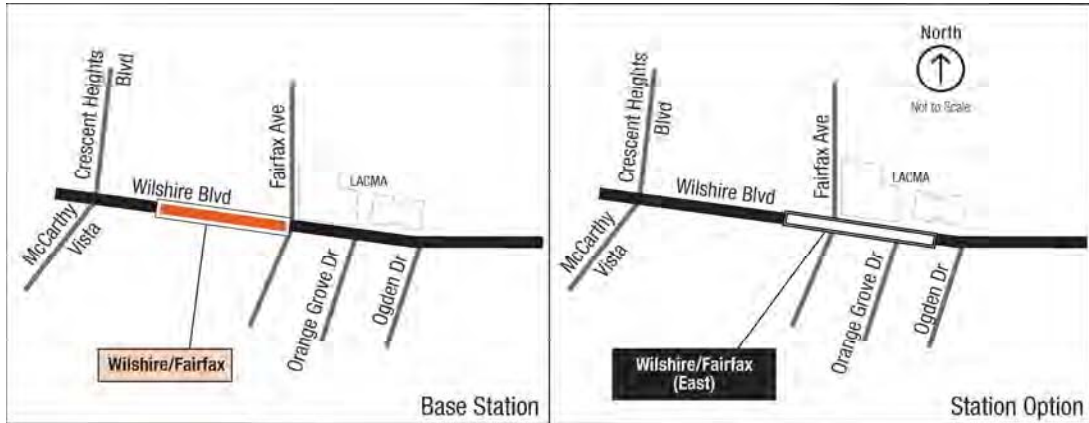


Figure 2-8. Option 2—Fairfax Station Option

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 Branch. This alignment portion of Option 3 is only applicable to Alternatives 4 and 5.

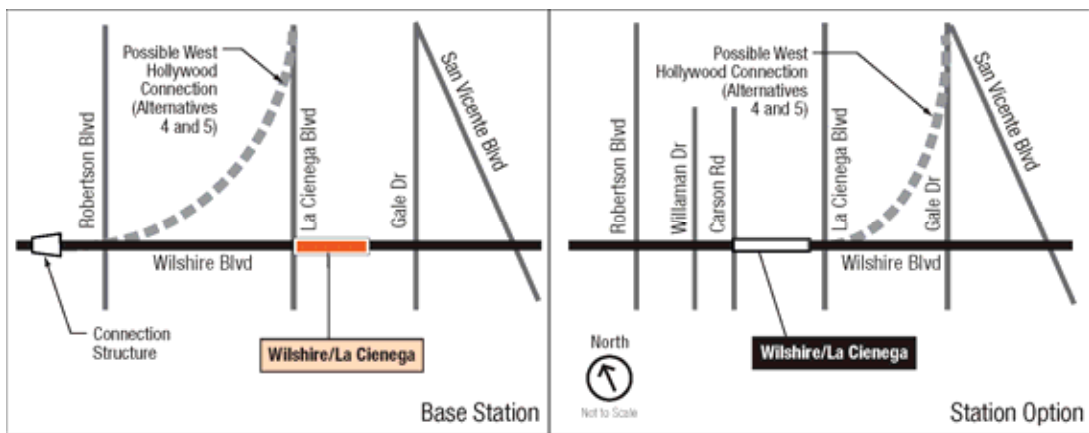


Figure 2-9. Option 3—La Cienega Station Option



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:** 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.

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.

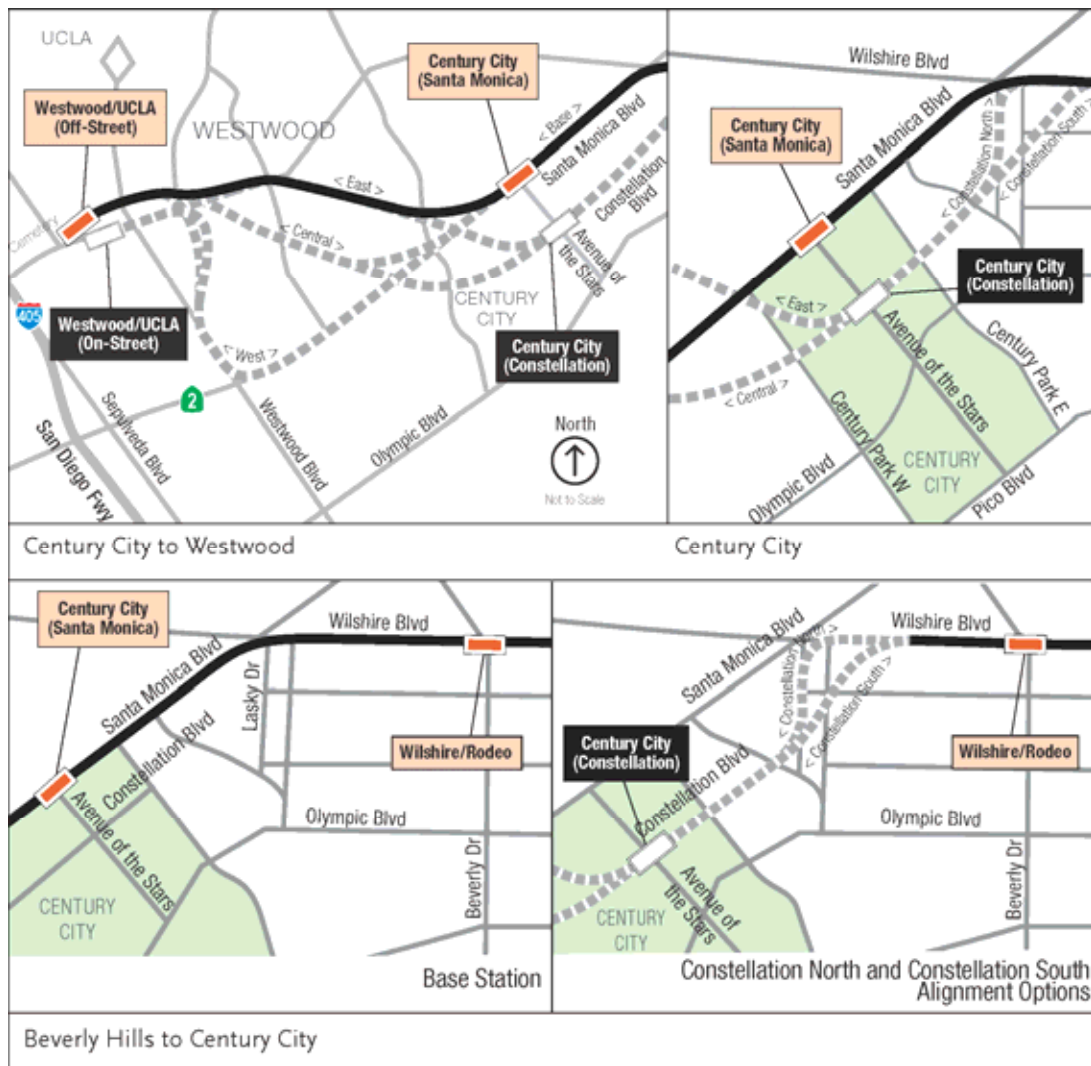


Figure 2-10. Century City Station Options

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)

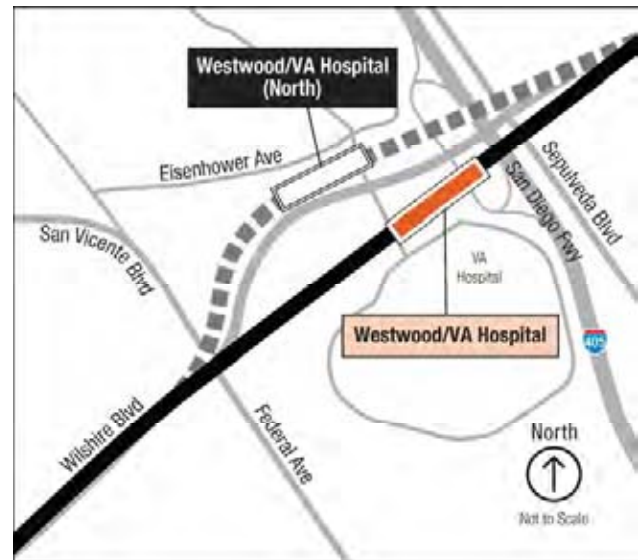


Figure 2-12. Option 6—Westwood/VA Hospital Station North

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.

2.4 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 Branch	Santa Monica Extension Plus West Hollywood Branch
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, 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

2.5.5 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.

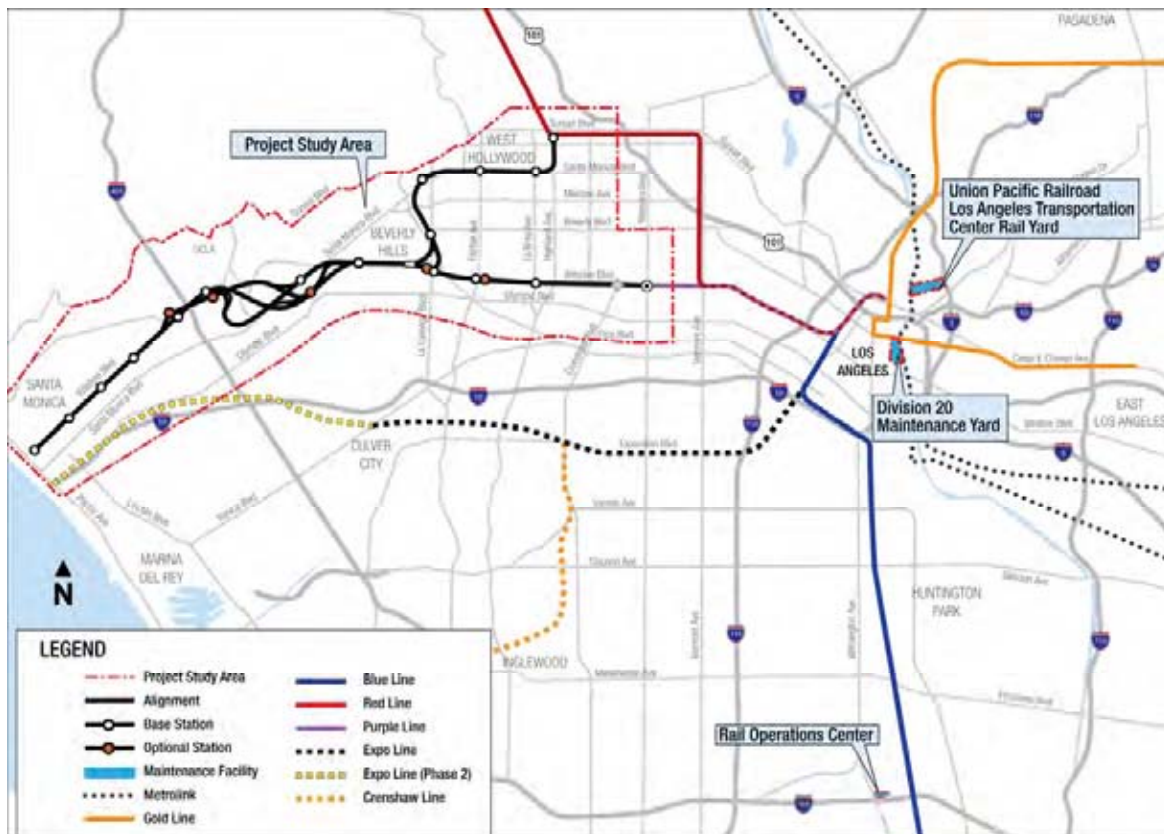


Figure 2-13. Location of the Rail Operations Center and Maintenance Yards



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

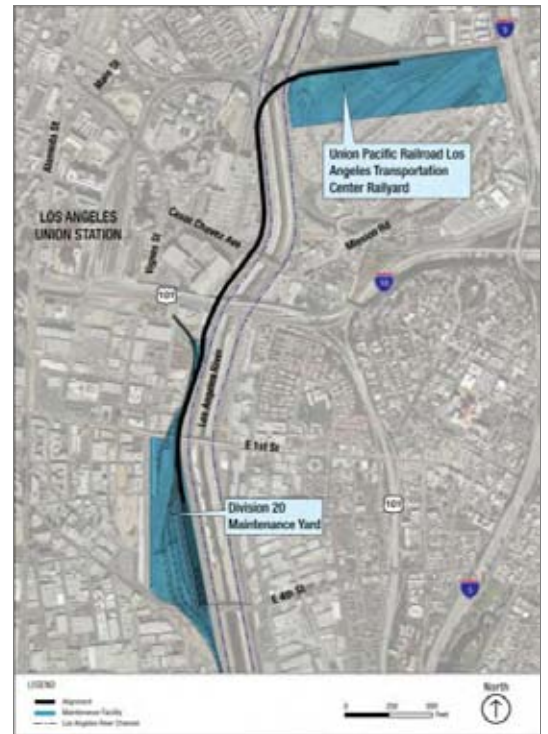


Figure 2-15. Maintenance Yard Options

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 EXISTING CONDITIONS

While there are no fixed-guideway transit facilities on the west side of Los Angeles, there is a significant demand for transit service, notably in the east-west direction, as demonstrated by the high number of bus lines, the frequency of bus service, and the high levels of bus ridership. The subway stations proposed as part of the Westside Subway Extension are particularly well positioned to serve this demand. Proposed station areas are locations where a high number of existing bus lines intersect and thousands of riders access the transit system each day.

3.1 Regional Transit Network

Since 1990, a regional fixed-guideway transit system serving Los Angeles County has been constructed. This system has heavy rail transit (HRT), light rail transit (LRT), bus rapid transit (BRT), and commuter rail components and includes more than 79 miles of Metro Rail (HRT and LRT) service, 14 miles of dedicated BRT service, and more than 500 miles of Metrolink commuter rail lines. The existing and committed system is shown in Figure 3-1. This figure illustrates the absence of regional transit options on the west side of Los Angeles.

3.2 Study Area Transit Network

Metro is the principal transit provider in the Westside Extension Transit Corridor Study Area. The study area is also served by Santa Monica’s Big Blue Bus, LADOT Downtown Area Shuttle (DASH), LADOT Commuter Express, Santa Clarita Transit Commuter Express Service, Culver CityBus, West Hollywood CityLine/DayLine, and Antelope Valley Transit Authority Commuter Services.

These transit service providers offer bus transit coverage on most major east-west and north-south arterials in the Study Area, as illustrated in Figure 3-2. The Study Area is well-served by bus transit, but that service must operate in mixed flow conditions which are subject to the area’s significant traffic congestion. The Study Area lacks fixed-guideway transit service that offers congestion-free, predictable travel.

The 62 bus routes operating in the Study Area serve approximately 550,000 boardings or about 50 percent of total weekday bus ridership on all Metro bus lines. Of this total, ridership on seven east-west streets currently account for approximately 40 percent of total transit demand in the Study Area. Weekday ridership for service on these east-west streets is shown in Table 3-1. Bus ridership levels presented in Table 3-1 represent weekday boardings along seven major east-west streets in the Study Area. The distribution of route-specific ridership for the Study Area is shown in Table 3-2.

Table 3-2 shows average daily ridership on existing Study Area bus lines. The highest number of boardings occurs on Metro Line 720, providing service along Wilshire Boulevard with 37,613 boardings per day. Local service on Wilshire Boulevard, provided by Metro Line 20, serves an additional 18,268



Figure 3-1. Fixed-Guideway Regional Transit Network



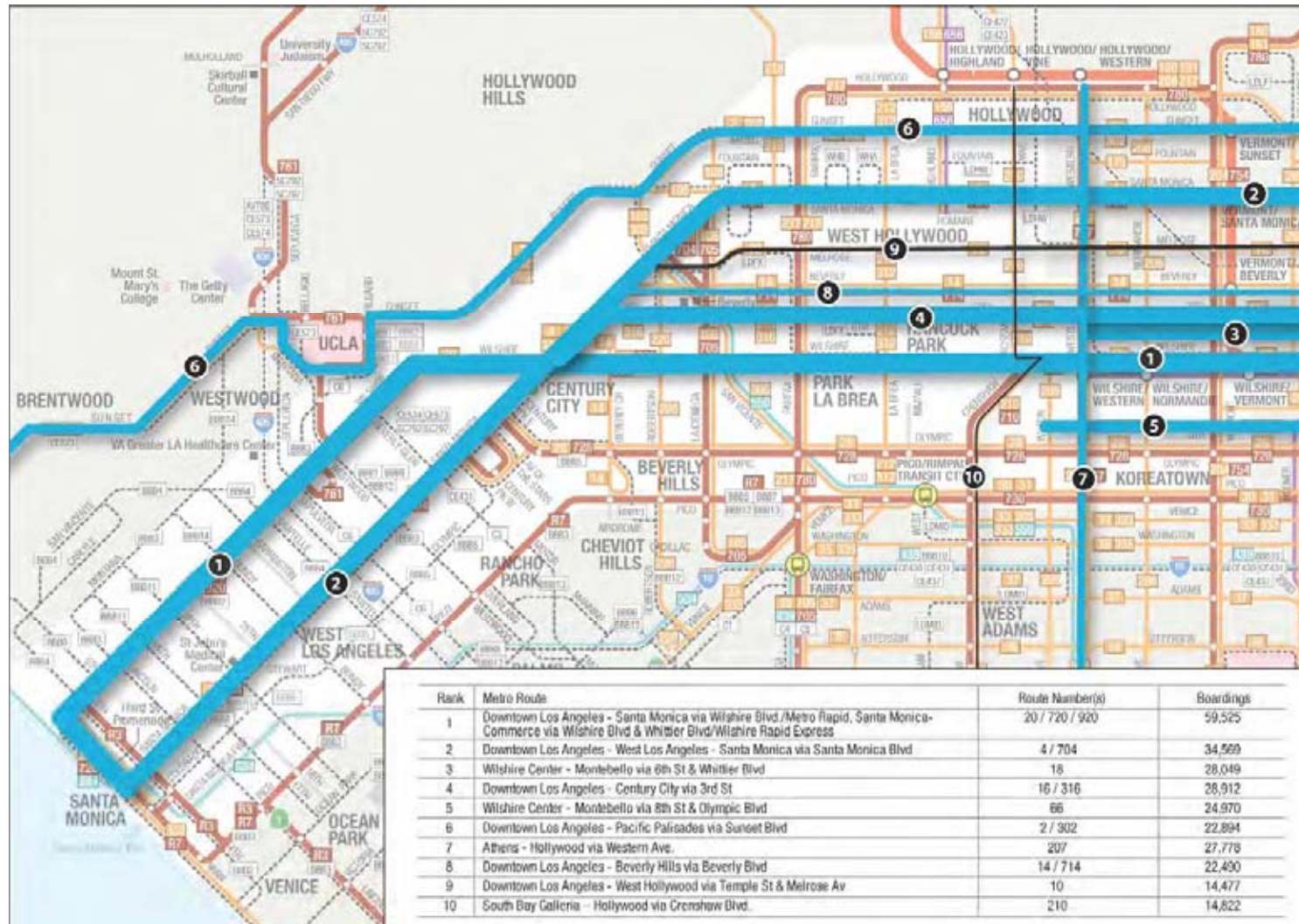
Figure 3-2. Existing Bus and Rail Service within the Study Area with Top 10 Ridership Corridors


Table 3-1. Major East-West Streets/Bus Lines in Study Area

Street/Bus Line	Weekday Ridership
Wilshire Boulevard/Metro 20, 720, 920, Santa Monica Big Blue Bus 2	64,200
Pico Boulevard/Metro 30 and 730, Santa Monica Big Blue Bus 7	37,929
Santa Monica Boulevard/Metro 4, Santa Monica Big Blue Bus 1	30,143
3 rd Street/Metro 16	28,912
Sunset Boulevard/Metro 2	22,894
Olympic Boulevard/Metro 28 and 728, Santa Monica Big Blue Bus 5	21,562
Beverly Boulevard/Metro 14	17,272

Source: Metro 2009, Santa Monica Big Blue Bus 2007



Table 3-2. Existing Study Area Transit Service and Weekday Boardings

Provider	Line	Description	Riders
Metro	720	Metro Rapid (Santa Monica—Commerce via Wilshire Boulevard & Whittier Boulevard)	37,613
Metro	204	Athens—Hollywood via Vermont Avenue	30,396
Metro	16	Downtown Los Angeles—Century City via 3rd Street	28,912
Metro	18	Wilshire Center—Montebello via 6th Street & Whittier Boulevard	28,049
Metro	207	Athens—Hollywood via Western Avenue	27,778
Metro	754	Metro Rapid (Athens—Hollywood via Vermont Avenue.)	22,964
Metro	2	Downtown Los Angeles—Pacific Palisades via Sunset Boulevard	22,894
Metro	4	Downtown Los Angeles—West Los Angeles—Santa Monica via Santa Monica Boulevard	21,509
Metro	30	Pico/Rimpau—Dozier/Rowan—Monterey Park via Pico Boulevard & East 1st Street	18,497
Metro	20	Downtown LA—Santa Monica via Wilshire Boulevard	18,268
Metro	14	Downtown Los Angeles—Beverly Hills via Beverly Boulevard	17,272
Metro	206	Athens—Hollywood via Normandie Avenue	17,025
Metro	210	South Bay Galleria—Hollywood via Crenshaw Boulevard	14,822
Metro	10	Downtown Los Angeles—West Hollywood via Temple Street & Melrose Avenue	14,477
Metro	212	Hawthorne—Hollywood via La Brea Avenue	13,910
SM	7	Pico Boulevard	13,639
Metro	704	Metro Rapid (Downtown Los Angeles—Santa Monica via Santa Monica Boulevard)	13,060
Metro	105	West Hollywood—Vernon via La Cienega Boulevard & Vernon Avenue.	11,808
Metro	761	Metro Rapid (Pacoima—Westwood via Van Nuys Boulevard)	11,675
Metro	163	West Hills Medical Center—Sun Valley/North Hollywood Station via Sherman Way & Lankershim Boulevard	11,642
Metro	180	Pasadena—Hollywood via Colorado Boulevard. and Hollywood Boulevard	10,940
Metro	217	Vermont/Sunset—Fairfax/Washington via Fairfax Avenue & Hollywood Boulevard	10,753
Metro	780	Pasadena—West Los Angeles via Colorado Boulevard. & Hollywood Boulevard	10,612
Metro	28	Downtown Los Angeles—Century City via Olympic Boulevard	9,721
CCB	6/Rapid 6	Sepulveda Boulevard	9,301
Metro	728	Metro Rapid (Downtown LA—Century City via Olympic Boulevard)	8,687
SM	1	Santa Monica Boulevard	8,634
SM	3	Montana Ave & Lincoln Boulevard	8,488
Metro	705	Metro Rapid (West Hollywood—Vernon via La Cienega Boulevard & Vernon Avenue)	8,295
Metro	710	Metro Rapid (South Bay Galleria—Wilshire Center via Crenshaw Boulevard)	7,755

WESTSIDE SUBWAY EXTENSION



Table 3-2. Existing Study Area Transit Service and Weekday Boardings (continued)

Provider	Line	Description	Riders
SM	2	Wilshire Boulevard	4,650
SM	14	Bundy Drive & Centinela Avenue	4,094
Metro	920	Wilshire Rapid Express	3,644
SM	5	Olympic Boulevard	3,154
Metro	305	UCLA—Willowbrook via Sunset Boulevard , San Vicente Boulevard & Western Avenue	2,975
Metro	550	Metro Express (San Pedro—West Hollywood via Harbor Transitway)	2,862
Metro	534	Metro Express (Malibu—Fairfax/Washington via Pacific Coast Hwy.)	2,814
LADOT	DASH	Wilshire/Koreatown	2,586
Metro	156	Van Nuys—Hollywood Panorama City—Hollywood	2,539
CCB	3	Crosstown	2,241
SM	R3	Rapid 3	2,239
SM	10	Freeway Express	2,028
LADOT	DASH	Hollywood	1,895
SM	9	Pacific Palisades	1,335
SM	R7	Rapid 7	1,259
LADOT	DASH	Fairfax	1,106
LADOT	DASH	West Hollywood	1,087
SM	4	San Vicente Boulevard & Carlyle Avenue	1,037
Metro	209	Athens—Wilshire Center via Van Ness Avenue & Arlington Avenue	980
SM	S12	UCLA Commuter	931
LADOT	CE 573	Mission Hills/Encino	813
SM	11	Campus Connector	699
LADOT	DASH	Midtown	369
SCT	797	Century City	313
WH	A/B	West Hollywood Loop	225
LADOT	CE 534	West Los Angeles/Century City/Westwood	181
LADOT	CE 431	Westwood/Rancho Park/Palms	175
AVTA	786	West Los Angeles	66
LADOT	CE 430	Pacific Palisades/Brentwood/Westwood	63
SCT	792	Century City	32
Total			555,120

Source: Metro 2009, Santa Monica Big Blue Bus 2007, Los Angeles Department of Transportation FY08-09, Antelope Valley Transit Authority 2009, Santa Clarita Transit 2009, West Hollywood CityLine 2009



riders. Other bus lines with some of the highest levels of ridership in the Study Area include Metro Line 2 (22,894 boardings), Metro Line 4 (21,509 boardings), and Metro Line 16 (28,912 boardings). These three bus lines all run east-west in the Study Area and travel parallel routes to the proposed subway, along Sunset Boulevard, Santa Monica Boulevard, and Third Street, respectively.

Major north-south/east-west transfer points are shown in Figure 3-4. Major transfer points are defined as locations where a Metro Rapid bus line, operating on weekday peak headways of 12 minutes or less, intersects with another bus line that is also operating on weekday peak headways of 12 minutes or less. Based on this criterion, there are 29 major transfer points in the Study Area. Approximately one third of these major transfer points occur where project stations are proposed, confirming the importance of these locations in the transit network.

3.3 Station-Area Transit Service

The focus of this section is to describe existing transit routes serving each potential station area. Table 3-3 lists station-area bus routes by station location, including directional peak and off-peak headways for each bus line. Station locations provide access to an average of 6 different bus lines, with the highest number of intersecting bus lines (16) occurring at UCLA. The headways reflect a high number of Metro Local and Metro Rapid buses serving a high volume of riders throughout the day, especially during morning and afternoon peak periods. The prevalence of commuter bus service at the Century City and Westwood/UCLA stations reflects the importance of these locations as regional employment centers.

Stop-level bus boarding data for Metro, Santa Monica Big Blue Bus, and Culver CityBus lines at intersections nearest to potential station locations are shown in Figure 3-4 through Figure 3-20. These maps identify stop-level boarding data within a quarter-mile of primary subway station entrances, as measured by traversable walking paths. The magnitude of stop-level boardings demonstrates the high level of existing transit use at station locations. They also illustrate the suitability of proposed subway station entrance locations, since these are critical points of access for people who use the transit system.

Figure 3-21 aggregates stop-level boarding data for Metro buses within one-quarter mile of each station location. The top six locations are Westwood/UCLA with 7,300 boardings, Wilshire/Fairfax with 4,700 boardings, Hollywood/Highland with 4,100 boardings, Santa Monica/Fairfax with 3,600 boardings, Wilshire/La Brea with 3,500 boardings, and Beverly Center Area with 3,100 boardings. This boarding data reflects a strong demand for transit service at station locations.

3.3.1 Peak Hour Roadway Congestion Underlies the Need for Transit Improvements

Los Angeles has the dubious distinction of being the most congested urban area in the country, according to the most recent survey of traffic congestion levels



conducted by the Texas Transportation Institute.² The Westside Subway Extension Study Area in turn contains some of the most congested traffic conditions in Los Angeles. Typical rush hours on the Westside of Los Angeles extend from 6:30 to 10:00 a.m. and 3:00 to 7:00 p.m. For example, LADOT loop detectors have found that a typical automobile commute along Wilshire Boulevard from Santa Monica to Beverly Hills over a distance of eight miles can take upwards of 60 minutes on a typical weekday evening. Morning and evening peak hour speeds along Santa Monica Boulevard in Beverly Hills average less than 7 mph.

With the exception of small segments of the Metro Rail Red and Purple Lines (in the far eastern portion of the Study Area), mixed-flow transit operations make up most transit service in the Westside. Therefore, current traffic conditions described above are also affecting transit service in the Study Area. Although ridership on Westside bus routes is high, congestion on arterial streets and freeways affects bus travel time and reliability thereby resulting in less than optimal service conditions. With high passenger loads, congested roads make reduced bus headways (improved frequency of service) difficult to maintain and result in overcrowded buses.

² Texas Transportation Institute. *The 2009 Urban Mobility Report*, Table 1.

Figure 3-3. Major Transfer Points in Study Area



Source: Metro



Table 3-3. Station-Area Transit Routes and Headways

Station	Bus Routes	Direction	Peak Headway (min)	Off-Peak Headway (min)
Wilshire/Crenshaw	20	EB	8.5	10
		WB	6	11
	720	EB	4-5	6-7
		WB	3-4	6-7
	210	Two-way	10-18	20-90
	710	NB	10	15
SB		10	15	
Wilshire/La Brea	20	EB	8.5	10
		WB	6	11
	720	EB	4-5	6-7
		WB	3-4	6-7
	LD914	Two-way	15	15
	212/312	Two-way	10	30
NB		6	30	
Wilshire/Fairfax	20	EB	8.5	10
		WB	6	11
	720	EB	4-5	6-7
		WB	3-4	6-7
	920	EB	36	120
		WB	6.5	40
	AV786	SB	120	N/A
	LD914	Two-way	15	15
217	Two-way	12	20	
	WB	8	15	
Wilshire/La Cienega	20	EB	8.5	10
		WB	6	11
	720	EB	4-5	6-7
		WB	3-4	6-7
	AV786	SB	120	N/A
	105	Two-way	25	20
	705	SB	13	20
		NB	13	20



Table 3-1. Station-Area Transit Routes and Headways (Continued)

Station	Bus Routes	Direction	Peak Headway (min)	Off-Peak Headway (min)
Wilshire/Rodeo	20	EB	8.5	10
		WB	6	11
	720	EB	4-5	6-7
		WB	3-4	6-7
	920	EB	36	120
		WB	6.5	40
	AV786	SB	120	N/A
14	Two-way	25	36	
Century City (Santa Monica Blvd)	AV786	SB	120	N/A
	16	WB	12	24
	4	Two-way	7	14
	28	Two-way	4	7.5
	704	EB	7	15
		WB	7	15
	728	EB	5	12
		WB	4	12
	CE534	WB	45	N/A
	CE573	SB	20	N/A
		NB	90	N/A
SC797	SB	60	N/A	
SC792	NB	30	N/A	
Century City (Constellation Blvd)	728	EB	5	12
		WB	4	12
	28	Two-way	4	7.5
	CE534	WB	45	N/A
	C3	Two-way	20	20
	SC792	NB	30	N/A
	SC797	SB	60	N/A
	CE573	SB	20	N/A
NB		90	N/A	
SM5	Two-way	30	20-60	



Table 3-1. Station-Area Transit Routes and Headways (Continued)

Station	Bus Routes	Direction	Peak Headway (min)	Off-Peak Headway (min)
Westwood/UCLA	20	EB	8.5	10
		WB	6	11
	720	EB	4-5	6-7
		WB	3-4	6-7
	920	EB	36	120
		WB	6.5	40
	AV786	SB	120	N/A
	SM2	Two-way	15	20
	SM3	Two-way	15	30
	SM1	Two-way	10-30	10-30
	SM8	Two-way	15	15
	SM12	Two-way	15	15-45
	C6	Two-way	20	30
	CE573	SB	20	N/A
		NB	90	N/A
	SC792	NB	30	N/A
	SC797	SB	60	N/A
	CE431	EB	45	N/A
CE534	WB	45	N/A	
761	NB	8	15	
	SB	4	15	
Westwood/VA Hospital	720	EB	6-7	11-12
		WB	5-6	11-12
	SM3	Two-way	15	30
	SM4	Two-way	30	30
SM2	Two-way	15	20	
Wilshire/Bundy	20		22.5	N/A
	720	EB	6-7	11-12
		WB	5-6	11-12
	SM2	Two-way	15	20
SM14	Two-way	12	30	
Wilshire/26th	20		22.5	N/A
	720	EB	6-7	11-12
		WB	5-6	11-12
SM2	Two-way	15	20	



Table 3-1. Station-Area Transit Routes and Headways (Continued)

Station	Bus Routes	Direction	Peak Headway (min)	Off-Peak Headway (min)
Wilshire/16th	20	EB	22.5	N/A
	720	EB	6-7	11-12
		WB	5-6	11-12
	SM2	Two-way	15	20
Wilshire/4th	720	EB	6-7	11-12
		WB	5-6	11-12
	920	EB	36	120
		WB	18	45
	SM2	Two-way	15	20
	SM4	Two-way	30	30
	SM3	Two-way	15	30
	SMR3	NB	15	N/A
		SB	15	N/A
SM9	Two-way	30	30	
Hollywood/Highland	217	Two-way	12	20
	212	Two-way	10	30
	212	SB	6	30
	156	Two-way	5	24
	LD916	Two-way	30	30
	LD917	Two-way	10	20
	780	NEB	5	15
SWB		8	15	
Santa Monica/La Brea	212/312	Two-way	10	30
		NB	6	30
	4	Two-way	7	14
	AV786	SB	120	N/A
	704	EB	7	15
WB		7	15	



Table 3-1. Station-Area Transit Routes and Headways (Continued)

Station	Bus Routes	Direction	Peak Headway (min)	Off-Peak Headway (min)
Santa Monica/Fairfax	4	Two-way	7	14
	704	EB	7	15
		WB	7	15
	AV786	SB	120	N/A
	218	Two-way	18	30
	217	Two-way	12	20
	780	EB	5	15
		WB	8	15
	WH-A/B	Two-way	40	40
AV786	SB	120	N/A	
Santa Monica/San Vicente	4	Two-way	7	14
	704	EB	7	15
		WB	7	15
	705	SB	13	20
	705	NB	13	20
	10	Two-way	12	30
	105	Two-way	25	20
	305	Two-way	30	45
		NB	47	45
550	SB	38	45	
Beverly Center Area	305	Two-way	30	45
	550	NB	47	45
		SB	38	45
	16	WB	12	24
		Two-way	6	12
	LD914	Two-way	15	15
	LD917	Two-way	10	20
	105	Two-way	25	20
	705	SB	13	20
705	NB	13	20	
218	Two-way	18	30	

Source: Metro

Note: Routes are operated by Metro unless otherwise specified as follows: LD (LADOT DASH); AV (Antelope Valley Transit Authority); SC (Santa Clarita Transit); SM (Santa Monica Big Blue Bus); CE (LADOT Commuter Express); C (Culver CityBus); WH (West Hollywood CityLine).

Figure 3-4. Wilshire/Crenshaw Station-Area Stop-Level Boardings

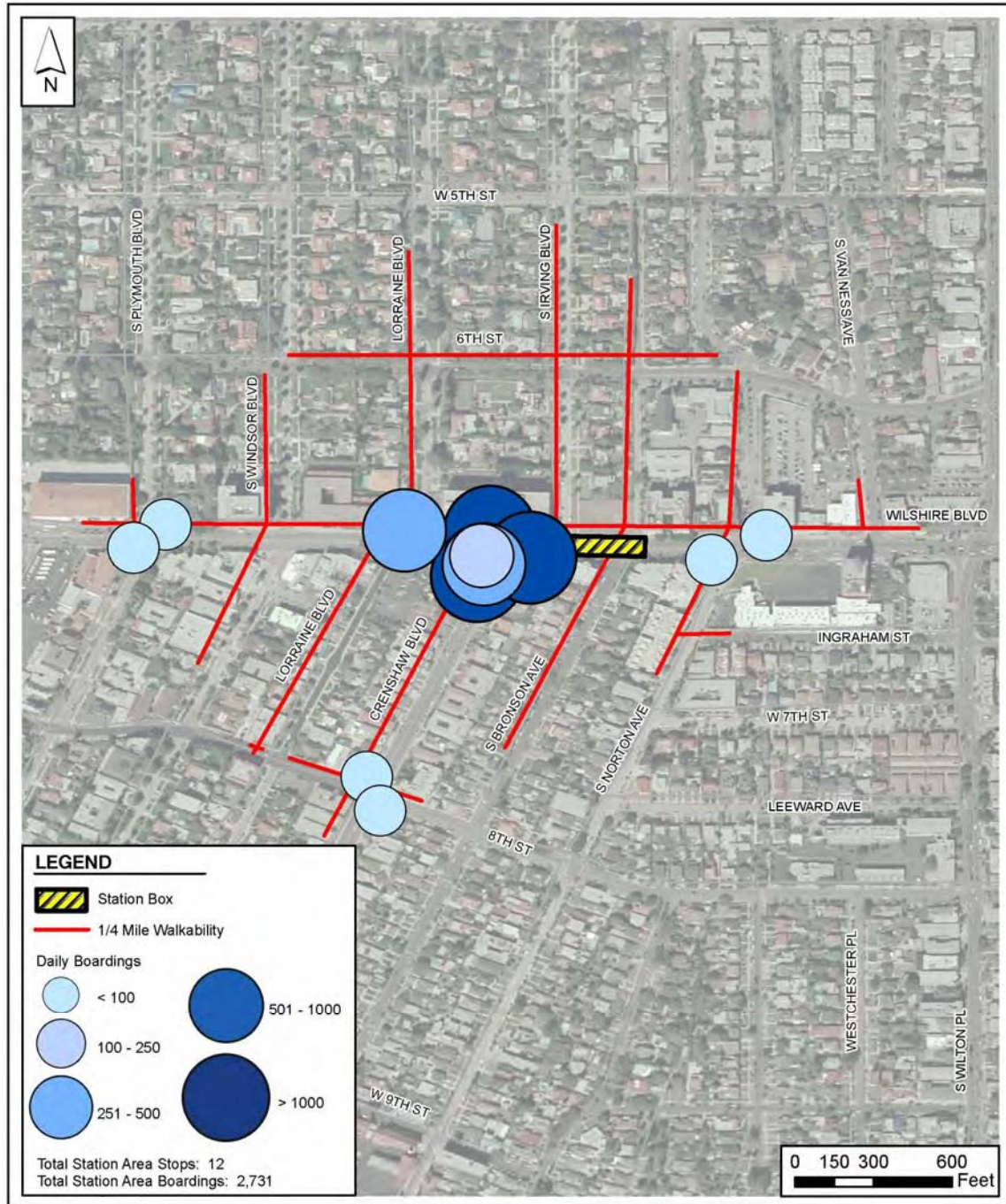


Figure 3-5. Wilshire/La Brea Station-Area Stop-Level Boardings

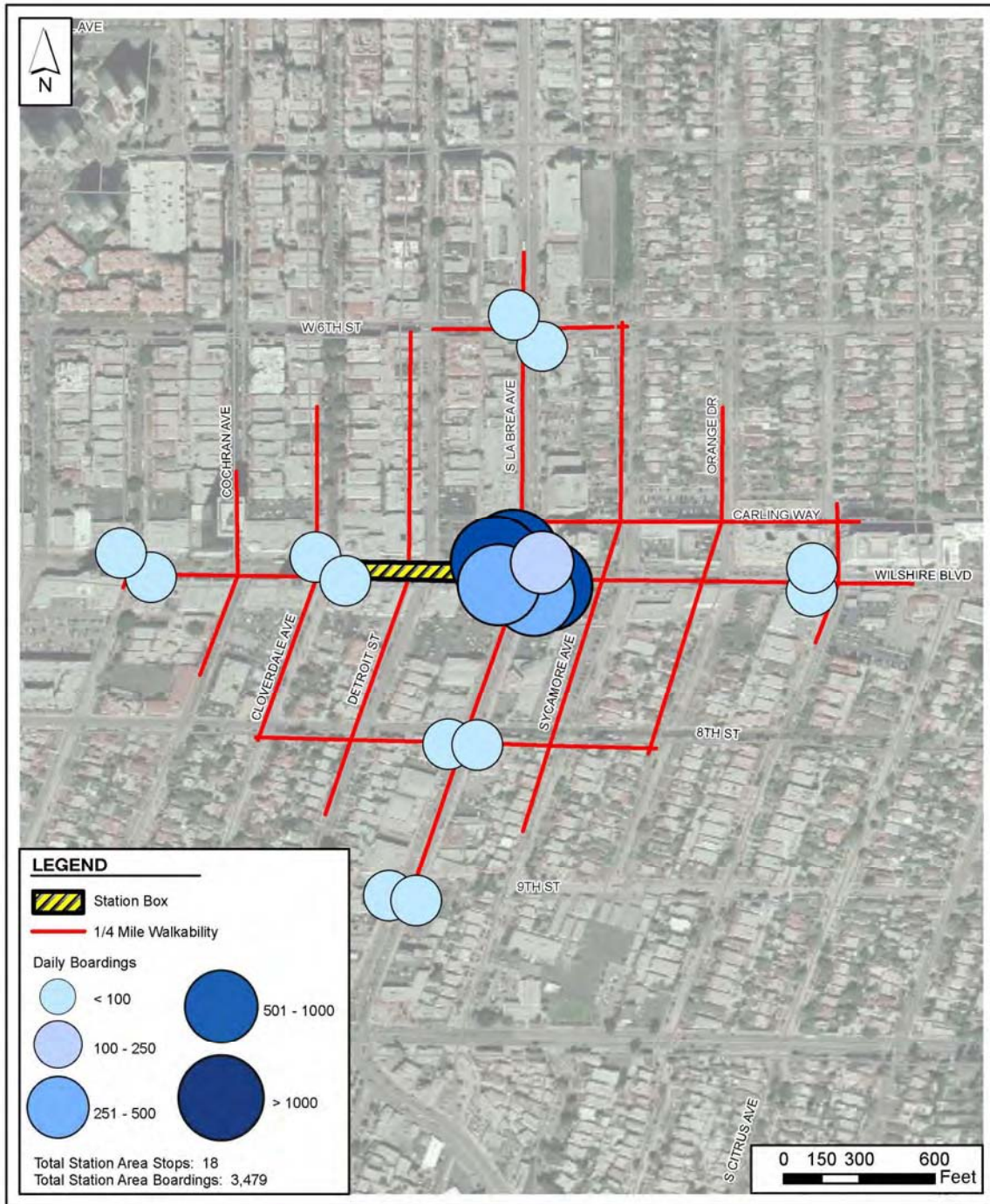


Figure 3-6. Wilshire/Fairfax Station-Area Stop-Level Boardings

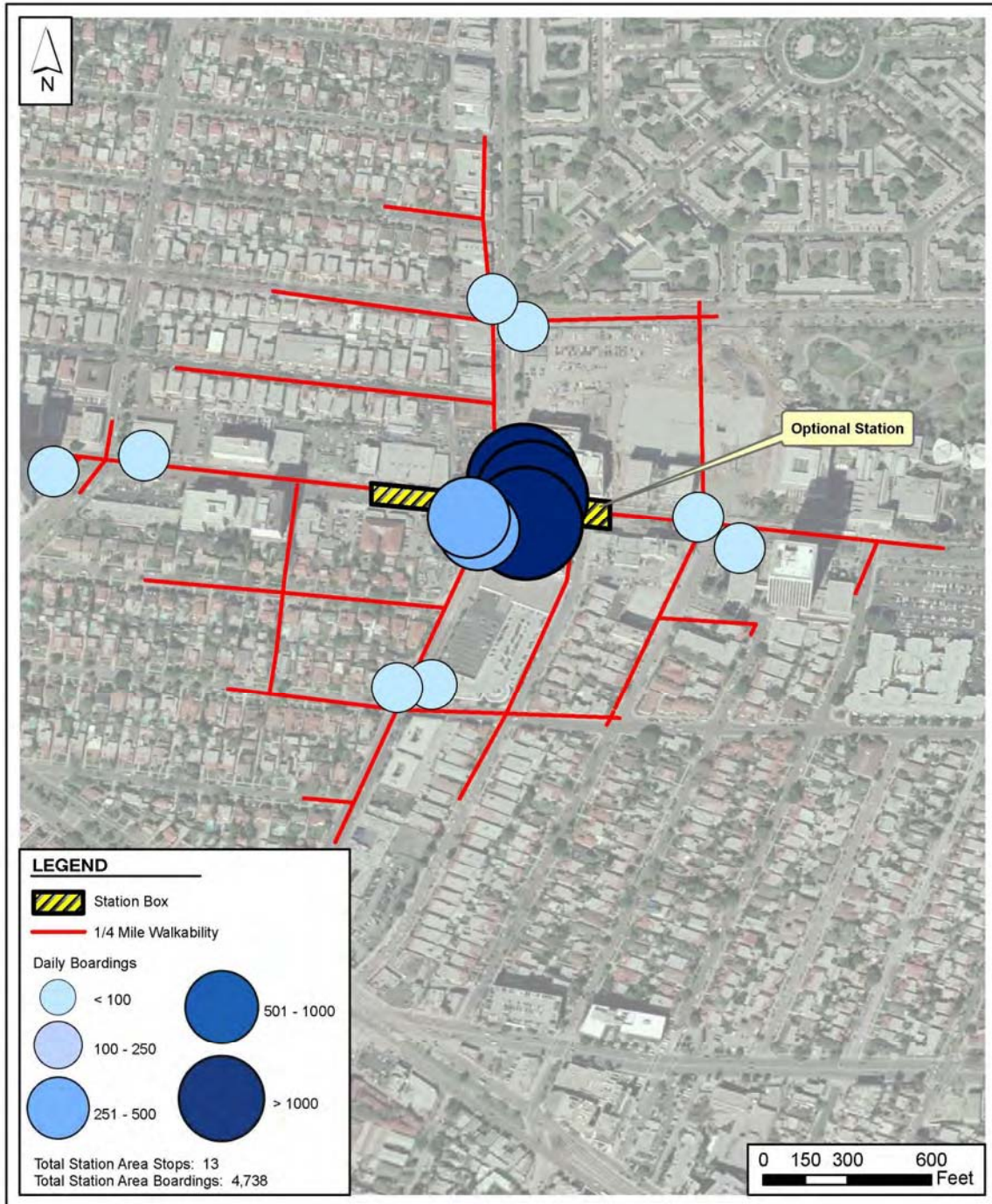


Figure 3-7. Wilshire/La Cienega Station-Area Stop-Level Boardings

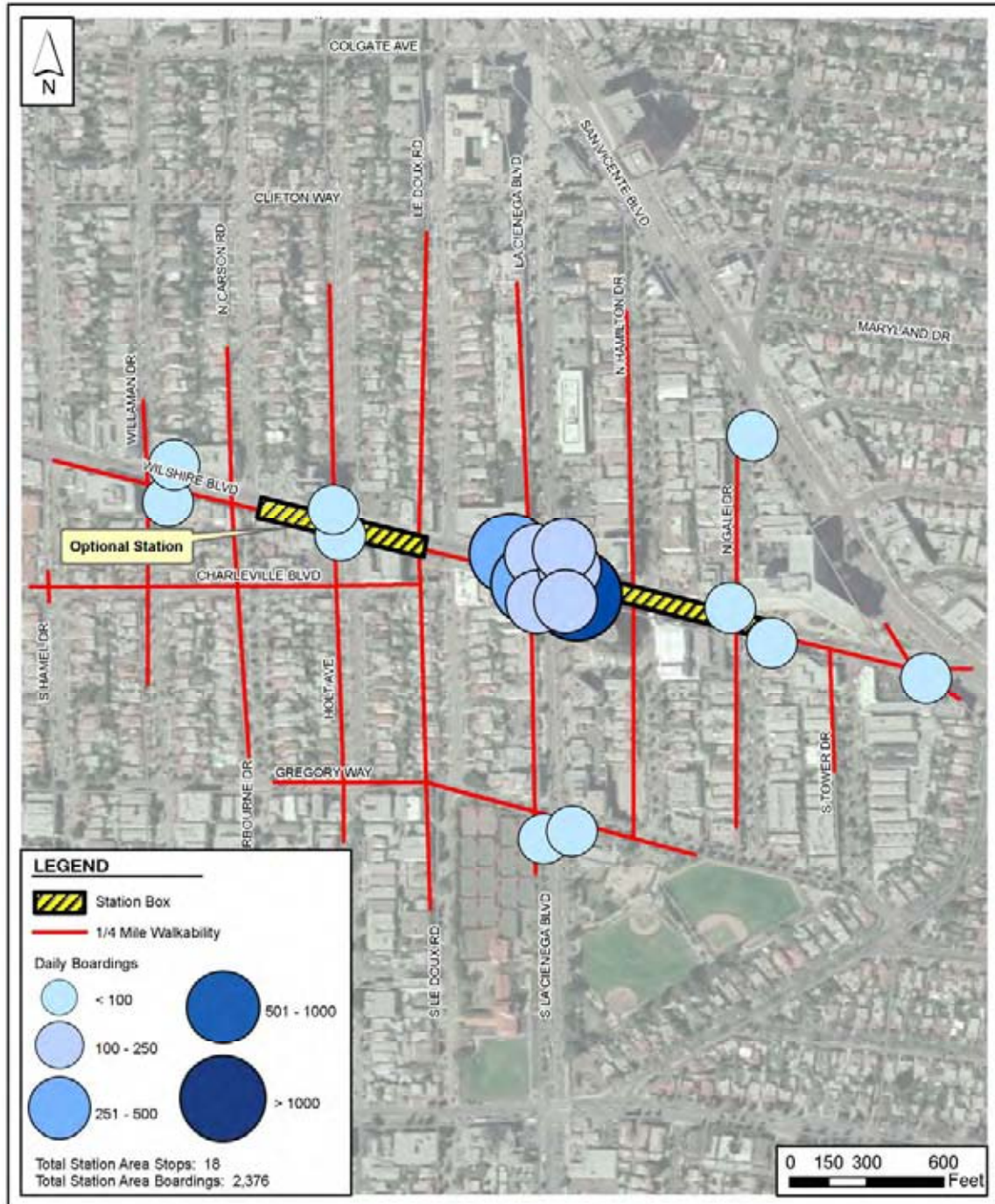


Figure 3-8. Wilshire/Rodeo Station-Area Stop-Level Boardings

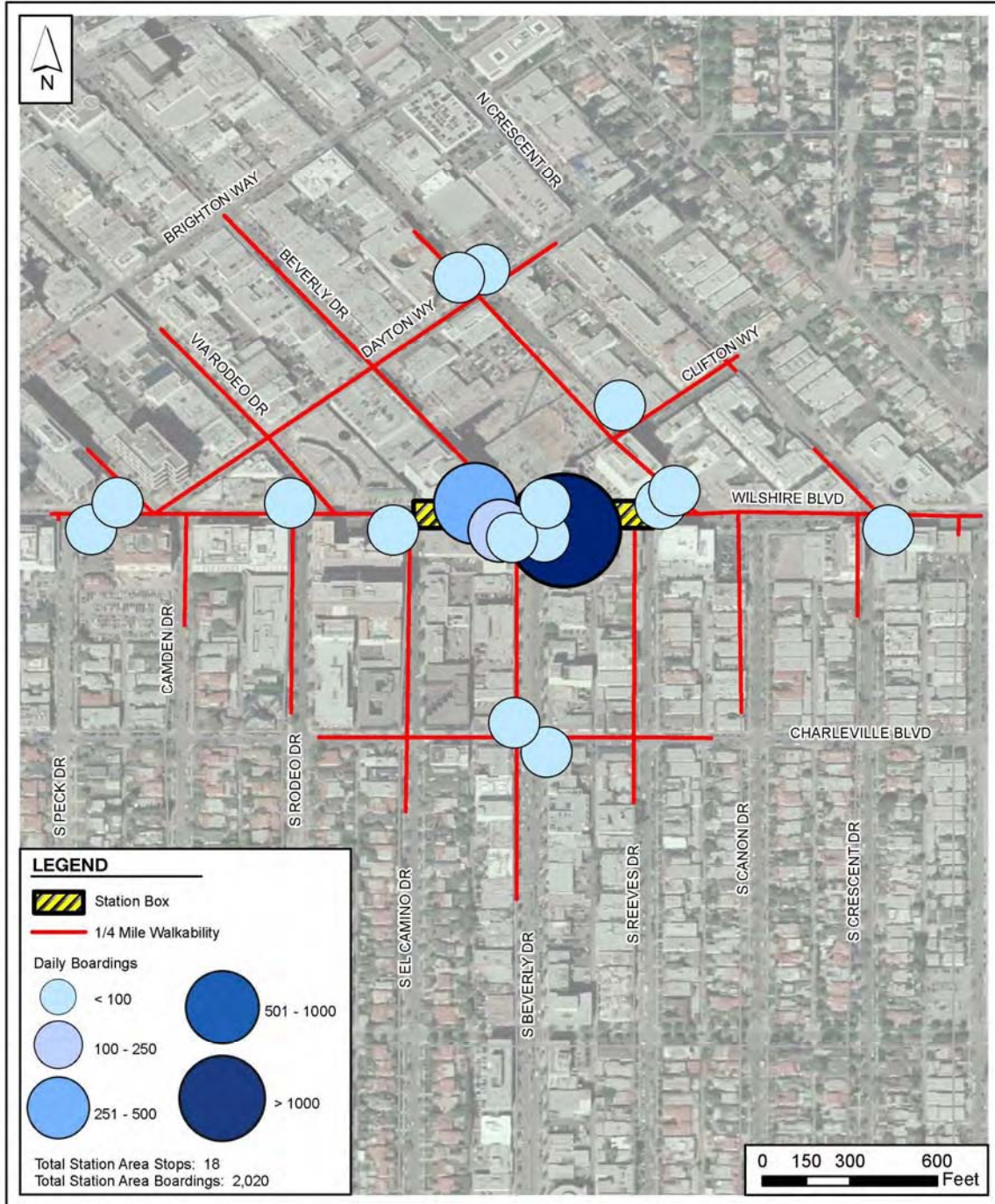


Figure 3-9. Century City Station-Area Stop-Level Boardings

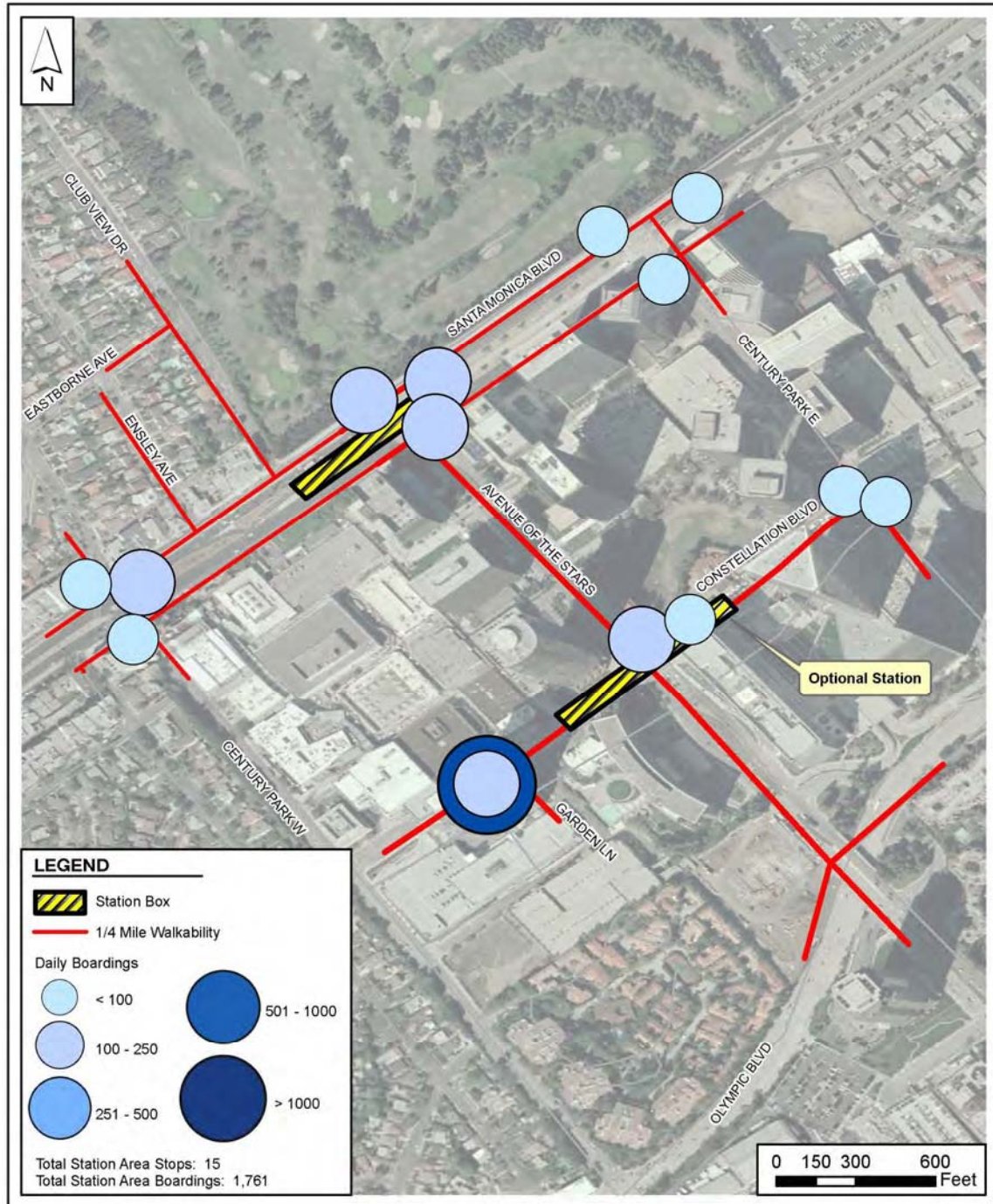




Figure 3-10. Westwood/UCLA Station-Area Stop-Level Boardings

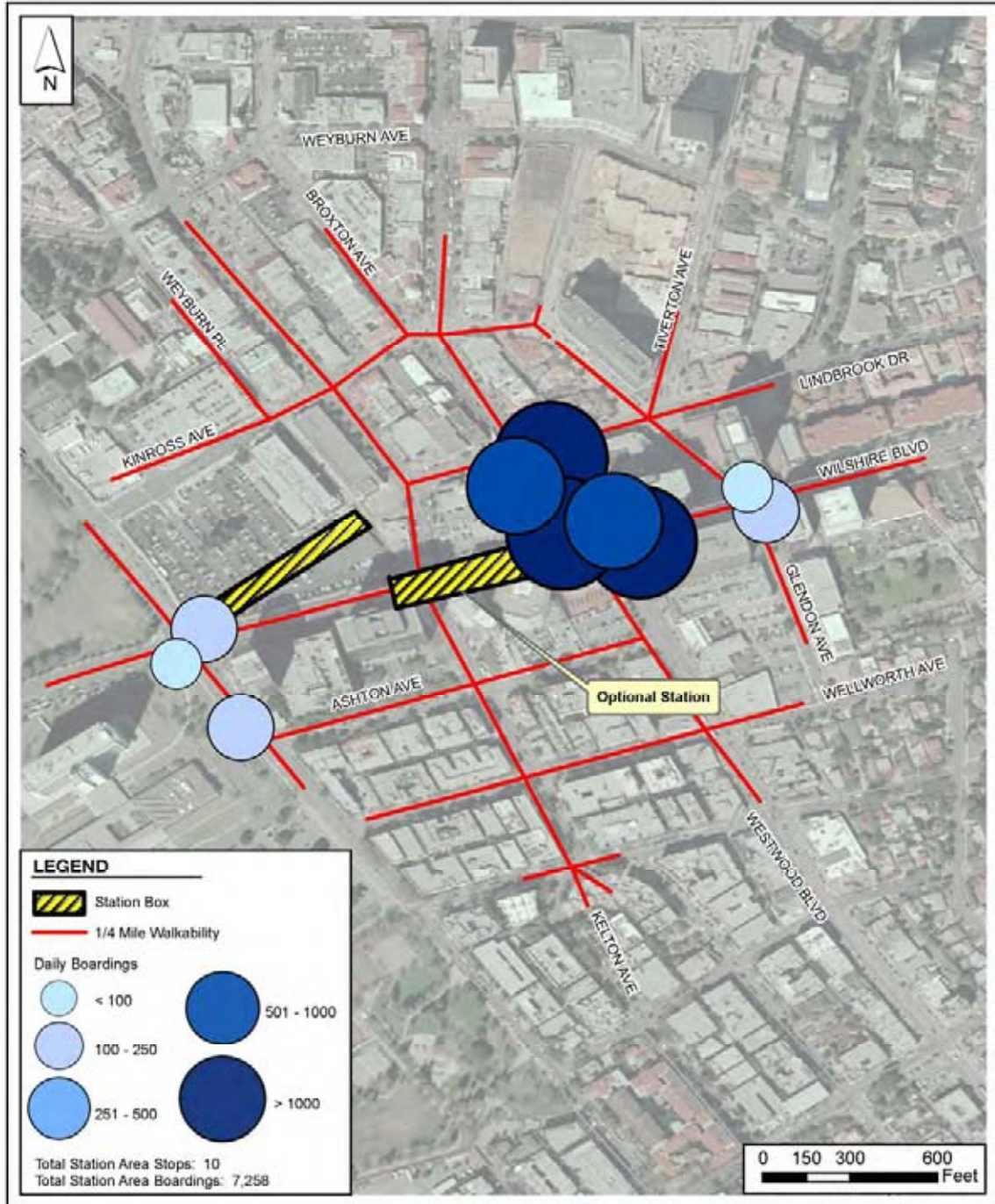


Figure 3-11. Westwood/VA Hospital Station-Area Stop-Level Boardings

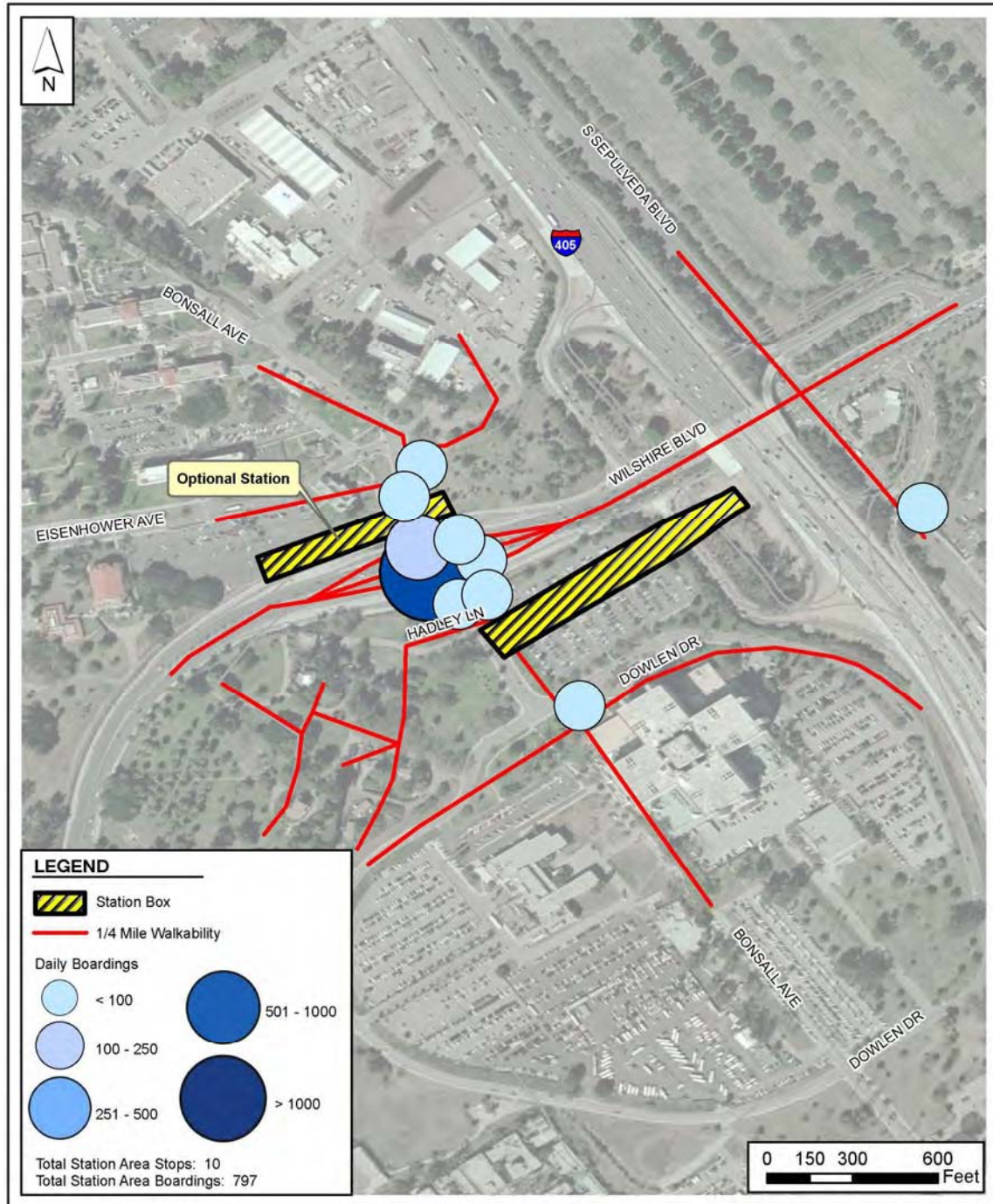


Figure 3-12. Wilshire/Bundy Station-Area Stop-Level Boardings

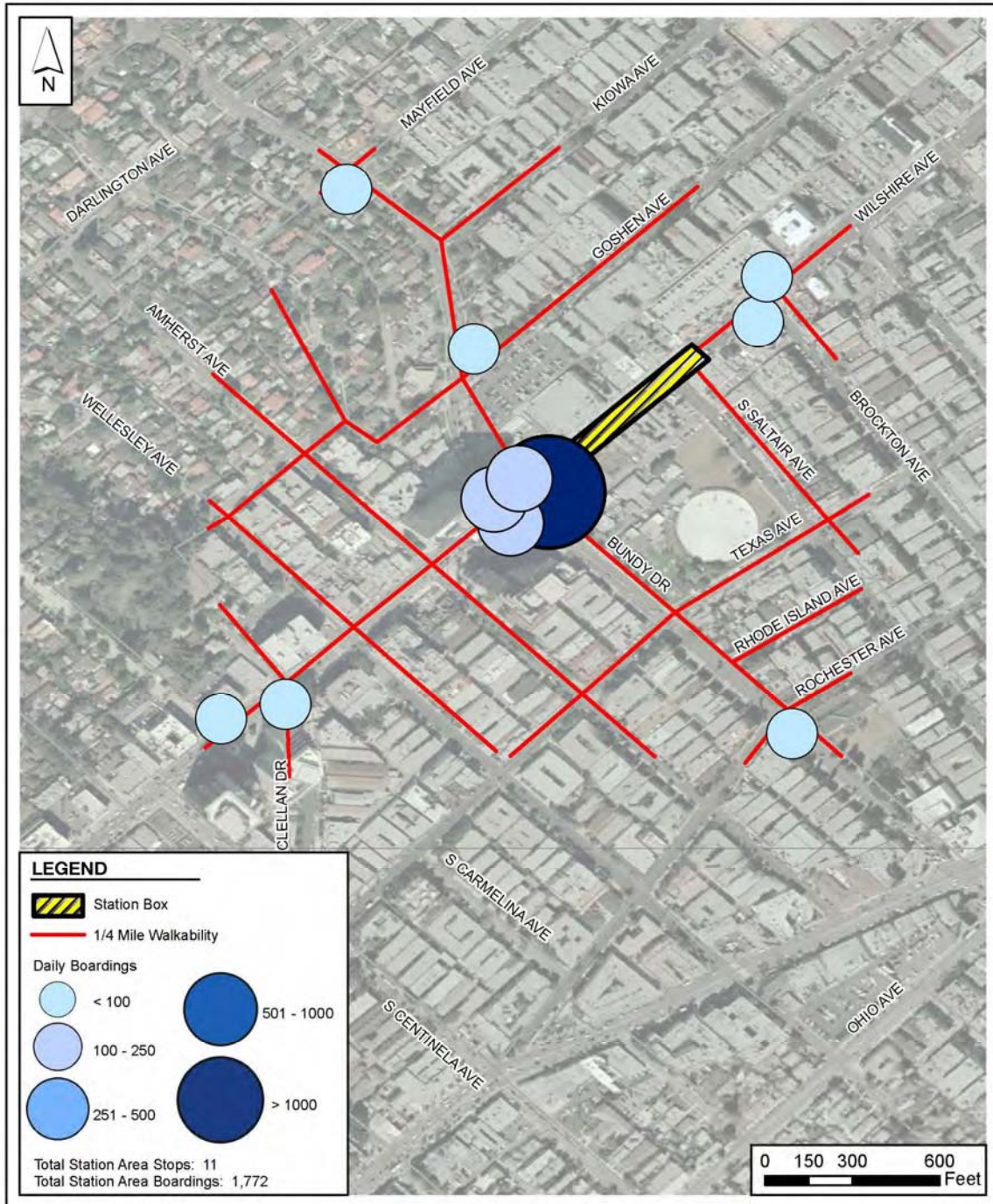


Figure 3-13. Wilshire/26th Station-Area Stop-Level Boardings

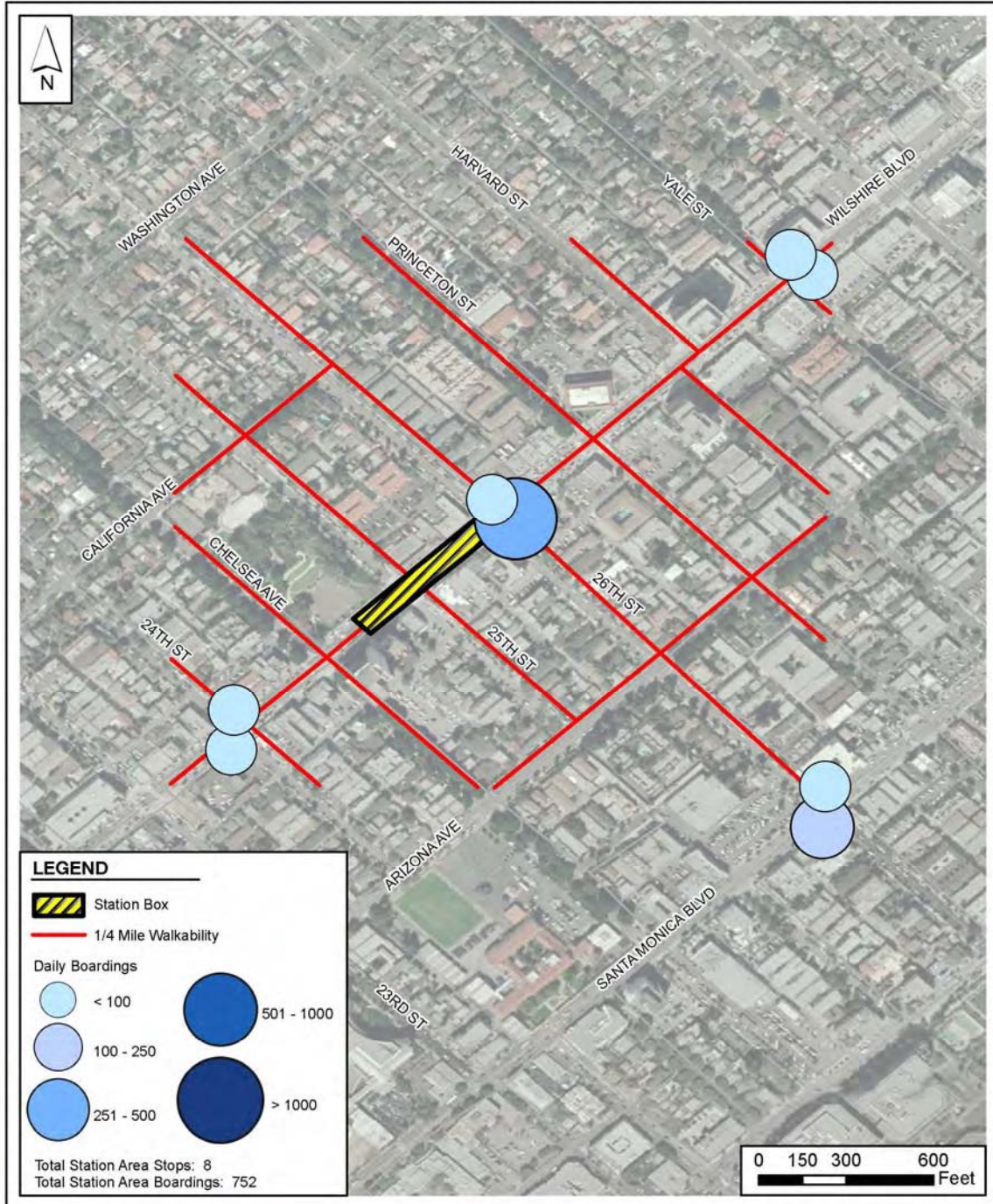


Figure 3-14. Wilshire/16th Station-Area Stop-Level Boardings

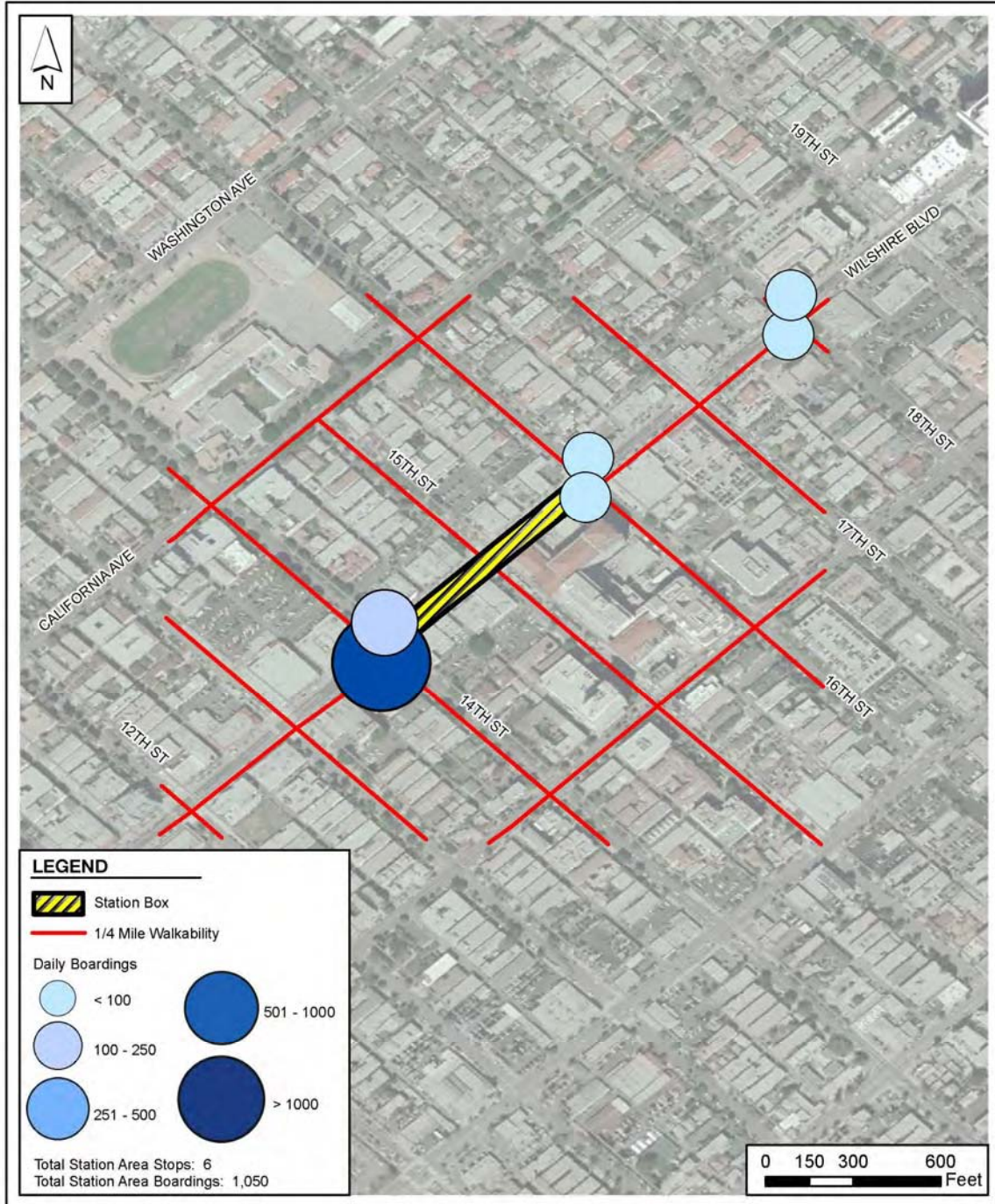


Figure 3-15. Wilshire/4th Station-Area Stop-Level Boardings

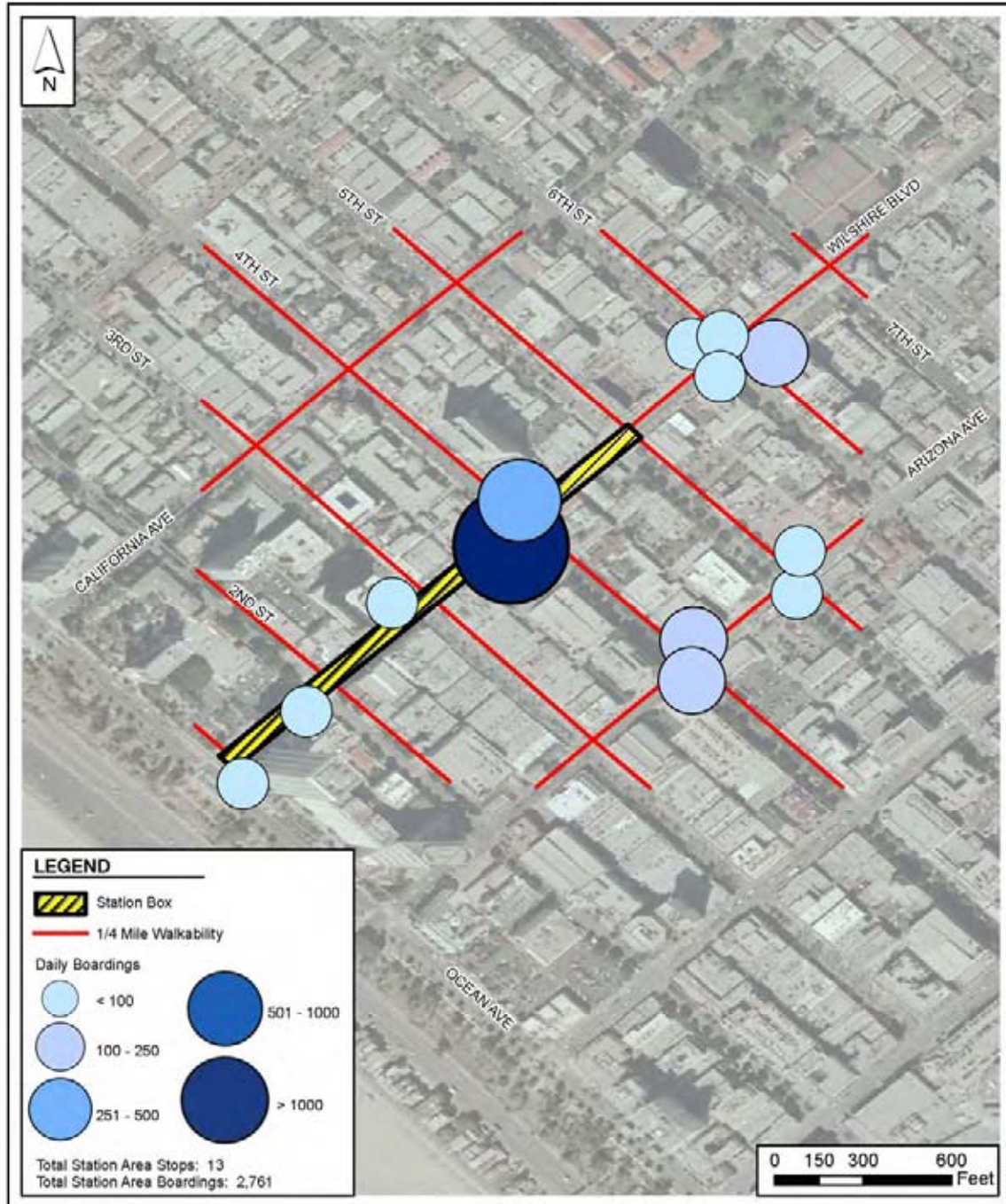


Figure 3-16. Hollywood/Highland Station-Area Stop-Level Boardings

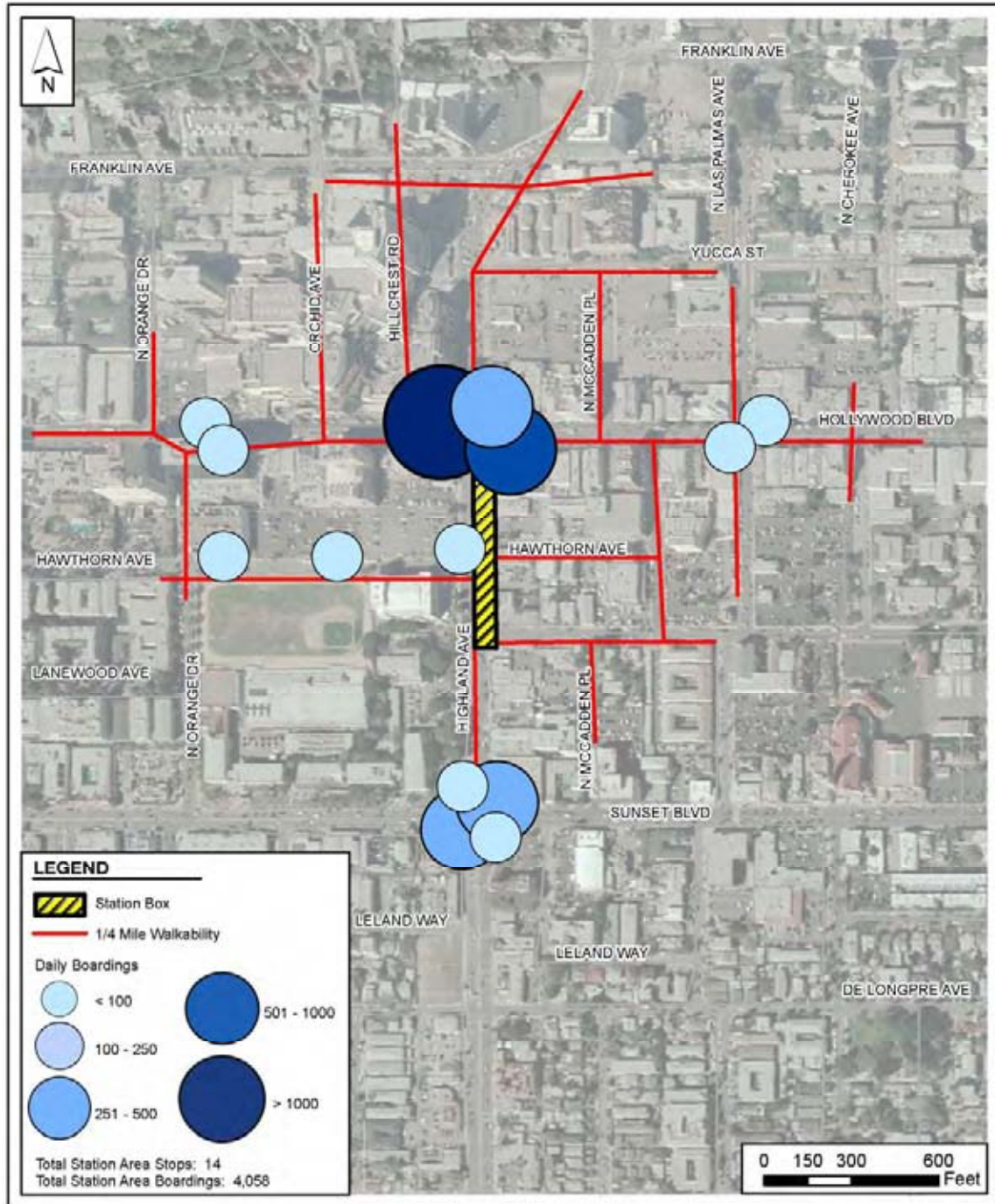


Figure 3-17. Santa Monica/La Brea Station-Area Stop-Level Boardings

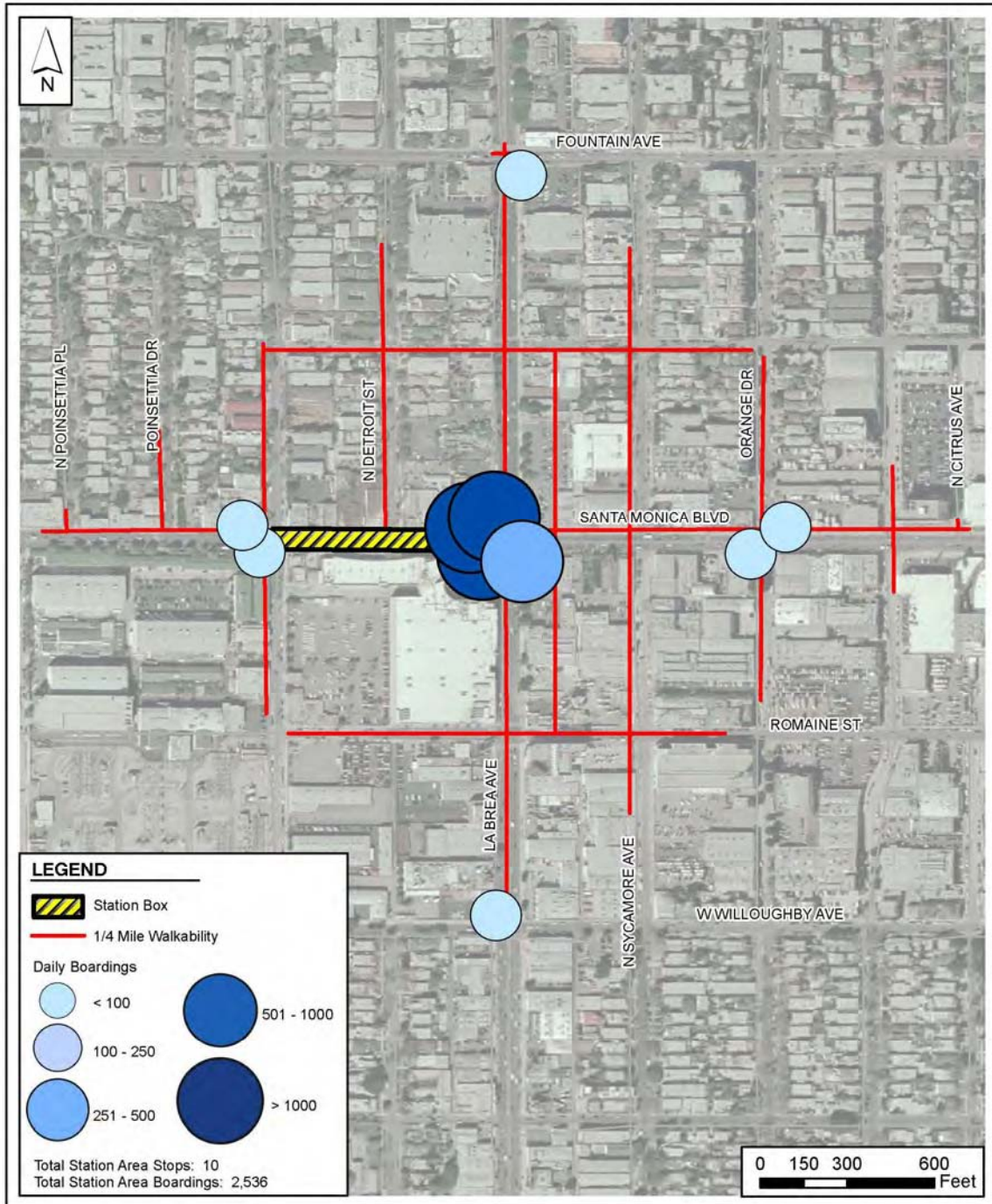


Figure 3-18. Santa Monica/Fairfax Station-Area Stop-Level Boardings

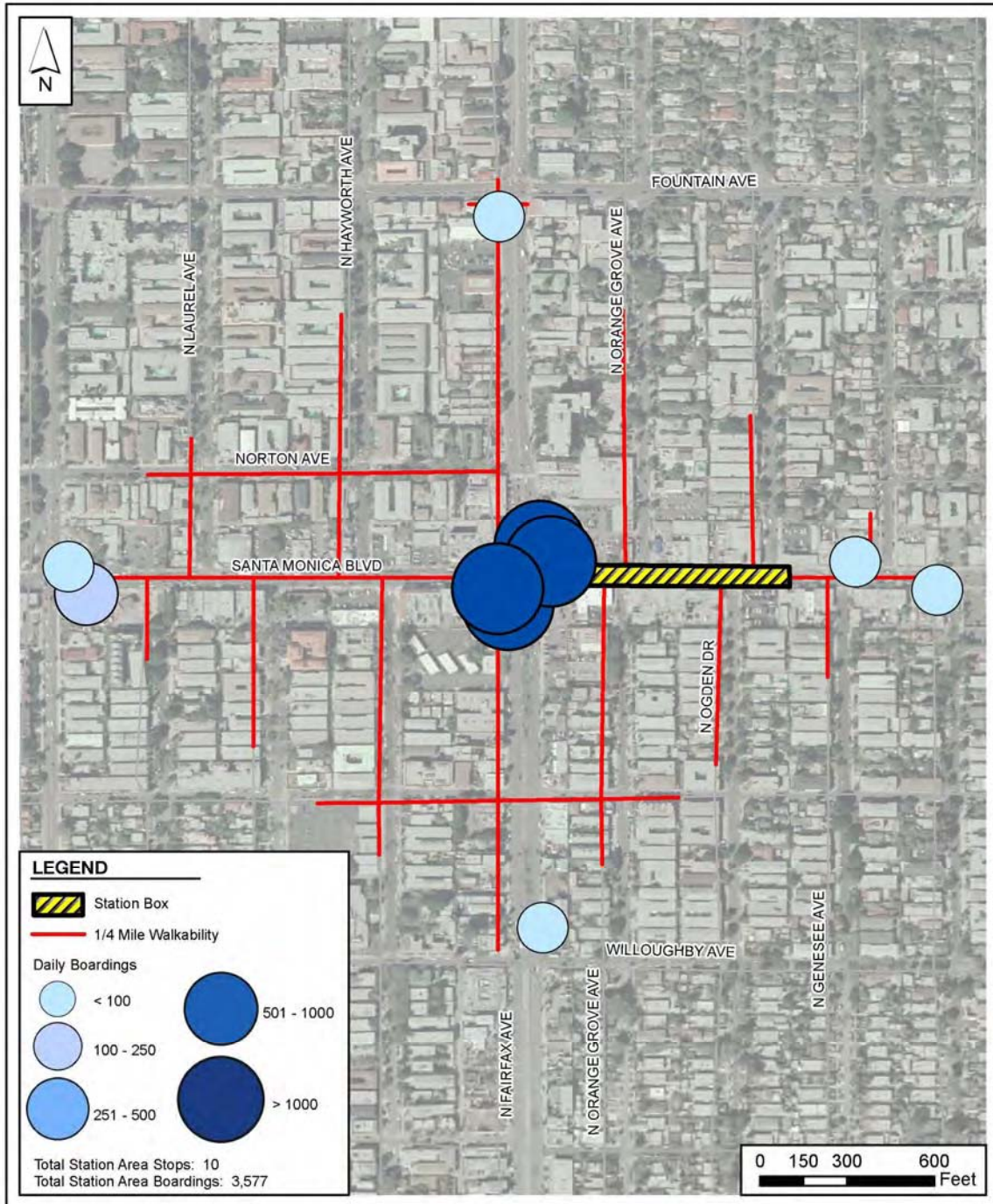




Figure 3-19. Santa Monica/San Vicente Station-Area Stop-Level Boardings

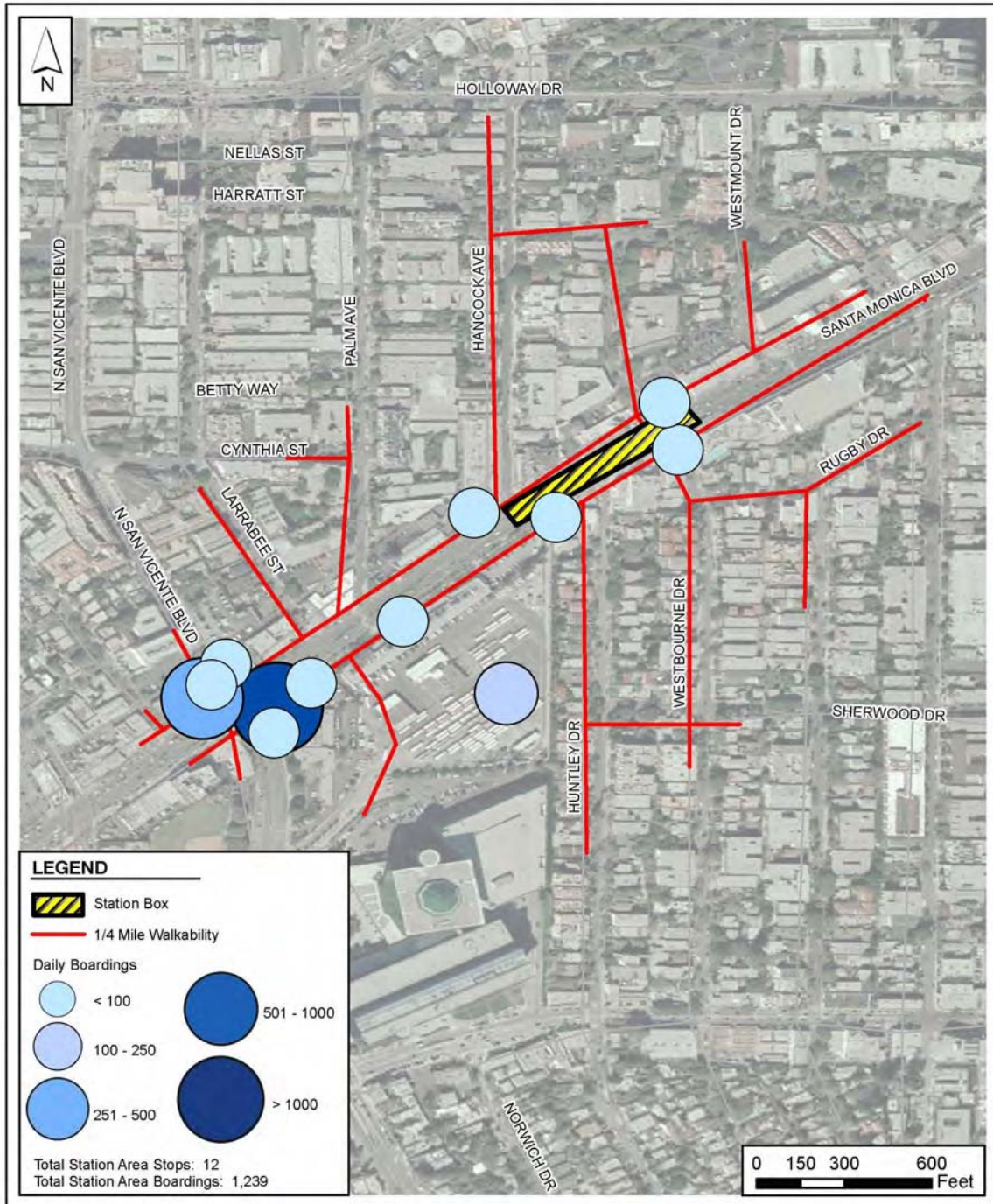


Figure 3-20. Beverly Center Area Station-Area Stop-Level Boardings

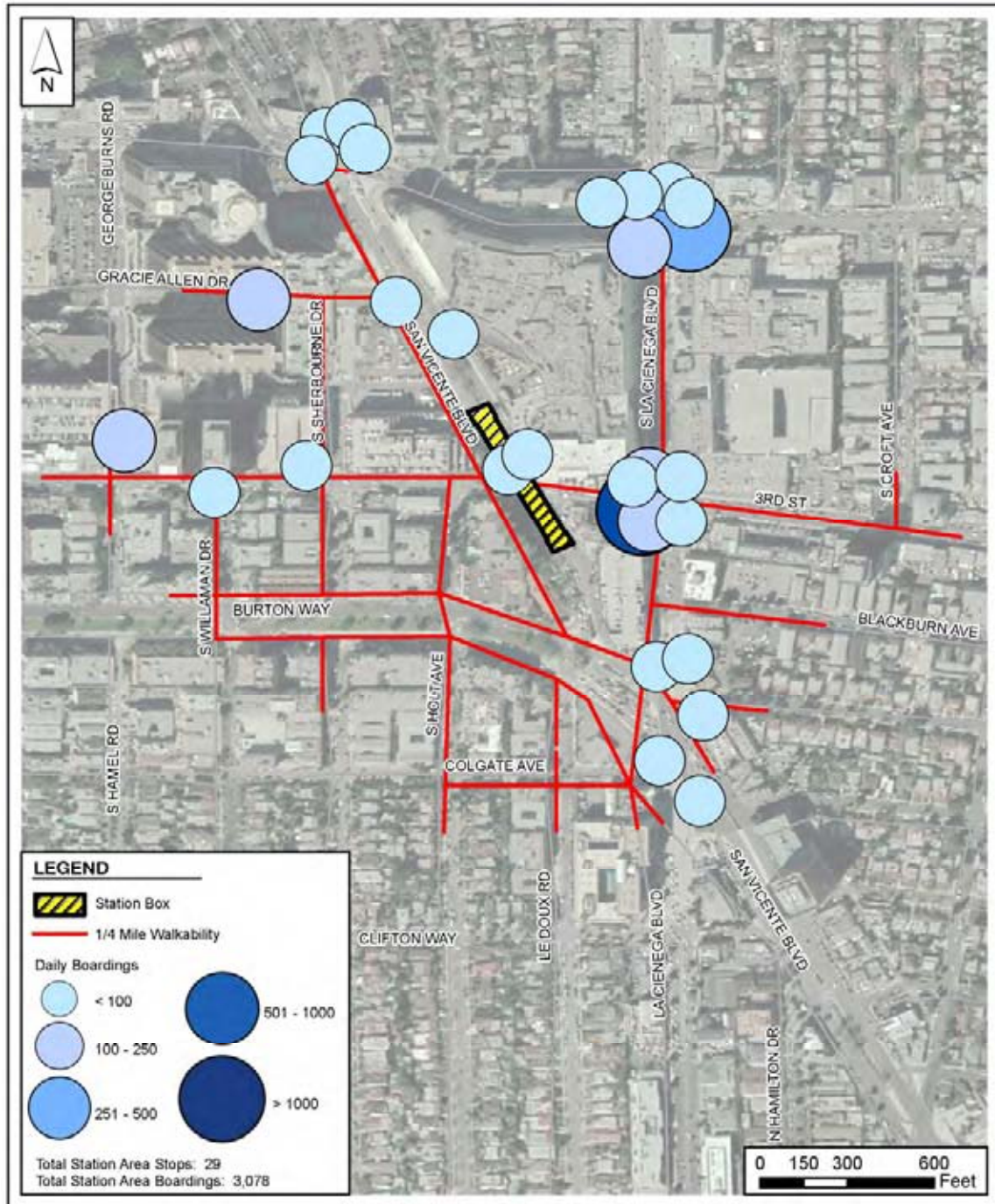
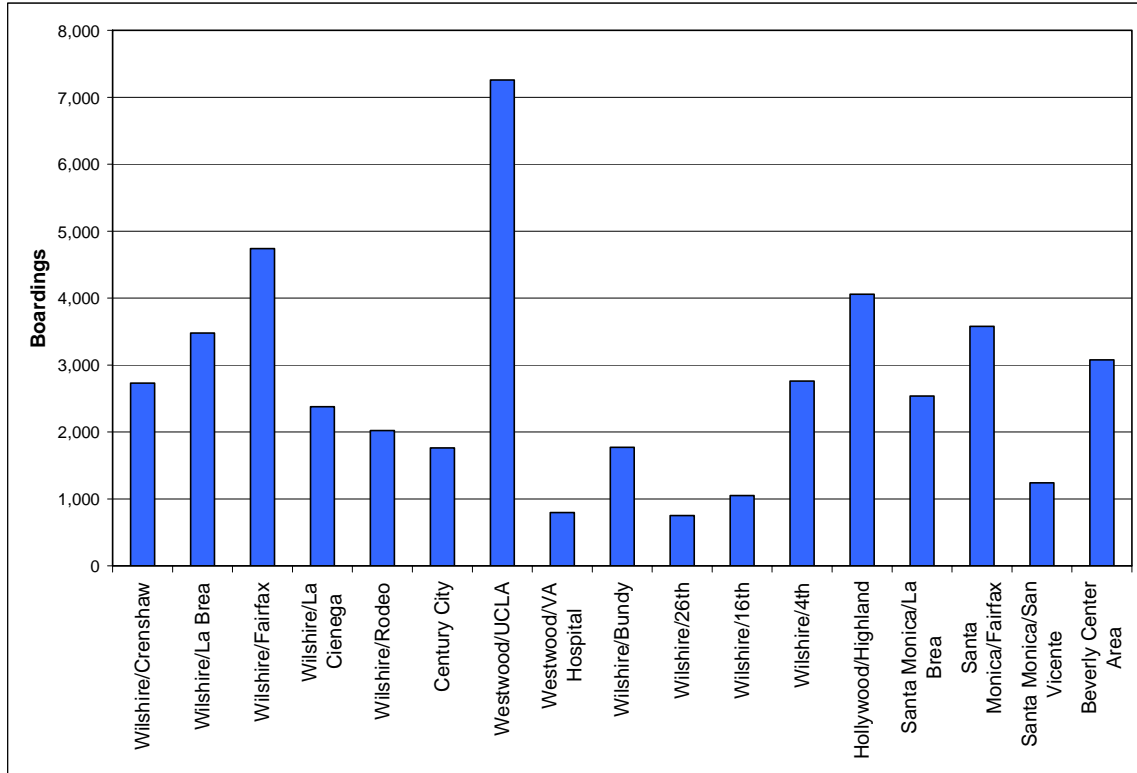




Figure 3-21. Daily Metro, Santa Monica, and Culver City Bus Boardings within ¼-Mile of Station Areas





This page intentionally left blank.



4.0 FUTURE TRANSIT CONDITIONS

This section describes the future transit operating conditions of each Project Alternative, including regional performance as measured by linked trips, a review of ridership estimates, mode of access to subway stations, and travel time comparisons. These measures are used to assess the transportation advantages of each Build Alternative. The Metro Travel Demand Model was used to forecast boardings and mode of access data for Year 2035. This section also compares transit travel times, transit speed, transit reliability, and variations in transit mode share for each of the Build Alternatives.

4.1 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 Long Range Transportation Plan* (LRTP) and the *2008 Southern California Association of Governments' (SCAG) Regional Transportation Plan* (RTP).³ Under the No Build Alternative, no new 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 Metro LRTP.

4.2 TSM Alternative

The TSM Alternative emphasizes more frequent bus service than the No Build Alternative to reduce delay and enhance mobility. As such, the TSM meets some aspect of the Purpose and Need to provide enhanced transit service and improved mobility in the Study Area. The TSM Alternative contains all elements of the highway, transit, Metro Rail, and bus service described under the No Build Alternative. For the TSM Alternative, bus service would be increased to meet the rising demand for transit service in the Study Area. The frequency of the following Metro bus lines would be increased: 2, 4, 14, 16, and 720.

4.3 Build Alternatives

For this analysis, the change between the No Build Alternative and the Build Alternatives occurs for Metro Lines 20, 720, and 920. These Metro lines provide Local (Line 20), Rapid (Line 720), and Rapid Express (Line 920) service along Wilshire Boulevard between Downtown Los Angeles and Santa Monica. In addition, Sunday service on Metro Line 704, which provides service between Downtown Los Angeles and Santa Monica on Santa Monica Boulevard, is expected to be cut. These routes most closely parallel the service that would be provided by the proposed subway. All other transit lines are assumed to offer equivalent service between existing and future scenarios.

In the future transit network, Line 920 would be eliminated and Line 720 would operate less frequently. In the City of Los Angeles, headways for Line 720 are expected to increase from 3 to 5 minutes under the existing network to 5 to 11.5 minutes under the Build Alternatives. In the City of Santa Monica, headways for Line 720 are expected to remain essentially unchanged. Future headways for Line 20 would remain unchanged within the City of Los Angeles, but in the City of Santa Monica, Line 20 service would be eliminated.

³ Metro is working with SCAG to update the RTP, which would add the projects identified in Metro's LRTP into the RTP. It is anticipated that the update will be completed in May 2010.



4.3.1 Service Characteristics

Service for all Build Alternatives is expected to operate seven days per week 365 days per year, with hours of operation from 6:00 AM to 3:00 AM. Peak-period headways of 5 minutes would be in effect during weekday non-holidays, from 6:00 AM to 9:00 AM, and 3:00 PM to 7:00 PM. Off-peak headways of 10 minutes would be in effect during the remaining weekday hours of operation, and on weekends and holidays.

4.4 Regional Performance Measures

Table 4-1 provides a summary of countywide transit performance measures for all scenarios based on linked trips for all modes. Linked trips are a measure of transit trips that assumes transfers between vehicles to reach a single destination as part of the same trip. The data includes all Metro buses and rail activity as well as municipal transit operations (for transit statistics) and trip activity across all travel modes (for daily linked trips). While this section addresses countywide performance measures, further information on ridership, including transit mode share changes, is presented in Section 4.8-Transit Travel Times, Speed, and Reliability.

Table 4-1. Regional Performance Measures – Los Angeles County

Countywide Statistics	Daily Fixed-Guideway Trips *	Daily Linked Bus Trips	Total Daily Linked Transit Trips	Auto Trips	Non-Motorized Trips	Daily Linked Trips (Total All Modes)	Total Transit Mode Share
No-Build	536,814	1,244,442	1,781,256	70,051,026	7,386,552	79,218,834	2.25%
TSM	536,992	1,246,383	1,783,375	70,049,499	7,385,962	79,218,836	2.25%
MOS 1	550,049	1,238,930	1,788,979	70,044,911	7,384,937	79,218,827	2.26%
MOS 2	568,170	1,231,494	1,799,664	70,036,297	7,382,861	79,218,822	2.27%
Alt 1	577,925	1,227,466	1,805,391	70,031,220	7,382,217	79,218,828	2.28%
Alt 2	583,728	1,225,139	1,808,867	70,028,522	7,381,448	79,218,837	2.28%
Alt 3	596,539	1,219,943	1,816,482	70,021,634	7,380,711	79,218,827	2.29%
Alt 4	589,844	1,222,628	1,812,472	70,026,076	7,380,284	79,218,832	2.29%
Alt 5	604,530	1,216,844	1,821,374	70,018,121	7,379,336	79,218,831	2.30%

Source: Metro Travel Demand Model

* Inclusive of Orange Line BRT trips & Metrolink Commuter Rail

Alternative 5 is forecast to have the highest regional daily transit mode share (2.30% compared with 2.25% under the No Build), and have the fewest auto trips (70,018,121 compared with 70,051,026 under the No Build, a reduction of 32,905 daily auto trips). With a difference of 27,598 bus trips between the No Build and Alternative 5, this is likely the minimum number of trips that have been upgraded from bus to rail; the actual number may be greater due to increased bus trips made to connect with the subway. Overall, there is a net gain of 40,118 daily linked transit trips between the No Build and Alternative 5.



4.5 Build Alternatives Ridership Analysis

4.5.1 Project Trips

Table 4-2 compares the project trips for each Build Alternative. Project trips represent the number of trips that can be credited to the Build Alternatives. Project trips are the sum of the following: inbound boardings (eastbound) at project stations, plus outbound boardings (westbound) at project stations, plus outbound boardings at non-project stations, minus outbound alightings at non-project stations. Essentially, the project trips estimate is comprised of riders who either begin or end at project stations. Alternative 5, with 120,000 daily project trips, is forecast to generate the highest number of project trips. Further information on ridership under each project alternative is presented in Section 0-Variations in Transit Mode Shares.

Table 4-2. Build Alternative Project Trips Comparison

Alternative	Description	Stations	Project Trips
MOS 1	Fairfax Station Terminus	3	30,049
MOS 2	Century City Station Terminus	6	56,713
Alt 1	Westwood/UCLA Extension	7	72,242
Alt 2	Westwood/VA Hospital Extension	8	80,757
Alt 3	Santa Monica Extension	12	105,421
Alt 4	Westwood/VA Hospital Extension + West Hollywood Branch	13	93,009
Alt 5	Santa Monica Extension + West Hollywood Branch	17	120,039

Source: Metro Travel Demand Model

4.5.2 Station Boardings

As a more detailed metric than project trips, boardings estimates add location-specific information about the origins and destinations of riders. Boardings data can be used to estimate the viability of project stations in terms of ridership. It can also be compared across the multiple scenarios to demonstrate a network effect; as more stations are added to the subway line, a greater number of riders are attracted to existing stations. The number of total daily boardings differs from project trips in that boardings data does not count riders who board at a non-project station and alight at project stations.

Table 4-3 presents daily station boardings for project stations under each Build Alternative, with total boardings varying from 17,500 for MOS 1 to 89,700 for Alternative 5. In general, ridership increases at initial stations as more stations are added. In cases where an added station provides a preferred alternative to a previously identified station, the previously identified station may show a slight decline, but the combined total of the two stations shows a net gain in boardings.

4.6 Mode of Access



Table 4-4 details the daily mode of access percentages for all project riders that arrive at or depart stations by foot, bus, private vehicle, or other modes. The private vehicle mode of access refers specifically to drop-off and pick-up activity because no park-and-ride facilities are planned at the station locations. While not quantified explicitly by the Metro Travel Demand Model, some utilization of off-site public and private parking capacity is expected on a daily basis.

All Build Alternatives are forecast to have similar private vehicle usage for mode of access. Bus transit mode of access is expected to progressively decline for MOS 2 and each subsequent Alternative as more subway stations are added to the network. This trend reflects an increase in pedestrian access to stations and will reduce the need for transfers between bus and rail. Alternatives 4 and 5 are forecast to have higher mode of access in the “Other” category, which includes urban rail transfers, because both alternatives provide an additional connection to the existing Metro Red Line through the West Hollywood Branch at the Hollywood/Highland Station.

Table 4-3. Daily Station Boardings

Station	MOS 1	MOS 2	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
1. Wilshire/Crenshaw Station	3,435	3,986	4,215	4,320	4,676	4,025	4,356
2. Wilshire/La Brea Station	3,937	3,569	3,722	3,808	4,064	3,239	3,423
3. Wilshire/Fairfax Station	10,135	5,792	6,071	6,209	6,629	5,031	5,361
4. Wilshire/La Cienega Station	--	6,114	6,433	6,608	7,072	5,088	5,418
5. Wilshire/Rodeo Station	--	7,682	4,642	4,585	4,857	6,386	6,649
6. Century City Station	--	8,333	6,681	6,498	6,568	6,424	6,390
7. Westwood/UCLA Station	--	--	14,313	12,629	11,039	13,894	11,978
8. Westwood/VA Hospital Station	--	--	--	8,010	6,120	8,762	6,662
9. Wilshire/Bundy Station	--	--	--	--	5,120	--	5,759
10. Wilshire/26 th Station	--	--	--	--	5,034	--	5,630
11. Wilshire/16 th Station	--	--	--	--	3,886	--	4,323
12. Wilshire/4 th Station	--	--	--	--	5,872	--	6,639
13. Hollywood/Highland Station	--	--	--	--	--	5,957	7,360
14. Santa Monica/La Brea Station	--	--	--	--	--	2,438	2,628
15. Santa Monica/Fairfax Station	--	--	--	--	--	2,125	2,270
16. Santa Monica/San Vicente Station	--	--	--	--	--	1,829	1,905
17. Beverly Center Area Station	--	--	--	--	--	2,818	2,933
Total Station Boardings	17,506	35,475	46,075	52,665	70,936	68,013	89,680

Source: Metro Travel Demand Model

Table 4-4. Daily Mode of Access Percentages

Alternative	Walk	Bus Transit	Private Vehicle	Other
MOS 1	39%	47%	2%	12%
MOS 2	54%	35%	2%	9%
Alternative 1	56%	34%	2%	8%
Alternative 2	60%	30%	2%	8%
Alternative 3	64%	26%	2%	8%
Alternative 4	55%	28%	2%	15%
Alternative 5	58%	24%	2%	16%

Source: Metro Travel Demand Model

4.7 Study Corridor Travel Time Comparison

Table 4-5 compares estimated corridor-specific travel times during the peak period for MOSs and Build Alternatives. As seen with Alternatives 3 and 5, longer subway extensions increase travel time benefits. For example, traveling westbound by bus from Wilshire/Western to Wilshire/4th would take more than an hour under the No Build or TSM Alternatives. Even by car, driving the same distance would be only 15 minutes faster. By comparison, taking the subway from Wilshire/Western to Wilshire/4th under Alternatives 3 or 5 would result in travel time savings of over 42 minutes compared to the bus and 28 minutes compared to driving.

Table 4-6 shows travel time comparisons during the off-peak period. The subway provides a notable improvement over bus service even during the off-peak because bus wait times are greater during the off-peak period than during the peak period. Traveling from Wilshire/Western to Wilshire/4th under the No Build or TSM Alternatives would take more than an hour by bus but only 25 minutes by subway under Alternatives 3 and 5. Traffic congestion is lower during the off-peak, but even with improved auto times, the subway is still faster than driving for all Build Alternatives. Transit travel times to the Westside from origins outside the Study Area are presented in Section 4.8.1 Transit Travel Times.

Table 4-5. Project Alternative Peak Travel Time Comparison

Westbound						
	From	To	Subway Time (min)	No Build Bus Time (min)	TSM Bus Time (min)	Auto Time (min)
MOS 1	Wilshire/Western	Wilshire/Fairfax	6.6	16.7	15.9	12.6
MOS 2	Wilshire/Western	Wilshire/Century City	11.9	34.4	33.6	25.2
Alt 1	Wilshire/Western	Wilshire/Westwood	14.2	45.7	44.9	33.8
Alt 2	Wilshire/Western	Westwood/VA	15.5	53.5	52.7	39.8
Alt 3	Wilshire/Western	Wilshire/4th	21.1	64.2	63.4	48.8
Alt 4	Wilshire/Western	Westwood/VA	15.5	53.5	52.7	39.8
	Hollywood/Highland	Westwood/VA	19.5	65.1	64.3	40.1

WESTSIDE SUBWAY EXTENSION



Westbound						
	From	To	Subway Time (min)	No Build Bus Time (min)	TSM Bus Time (min)	Auto Time (min)
Alt 5	Wilshire/Western	Wilshire/4th	21.1	64.2	63.4	48.8
	Hollywood/Highland	Wilshire/4th	25.1	75.8	75.0	49.0
	From	To	Subway Time (min)	No Build Bus Time (min)	TSM Bus Time (min)	Auto Time (min)
MOS 1	Wilshire/Fairfax	Wilshire/Western	6.6	14.0	10.7	7.7
MOS 2	Wilshire/Century City	Wilshire/Western	11.9	24.7	21.4	15.3
Alt 1	Wilshire/Westwood	Wilshire/Western	14.2	31.8	28.5	20.9
Alt 2	Westwood/VA	Wilshire/Western	15.5	40.9	37.6	28.4
Alt 3	Wilshire/4th	Wilshire/Western	21.1	49.6	46.3	35.5
Alt 4	Westwood/VA	Wilshire/Western	15.5	40.9	37.6	28.4
	Westwood/VA	Hollywood/Highland	19.5	47.8	44.5	27.6
Alt 5	Wilshire/4th	Wilshire/Western	21.1	49.6	46.3	35.5
	Wilshire/4th	Hollywood/Highland	25.1	56.5	53.2	34.7

Source: Metro Travel Demand Model; Note: Transit times include wait times equal to half of headways

Table 4-6. Project Alternative Off-Peak Travel Time Comparison

Westbound						
	From	To	Subway Time (min)	No Build Bus Time (min)	TSM Bus Time (min)	Auto Time (min)
MOS 1	Wilshire/Western	Wilshire/Fairfax	9.9	16.2	16.2	7.3
MOS 2	Wilshire/Western	Wilshire/Century City	15.3	29.2	29.2	14.3
Alt 1	Wilshire/Western	Wilshire/Westwood	17.6	38.7	38.7	19.4
Alt 2	Wilshire/Western	Westwood/VA	18.9	50.1	50.1	23.5
Alt 3	Wilshire/Western	Wilshire/4th	24.5	61.9	61.9	30.5
Alt 4	Wilshire/Western	Westwood/VA	18.9	50.1	50.1	23.5
	Hollywood/Highland	Westwood/VA	22.0	64.4	64.4	23.1
Alt 5	Wilshire/Western	Wilshire/4th	24.5	61.9	61.9	30.5
	Hollywood/Highland	Wilshire/4th	27.6	76.2	76.2	30.0

Westbound						
	From	To	Subway Time (min)	No Build Bus Time (min)	TSM Bus Time (min)	Auto Time (min)
	From	To	Subway Time (min)	No Build Bus Time (min)	TSM Bus Time (min)	Auto Time (min)
MOS 1	Wilshire/Fairfax	Wilshire/Western	9.9	16.4	16.4	7.2
MOS 2	Wilshire/Century City	Wilshire/Western	15.3	29.4	29.4	14.3
Alt 1	Wilshire/Westwood	Wilshire/Western	17.6	38.3	38.3	19.1
Alt 2	Westwood/VA	Wilshire/Western	18.9	50.2	50.2	23.5
Alt 3	Wilshire/4th	Wilshire/Western	24.5	61.9	61.9	30.4
Alt 4	Westwood/VA	Wilshire/Western	18.9	50.2	50.2	23.5
	Westwood/VA	Hollywood/Highland	22.0	65.0	65.0	23.3
Alt 5	Wilshire/4th	Wilshire/Western	24.5	61.9	61.9	30.4
	Wilshire/4th	Hollywood/Highland	27.6	76.7	76.7	30.2

Source: Metro Travel Demand Model; Note: Transit times include wait times equal to half of headways

4.8 Transit Travel Times, Speed, and Reliability: Regional Travel

Impacts of alternatives include changes in key transit service characteristics such as speed and reliability. Under the Build Alternatives, a substantial reduction in travel times and improved service reliability are anticipated as compared to the No Build and TSM Alternatives.

4.8.1 Transit Travel Times

Transit travel times are a major factor for determining transit demand. Several zone pairs were selected to show estimated a.m. peak hour travel times in 2035 under each alternative. The origin and destination locations are shown in Figure 4-1. The five destination zones, all located in the Study Area, encompass the four cities in the area: Los Angeles (including Century City and Westwood), West

Hollywood, Beverly Hills, and Santa Monica. These zone pairs were selected based on several factors such as:

- The destination zones include major concentrations of employment in the Study Area.
- The seven origin zones are spread throughout Los Angeles County.
- Each origin includes an existing high capacity transit station on the Metro Red, Orange, Blue, and Purple lines or Metrolink commuter rail service. Figure 3-1 identifies each station on these rail lines.
- In addition to reflecting geographic diversity, the origin locations also involve a demographic mix, including household income levels and a variation of concentrations of minority communities.

The origin zones are:

WESTSIDE SUBWAY EXTENSION



- Pasadena (Del Mar Station), located on the existing Metro LRT Gold Line in Pasadena and northeast of the Study Area. From this location, access to the Westside is provided via transfer in Downtown Los Angeles at Union Station.
- Located in the central part of Downtown Los Angeles, the Pershing Square Station is due east of the Study Area and is served by the existing Metro Purple and Red HRT lines. Direct HRT service is currently provided from this station to Central Wilshire.
- South Los Angeles at the Florence Station is southeast of the Study Area on the existing LRT Metro Blue Line. Westside access can be provided with one transfer in Downtown Los Angeles.
- Reseda in the central part of the San Fernando Valley at the existing Metro Orange Line Station BRT Station. The station is north of the Westside Study Area
- Covina is located east of Downtown Los Angeles and the Study Area at the existing Covina Metrolink commuter rail station. Access to the Westside from Covina can be provided with a transfer at Union Station in Downtown Los Angeles.
- Wilshire Center (Wilshire/Western Purple Line Station) is located at the east end of the Study Area. For potential Westside subway extensions, this would be the starting point for service along Wilshire Boulevard
- North Hollywood, at the Metro North Hollywood Red/Orange Line Station, is the terminus for the Orange BRT line and the Red HRT line. The station is located north and east of the Study Area.


Figure 4-1. Origins and Destinations for Transit Travel Times
WESTSIDE SUBWAY EXTENSION



Summary information on estimated 2035 a.m. peak-period transit travel times is presented in the following sections for the above zone pairs. There are very little travel-times differences for the No Build and TSM Alternatives (in most cases less than one minute). Accordingly, a single travel time (for the No Build Alternative) is identified in the following sections. The information presented in this section reflects complete implementation of the alternatives as defined in Chapter 2. Since the MOSs represent potential phasing of subway extensions, they are not included.

The estimated travel time variations among the alternatives reflect the extent of exclusive subway service that would be involved in making the trip. In several cases, such as travel from Pasadena to Century City or Downtown Los Angeles to Westwood, no variations in travel among Build Alternatives would occur. Similar travel times for these zone pairs would occur since the subway would be serving these destinations under each Build Alternative. In addition to the relative length of subway service under each alternative, variations in transit travel time would occur due to alignment options and number of station locations. However, most variations

in travel time would be attributable to the extent of subway service for each alternative.

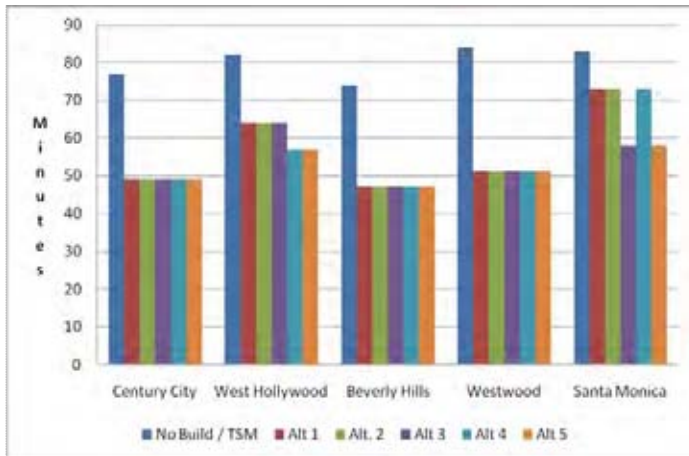


Figure 4-2. Transit Travel Times—
Pasadena to Westside

From Pasadena (Del Mar Gold Line Station)

Estimated transit travel times from Pasadena to various Westside destinations are shown in Figure 4-2. Under any alternative, a transfer would be necessary to complete the trip to the Westside. In the case of the Build Alternatives, the transfer would be at Union Station.

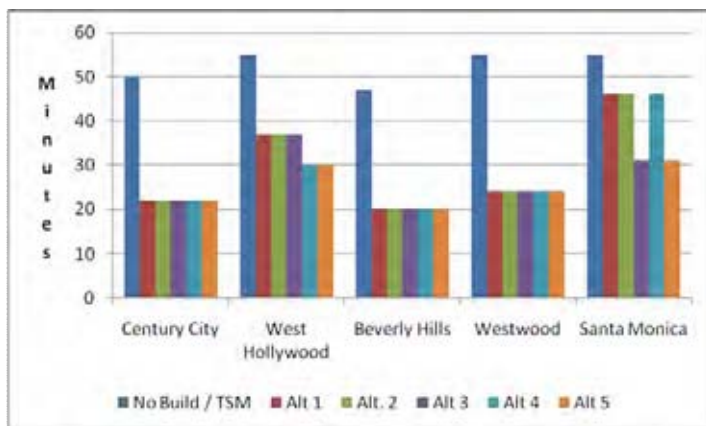


Figure 4-3. Transit Travel Times—
Downtown Los Angeles to Westside

The travel times with the Build Alternatives would be generally much lower than the No Build/TSM Alternatives. Particularly major reductions in times would occur for travel to Century City, Beverly Hills, and Westwood. For trips to Santa Monica under Alternatives 1, 2, and 4, travel time would involve a bus transfer to complete the trip.

From Downtown Los Angeles (Pershing Square Station)

Estimated transit travel times from



Downtown Los Angeles (Pershing Square Station) to various Westside destinations are shown in Figure 4-3. Under all alternatives, direct/no transfer transit access to the Westside would be available. However, even with direct bus access, the No Build/TSM Alternatives would have twice the travel time than the Build Alternatives for trips to Century City, Beverly Hills, and Westwood.

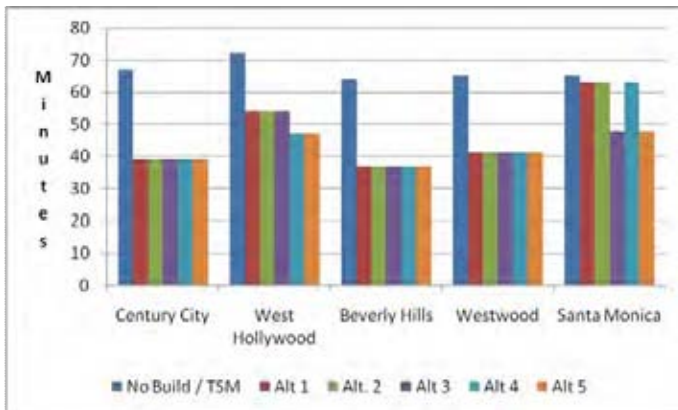


Figure 4-4. Transit Travel Times—South Central Los Angeles to Westside

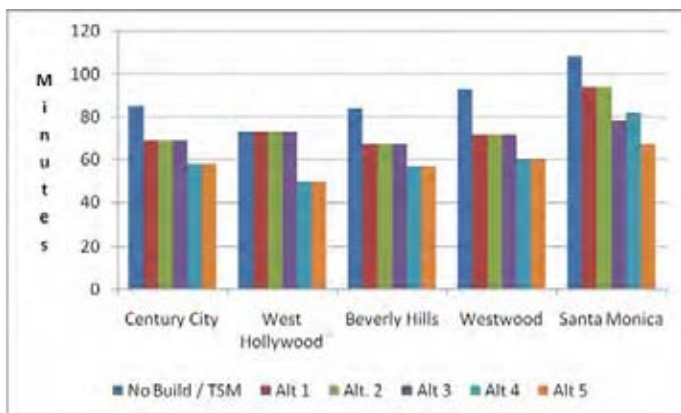


Figure 4-5. Transit Travel Times—Reseda to Westside

From South Los Angeles (Florence Blue Line Station)

The estimated transit travel times from South Los Angeles (Florence Blue Line Station) to various Westside destinations are shown in Figure 4-4. Under the Build Alternatives, transfers between the Blue and extended Purple Lines would be required in Downtown Los Angeles to complete the trip to Westside locations. Travel times to Santa Monica under the No Build/TSM Alternatives would be somewhat competitive with Alternatives 1 and 2. Because riders could use the planned Exposition LRT line, it would provide quick transit access between South Los Angeles and the Westside.

From Reseda (Orange Line Station)

Estimated transit travel times from Reseda in the San Fernando Valley to Westside destinations are shown in Figure 4-5. Under all alternatives, transfers in either Hollywood or Wilshire/Vermont would be required to complete the trips. Under Alternatives 4 and 5, a potential subway extension to West Hollywood

from the Hollywood/Highland Station would result in substantial travel time savings versus the No Build/TSM Alternatives. This would be particularly applicable to trips between Reseda and Westwood, West Hollywood, and Santa Monica. Under Alternatives 1, 2, and 4, transfers would occur at Wilshire and Vermont.

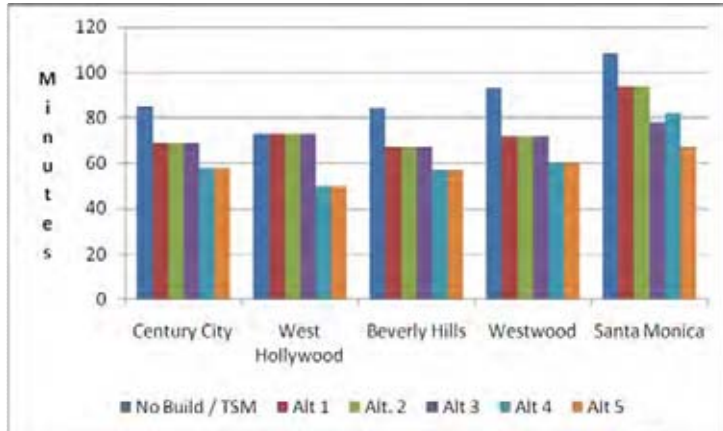


Figure 4-6. Transit Travel Times—Covina to Westside

From Covina (Metrolink Station)

The estimated transit travel times from the Covina Metrolink Station to various Westside destinations are shown in Figure 4-6. Under all alternatives, transfers in Downtown Los Angeles at Union Station would be required to complete the trip to Westside locations. However, even with direct bus access from Downtown Los Angeles, the No Build/TSM Alternatives would have higher transit travel times than the Build Alternatives for all locations except West Hollywood under Alternatives 1, 2, and 3.

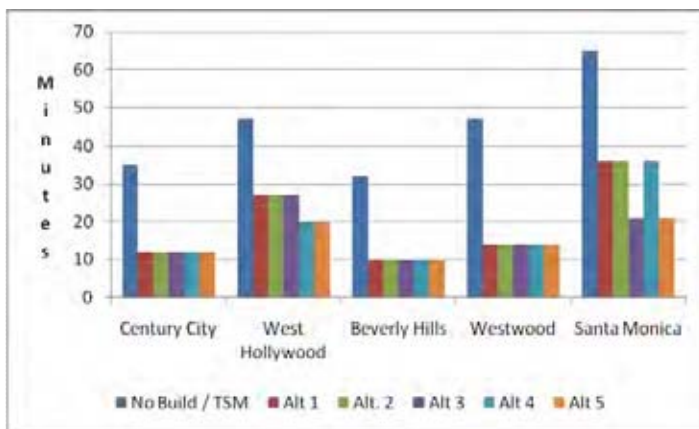


Figure 4-7. Transit Travel Times—Wilshire Western to Westside

From Wilshire Center (Wilshire/Western Station)

The estimated transit travel times from the Wilshire/Western Purple Line Station reflect an extension of HRT service within the Study Area. The estimated travel times from this location to various Westside destinations are shown in Figure 4-7. Major variations can be seen between the No Build/TSM Alternatives travel times and each of the Build Alternatives. Particularly, major variations can be seen for trips to Century City, Beverly Hills, Westwood, and Santa Monica. For example, transit travel time to Westwood would be 12 minutes as compared to 46 minutes under the No Build/TSM Alternative.

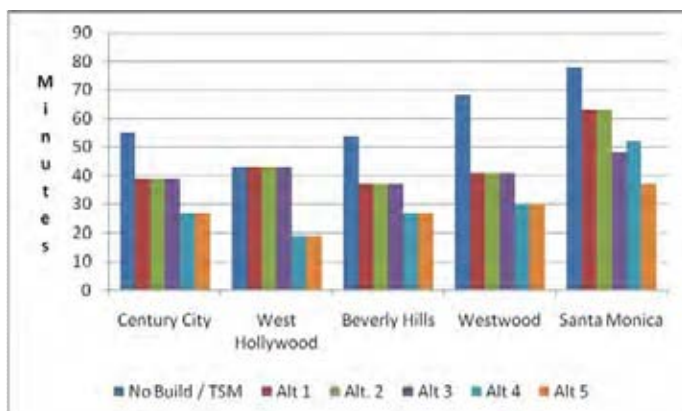


Figure 4-8. Transit Travel Times—North Hollywood to Westside

From North Hollywood (Red Line Station)

Estimated transit travel times from the existing Red Line North Hollywood Station represent an extension of an existing HRT service. Estimated peak-hour transit travel times from North Hollywood to



selected Westside destinations are shown in Figure 4-8.

Under all alternatives, transfers at Wilshire/Vermont or Hollywood/Highland would be required to complete the trip to Westside locations. Substantial travel time reductions would occur under Alternatives 4 and 5 as compared to the No Build/TSM Alternatives. These alternatives would include direct subway service from North Hollywood to the Westside.

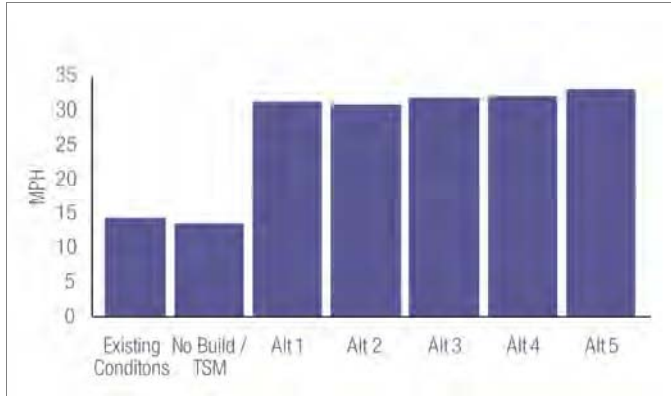


Figure 4-9. Transit Operating Speeds

4.8.2 Transit Speed and Reliability

The transit travel times presented above reflect estimated variations in transit speeds for the alternatives. As shown in , transit speeds under the Build Alternatives would increase by over a factor of two versus the No Build/ TSM Alternatives and existing conditions. Even allowing time spent for accessing subway service (including vertical movement to platforms) under the Build Alternatives, the substantial increases in speeds versus the No Build and

TSM Alternatives conditions would result in reduced travel times. Transit speeds under the Build Alternatives contrast with reduced speeds under the No Build/TSM Alternatives compared to existing conditions. The degrading conditions under the No Build/TSM Alternatives would result from transit service, heavily dominated by

buses operating in mixed traffic conditions, being subject to increasingly poor conditions.

Reduced transit travel times directly reflect expected major increases in operating speeds as compared to the No Build and TSM Alternatives. Transit demand under the Build Alternative also would be influenced by improved service reliability. This would be achieved by increases in operations involving exclusive right-of-way.

In addition to higher transit speeds which result in reduced travel time, transit demand is highly influenced by reliability of service. Service reliability is measured in terms of actual service arrivals and transit travel times as compared to what is published in timetables. While some deviations could occur due to special conditions such as a traffic accident, close adherence between published and actual transit schedules and travel times should be expected.

Several factors can affect service reliability, including traffic incidences that can prevent adherence to bus schedules. However, the most dominant factor affecting transit service reliability is the extent of general-purpose traffic congestion on streets that are also used by buses. As is the case with existing conditions, the No Build and TSM Alternatives would involve mostly a mix of buses and general-purpose traffic. Only small segments of the Purple and Red HRT lines, located in the far eastern portions of the Study Area, provide transit operations in exclusive right-of-way. In addition, there may be a bus lane on Wilshire Boulevard that would improve service



reliability as compared to current conditions. However, autos making right turns would still be mixed with buses and there also would be cross-traffic that buses would have to confront.

With the Build Alternatives, much higher levels of exclusive right-of-way service would be available to transit riders. As potential subway extensions proceed farther west, this level of exclusive transit operations versus exclusive-plus-mixed operations would gradually increase. The travel forecasting model can identify the extent of daily passenger miles that involve exclusive operations. The passenger miles information presented in this section involves service in the Study Area. But, for some routes, the coverage includes Downtown Los Angeles.



Figure 4-10. Extent of Passenger Miles in Exclusive Guideway Service

As indicated by Figure 4-10, there would be a relatively small share of passenger miles that involves exclusive operations under the No Build/ TSM Alternatives in 2035. With the Build Alternatives, the extent of passenger miles in exclusive operations would be substantially greater as compared to both the No Build and TSM Alternatives. As compared to about 5 percent under the No Build and TSM Alternatives,

the shares under the Build Alternatives would range between 40 percent to over 50 percent. With these much larger shares of passenger miles involving exclusive right-of-way and congestion-free service, transit reliability in the Study Area would be affected in a very positive way. Variations in Transit Mode Shares

The effects of the Build Alternatives can also be shown by the estimated mode share changes within the Study Area as compared to the No Build and TSM Alternatives. The Travel Demand Model provides information on 2035 transit mode shares during peak periods for travel pairs within Los Angeles County. These travel pairs involve origins located in the vicinity of existing rail stations while the destinations are located in the Study Area. In comparison to the county-wide performance measure changes, the mode share information presented below reflects characteristics of the alternatives (for example, travel time) that would more directly affect the Study Area.

The following summarize estimated changes in mode shares during AM and PM peak periods for selected travel pairs between the No Build/TSM and Build Alternatives:

Pasadena (Del Mar Gold Line Station) to Century City

No Build/TSM:	18 percent
Build Alternatives:	22 percent



South-Central Los Angeles (Florence Blue Line Station) to Westwood/UCLA

No Build/TSM:	19 percent
Build Alternatives:	24 percent

Wilshire District (Wilshire/Western Purple Line Station) to Santa Monica (Wilshire Boulevard /4th Street)

No Build/TSM:	21 percent
Build Alternatives:	29 percent

North Hollywood (Orange-Red Line Stations) to West Hollywood (Santa Monica Boulevard/San Vicente Boulevard)

No Build/TSM:	13 percent
Build Alternatives:	19 percent

4.9 Summary

Using regional performance measures, ridership, mode of access, and travel time, it is possible to assess the transportation benefits of each MOS and Build Alternative.

As the number of subway stations increases, the number of auto trips declines and the number of transit trips increases. The greatest benefit, according to these regional performance measures, is achieved by Alternative 5 (1,821,000 linked daily transit trips), followed by Alternative 3 (1,816,000 linked daily transit trips) and Alternative 4 (1,812,000 linked daily transit trips).

With more stations, there are more opportunities for people to begin or end new trips on the subway. Under the metric of project trips, Alternative 5 has the most project trips (120,000), followed by Alternative 3 (105,000) and Alternative 4 (93,000).

Boardings data reflects the ability of project stations to attract subway trip origins. It also reflects the network effect of additional stations increasing the net gain in total trips. Alternative 5 is estimated to produce the greatest number of daily boardings (89,700), followed by Alternative 3 (71,000), and Alternative 4 (68,000).

Build Alternatives can be compared based on several measures. Alternative 5 has the highest share of other mode of access (16%), suggesting the highest share of rail-to-rail transfers. It also has a high share of walk access (58%) and a low share of bus access (24%). Alternative 3 predicts more people accessing subway stations on foot compared to Alternative 5 (64%), with a slightly greater amount of bus access (26%), and a much lower share of other access (8%). Compared to Alternative 5, Alternative 4 has lower shares of walk access (55%) and other access (15%) and a higher share of bus access (28%).

The mobility benefits of decreased travel time accrue to the Build Alternatives that provide the greatest amount of transit service along an exclusive Right of Way.



Alternative 5 adds the greatest number of miles (25), followed by Alternative 4 (18), and Alternative 3 (12). A sampling of transit travel times originating from diverse locations in the Study Area finds that in every case, Alternative 5 experiences transit travel times equal to or faster than each of the other Build Alternatives. Alternative 5 also shows the greatest increase in transit operating speed and the greatest level of transit reliability. For all analyzed travel markets, the transit mode share under Alternative 5 is equal to or higher than the other Build Alternatives.

Based on these metrics, Alternative 5 would have the most transportation benefits among the Build Alternatives.



This page intentionally left blank.



5.0 PEDESTRIAN/BICYCLE/BUS-RAIL INTERFACE

The purpose of this section is to describe the connections between Westside Subway Extension stations and the other transportation modes that interface with these stations. The interface between the Westside Subway Extension and other modes is important because no trip begins or ends directly at a station. Subway riders will walk, bicycle, take a bus, or be picked up/dropped off in private vehicles to continue or complete their trips. Providing efficient and safe connections between the Westside Subway Extension and the transportation modes that interface with it will ensure the best possible service for subway riders.

The interfacing transportation modes evaluated in this section include bus transit (specifically the location of bus stops), and pedestrian and bicycle facilities (pedestrian crossings and bicycle lanes). The possibility of pedestrian constriction at station locations was carefully reviewed, but the width of station area sidewalks is sufficient to dismiss this concern.

5.1 Wilshire/Crenshaw Station

The following MOSs and Build Alternatives include this station:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOSs and Build Alternatives.

5.1.1 Pedestrian & Bicycle Interface

This optional station is located between Bronson Avenue and Lorraine Boulevard, with a potential station entrance on the south side of Wilshire Boulevard on the Metro-owned property between Crenshaw and Lorraine Boulevards (see Figure 5-1).

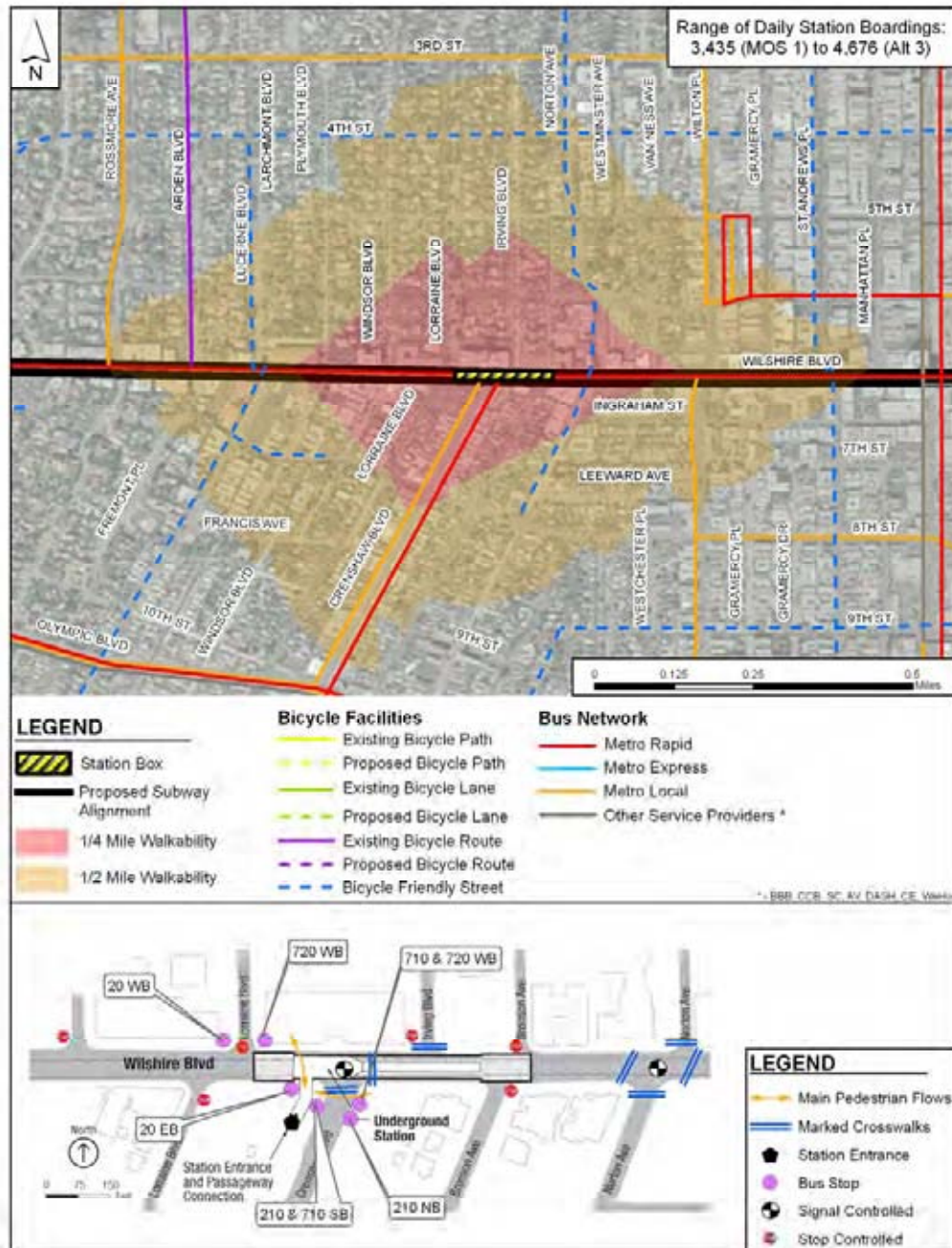
The intersection of Crenshaw and Wilshire Boulevards is signalized with protected/permissive left-turn phasing on westbound Wilshire Boulevard. Marked crosswalks are currently provided on the south leg and the east leg of the intersection. There is no crosswalk across Wilshire Boulevard on the west leg of the intersection where the potential entrance is located. The intersection of



Lorraine and Wilshire Boulevards is unsignalized. No marked crosswalks are provided at this intersection.

Arden Boulevard north of Wilshire Boulevard is designated as a bicycle route. 4th Street, Lucerne Boulevard, Norton Avenue and Saint Andrews Place are designated as bicycle friendly streets. No bicycle facilities are located on either Crenshaw or Wilshire Boulevards.

Figure 5-1. Wilshire/Crenshaw Station





5.1.2 Bus Interface

Figure 5-1 also illustrates bus stop locations. Bus stops for Metro Rapid Line 720 are on the north side of Wilshire Boulevard, just east of Lorraine Boulevard (westbound buses) and on the south side of Wilshire Boulevard east of Crenshaw Boulevard (eastbound buses). Bus stops for Metro Rapid Line 710 are on the west side of Crenshaw Boulevard, just south of Wilshire Boulevard (southbound buses) and at the eastbound Rapid Line 720 bus stop on the south side of Wilshire Boulevard east of Crenshaw Boulevard (northbound buses). Bus stops for Metro Line 20 are on the north side of Wilshire Boulevard, west of Lorraine Boulevard (westbound bus), and on the south side of Wilshire Boulevard, west of Crenshaw Boulevard and directly in front of the potential station entrance (eastbound bus). Bus stops for Metro Line 210 are at the Rapid Line 710 bus stop on the west side of Crenshaw Boulevard, just south of Wilshire Boulevard (southbound buses) and on the east side of Crenshaw Boulevard just south of Wilshire Boulevard (northbound buses).

5.2 Wilshire/La Brea Station

The following MOSs and Build Alternatives include this station:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOSs and Build Alternatives.

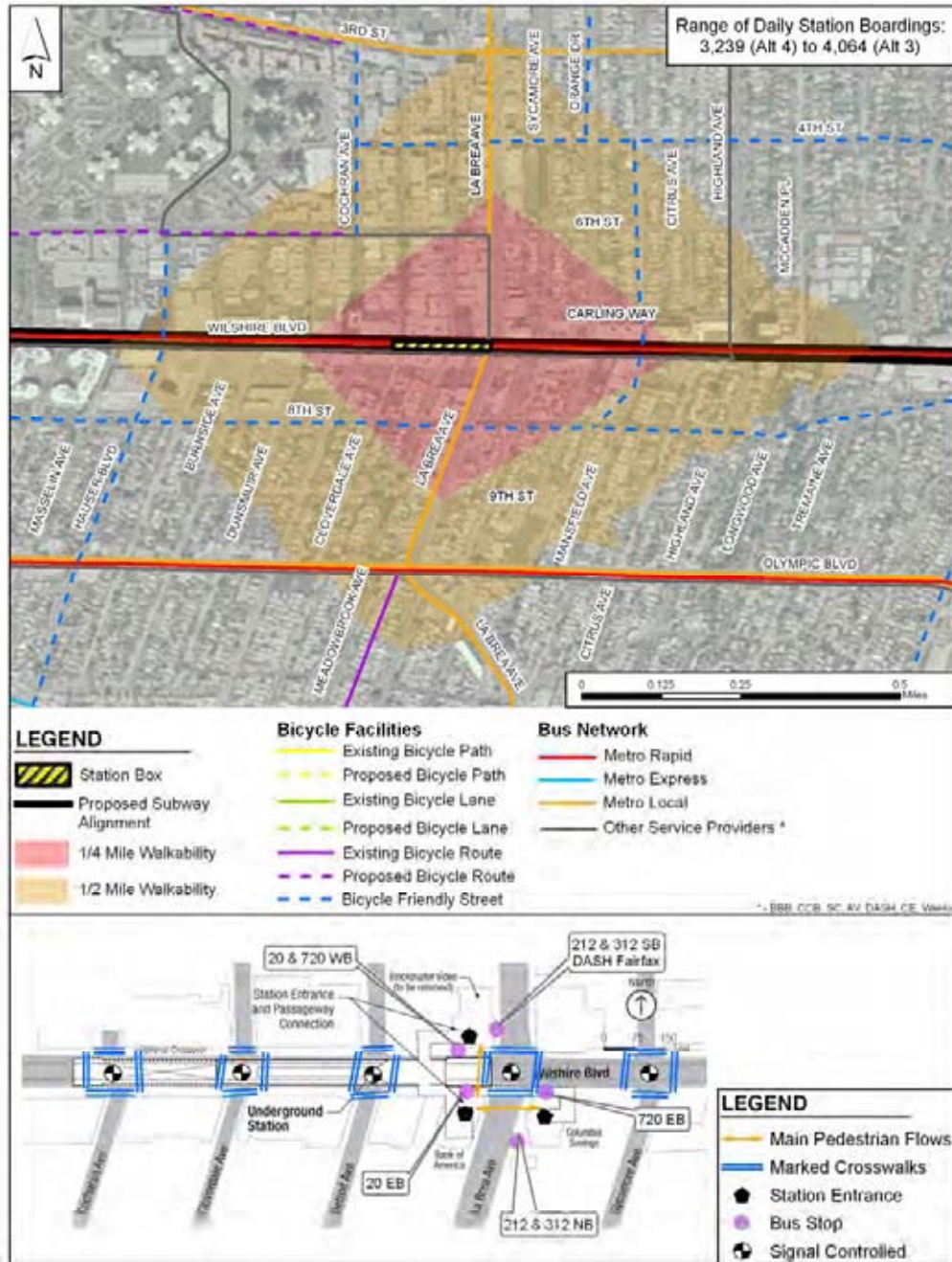
5.2.1 Pedestrian & Bicycle Interface

This station is between La Brea and Cloverdale Avenues with three potential station entrances: on the northwest, southwest, and southeast corners of the intersection of La Brea Avenue and Wilshire Boulevard (see Figure 5-2).

The intersection of La Brea Avenue and Wilshire Boulevard is signalized with protected/permissive phasing on Wilshire Boulevard and northbound on La Brea Boulevard and with protected left-turn phasing southbound on La Brea Boulevard. Marked crosswalks are provided on all legs of the intersection. The intersection of Detroit Street and Wilshire Boulevard is signalized with permissive phasing in all four directions. Marked crosswalks are currently



Figure 5-2. Wilshire/La Brea Station





provided on all legs of the intersection. Raised medians are provided on Wilshire Boulevard both east and west of Detroit Street.

4th Street, 8th Street, Sierra Bonita Avenue, Cochran Avenue, and Mansfield Avenue are designated as bicycle friendly streets. In the Draft Los Angeles Bicycle Plan Update, bicycle routes are proposed for 3rd Street and 6th Street west of Cochran Avenue. No bicycle facilities are located on either La Brea Avenue or Wilshire Boulevard.

5.2.2 Bus Interface

Figure 5-2 also illustrates bus stop locations. Bus stops for Metro Rapid Line 720 are on the north side of Wilshire Boulevard, just west of La Brea Avenue (westbound bus) and on the south side of Wilshire Boulevard east of La Brea Avenue (eastbound buses). Bus stops for Metro Line 20 are on the north side of Wilshire Boulevard, west of La Brea Avenue immediately adjacent to the Rapid stop, (westbound bus), and on the south side of Wilshire Boulevard, west of La Brea Avenue (eastbound buses). Bus stops for Metro Lines 212 and 312 are on the west side of La Brea Avenue just north of Wilshire Boulevard (southbound buses) and on the east side of La Brea Avenue just south of Wilshire Boulevard (northbound buses). The bus stop for the DASH Fairfax Line (clockwise buses) is located at the southbound Metro Lines 212/312 stop.

5.3 Wilshire/Fairfax Station

The following MOSs and Build Alternatives include this station:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

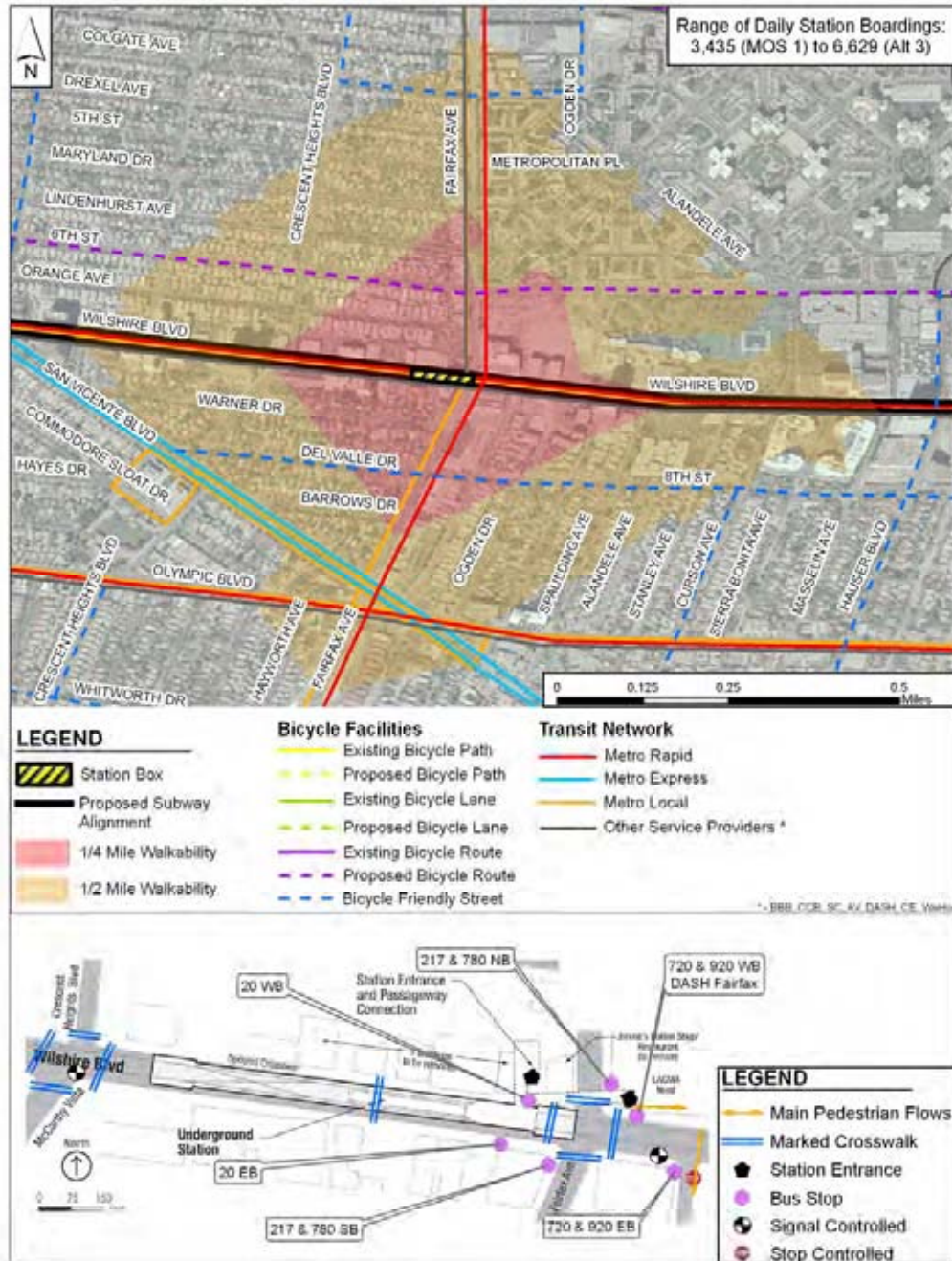
The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOSs and Build Alternatives.

5.3.1 Pedestrian & Bicycle Interface

This station is under the center of Wilshire Boulevard, immediately west of Fairfax Avenue, extending almost to the intersection with Crescent Heights (see Figure 5-3). There are two potential station entrances: on the northwest and north east corner of the intersection of Wilshire Boulevard and Fairfax Avenue



Figure 5-3. Wilshire/Fairfax Station





The intersection of Fairfax Avenue and Wilshire Boulevard is signalized with protected/permissive phasing on Wilshire Boulevard and northbound on Fairfax Avenue and with protected left-turn phasing southbound on Fairfax Avenue. Marked crosswalks are currently provided on all legs of the intersection. A raised median is provided on Wilshire Boulevard east of Fairfax Avenue.

Del Valle Drive, Curson Avenue, Sierra Bonita Avenue, 4th Street, 8th Street, and Mansfield Avenue are designated as bicycle friendly streets. In the Draft Los Angeles Bicycle Plan Update, bicycle routes are proposed for 3rd Street and 6th Street west of Cochran Avenue. No bicycle facilities are located on either La Brea Avenue or Wilshire Boulevard.

5.3.2 Bus Interface

Figure 5-3 also illustrates bus stop locations. Bus stops for Metro Rapid Lines 720 and 920 are on the north side of Wilshire Boulevard, east of Fairfax Avenue (westbound buses) and on the south side of Wilshire Boulevard east of Fairfax Avenue (eastbound buses). Bus stops for Metro Rapid Line 780 and Line 217 are located on the west side of Fairfax Avenue, south of Wilshire Boulevard (southbound buses) and on the east side of Fairfax Avenue, north of Wilshire Boulevard (northbound buses). Bus stops for Metro Line 20 are on the north side of Wilshire Boulevard, west of Fairfax Avenue (westbound buses), and on the south side of Wilshire Boulevard, west of Fairfax Avenue (eastbound buses). The bus stop for the DASH Fairfax Line (clockwise buses), is located at the westbound Metro Rapid 720/920 bus stop. Commuter service provided by Antelope Valley Transit Line 786 also serves this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.3.3 Wilshire/Fairfax Optional Station (Option B)

The following MOSs and Build Alternatives include this station:

MOS 1

MOS 2

Alternative 1

Alternative 2

Alternative 3

Alternative 4

Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOSs and Build Alternatives.



5.3.3.1.1 Pedestrian & Bicycle Interface

The Wilshire/Fairfax Optional Station would be located east of the base Wilshire/Fairfax Station, underneath the intersection of Wilshire Boulevard and Fairfax Avenue (see Figure 5-4). There are three potential station entrances: on the northwest corner of the intersection of Wilshire Boulevard and Fairfax Avenue; on the northeast corner of the intersection of Wilshire Boulevard and Fairfax Avenue on the LACMA property; and on the southeast corner of the intersection of Orange Grove Avenue and Wilshire Boulevard, across from LACMA.

The signal controls and crosswalk facilities of the intersection of Fairfax Avenue and Wilshire Boulevard have been described above for the Wilshire/Fairfax Station location. The intersection of Orange Grove Avenue and Wilshire Boulevard is unsignalized, with stop controls on the south leg of the intersection. No marked crosswalks are currently provided on any legs of the intersection.

The bicycle facilities have been described above for the Wilshire/Fairfax Station location.

5.3.3.1.2 Bus Interface

Bus stop locations have been described above for the Wilshire/Fairfax Station location.

5.4 Wilshire/La Cienega Station

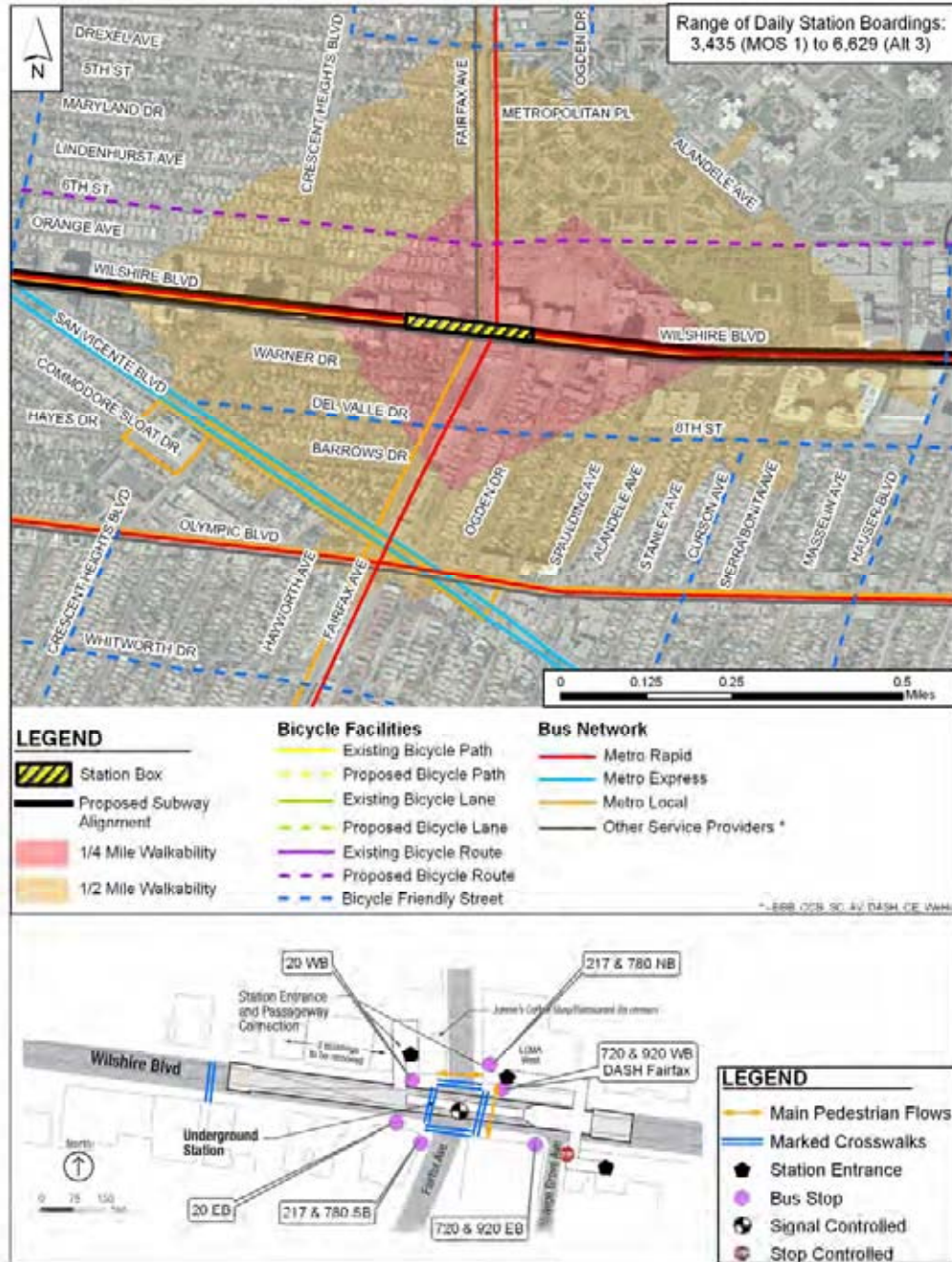
The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOSs and Build Alternatives.



Figure 5-4. Wilshire/Fairfax Optional Station





5.4.1 Pedestrian & Bicycle Interface

This station is under the center of Wilshire Boulevard, immediately east of La Cienega Boulevard (see Figure 5-5). There are two potential station entrances: on the northeast corner of the intersection of La Cienega and Wilshire Boulevards and on the southwest corner of the intersection of Hamilton Drive and Wilshire Boulevard, in front of the Flynt building. A transfer to the West Hollywood alignment is not provided with this station; a track connection to West Hollywood is provided via a separate connection structure at Robertson Boulevard.

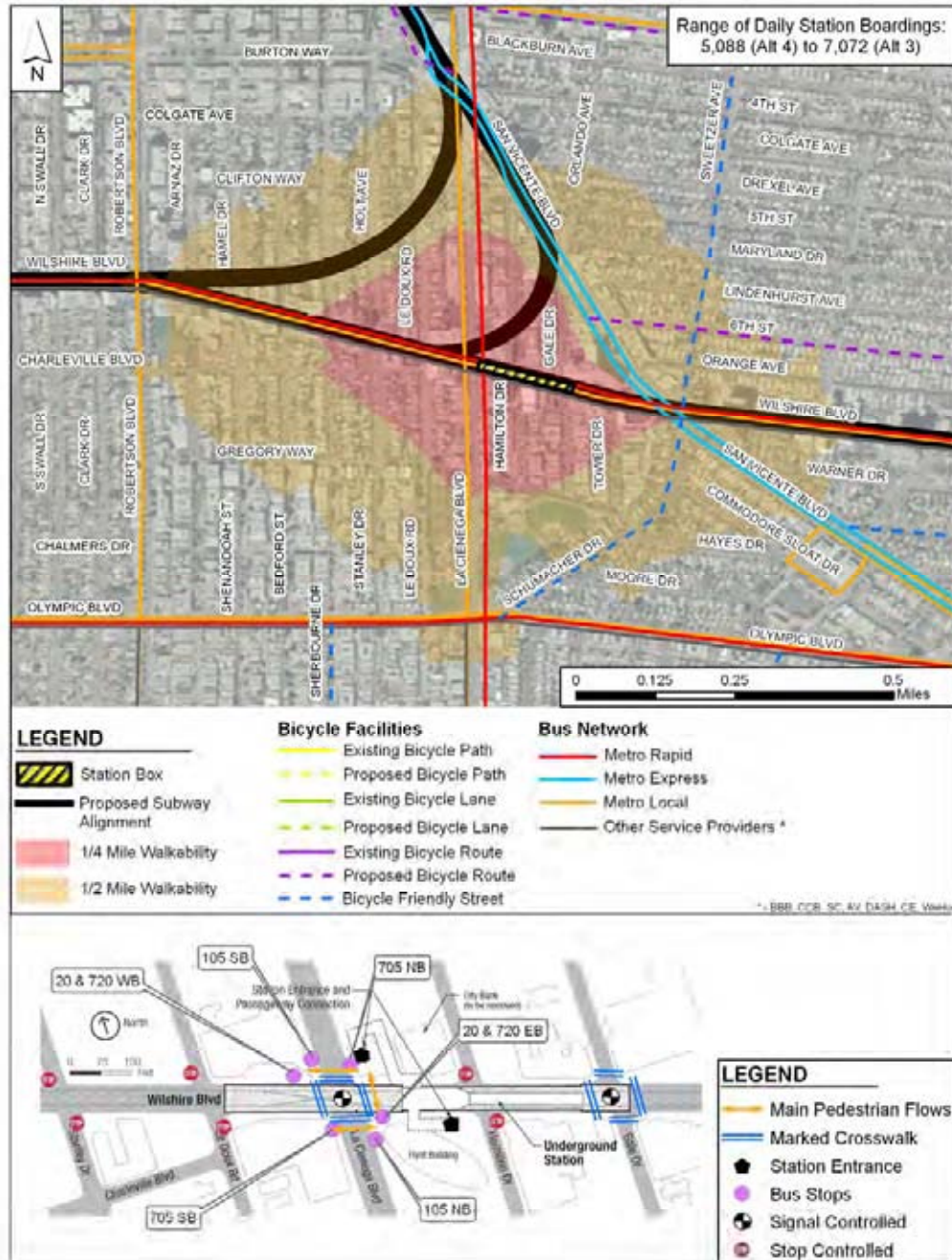
The intersection of La Cienega and Wilshire Boulevard is signalized with protected/permissive phasing in all four directions. Marked crosswalks are provided on all legs of the intersection. The intersection of Hamilton Drive and Wilshire Boulevard is unsignalized, with stop controls on the north and south legs of the intersection. No marked crosswalks are currently provided on any legs of the intersection.

Sweetzer Avenue is designated as a bicycle friendly street. In the Draft Los Angeles Bicycle Plan Update, bicycle routes are proposed for 3rd Street and 6th Street. No bicycle facilities are located on either La Cienega or Wilshire Boulevards.

5.4.2 Bus Interface

Figure 5-5 also illustrates bus stop locations. The bus stops for Metro Rapid Line 720 and Metro Line 20 are located on the north side of Wilshire Boulevard, west of La Cienega Boulevard (westbound buses) and on the south side of Wilshire Boulevard east of La Cienega Boulevard (eastbound buses). Bus stops for Metro Rapid Line 705 are on the west side of La Cienega Boulevard, just south of Wilshire Boulevard (southbound buses) and on the east side of La Cienega Boulevard, north of Wilshire Boulevard (northbound bus). Bus stops for Metro Line 105 are on the west side of La Cienega Boulevard, north of Wilshire Boulevard (southbound buses) and on the east side of La Cienega Boulevard, south of Wilshire Boulevard (northbound buses). Commuter service provided by Antelope Valley Transit Line 786 also serves this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

Figure 5-5. Wilshire/La Cienega Station





5.4.3 Wilshire/La Cienega Optional Station (Option C)

The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOS and Build Alternatives.

5.4.3.1.1 Pedestrian & Bicycle Interface

The station box extends from the intersection of Le Doux Road and Wilshire Boulevard on the east to just west of the intersection of Carson Road and Wilshire Boulevard on the west (see Figure 5-6). There are two potential station entrances: on the northwest corner of the intersection of Le Doux Road and Wilshire Boulevard, and on the northwest corner of the intersection of La Cienega and Wilshire Boulevards in front of Cedars-Sinai Medical Group. The location of this station farther west of the Wilshire/La Cienega intersection allows it to be a transfer station with the West Hollywood alignment.

The signal controls and crosswalk facilities of the intersection of La Cienega and Wilshire Boulevards have been described above for the preferred station location.

The intersection of Le Doux Road and Wilshire Boulevard is unsignalized with stop controls on the south leg of the intersection. No marked crosswalks are currently provided on any legs of the intersection. Further to the west, the intersection of Stanley Drive and Wilshire Boulevard is unsignalized with stop controls on the south leg of the intersection. No marked crosswalks are currently provided on any legs of the intersection.

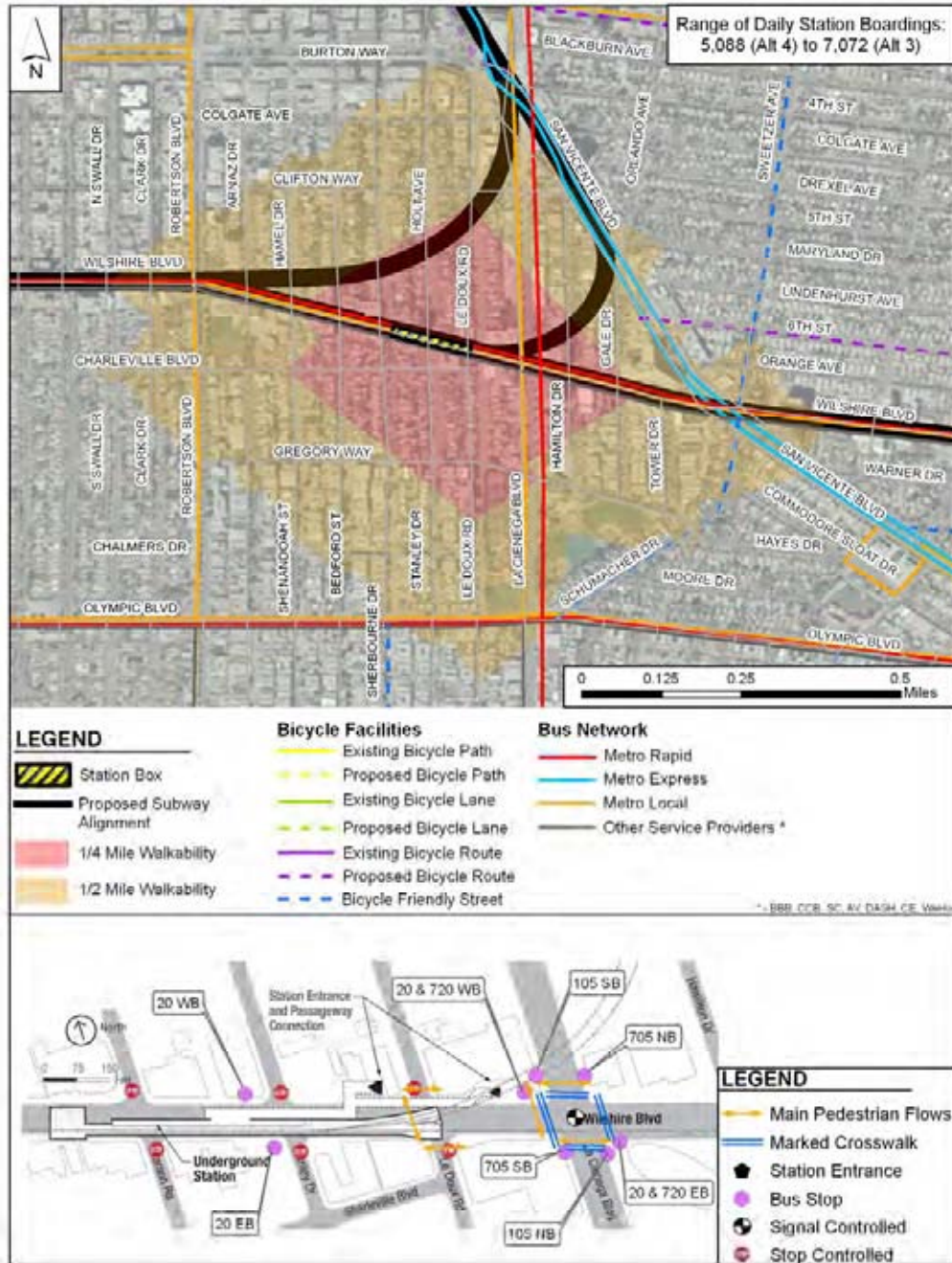
No marked bicycle lanes or other bicycle facilities are provided in the vicinity of this optional station location.

5.4.3.1.2 Bus Interface

Bus stops at the intersection of La Cienega and Wilshire Boulevards are described above under the Wilshire/La Cienega Station location. Additional bus stops (illustrated in Figure 5-6) for Metro Line 20 are on the north side of Wilshire Boulevard, west of Stanley Drive (westbound buses) and on the south side of Wilshire Boulevard west of Stanley Drive (eastbound buses).



Figure 5-6. Wilshire/La Cienega Optional Station





5.5 Wilshire/Rodeo Station

The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOS and Build Alternatives.

5.5.1 Pedestrian & Bicycle Interface

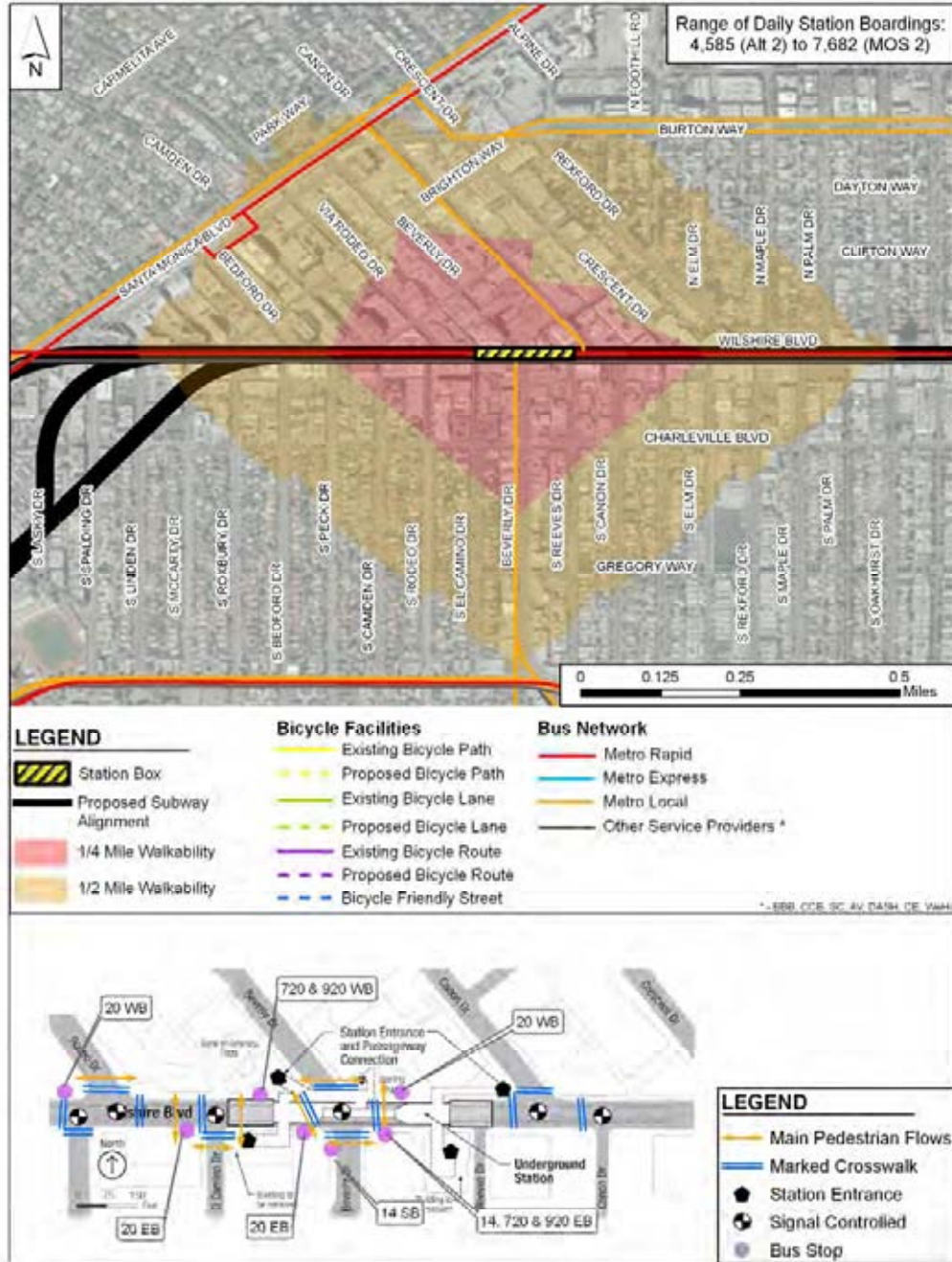
This station is under the center of Wilshire Boulevard, beginning just west of North Canon Drive and extending to El Camino Drive (see Figure 5-7). There are five potential station entrances: on the northwest corner of the intersection of Beverly Drive and Wilshire Boulevard; on the northeast corner of the intersection of Beverly Drive and Wilshire Boulevard; on the northwest corner of the intersection of Canon Drive and Wilshire Boulevard; on the southeast corner of the intersection of El Camino Drive and Wilshire Boulevard; and on the southwest corner of the intersection of Reeves Drive and Wilshire Boulevard.

The intersection of Beverly Drive and Wilshire Boulevards is signalized with protected left-turn phasing along Wilshire Boulevard and permissive left-turn phasing along Beverly Drive. Marked crosswalks are provided on all legs of the intersection. The intersection of Canon Drive and Wilshire Boulevards is signalized with protected left-turn phasing along Wilshire Boulevard and permissive left-turn phasing along Canon Drive. Marked crosswalks are currently provided on the north and west legs of the intersection and on the east leg after a sizable setback. The intersection of El Camino Drive and Wilshire Boulevard is signalized with a protected-permitted right-turn only phasing on El Camino Drive. Marked crosswalks are provided on the south and west legs of the intersection. The intersection of Reeves Drive and Wilshire Boulevard is unsignalized and stop-controlled in the northbound direction of Reeves Drive. There are no marked crosswalks at this intersection.

No marked bicycle lanes or other bicycle facilities are provided in the vicinity of this station location.



Figure 5-7. Wilshire/Rodeo Station





5.5.2 Bus Interface

Figure 5-7 also illustrates bus stop locations. Bus stops for Metro Rapid Lines 720 and 920 are located on the north side of Wilshire Boulevard west of Beverly Drive (westbound buses), and on the south side of Wilshire Boulevard east of Beverly Drive (eastbound buses). Bus stops for Metro Line 20 are located on the north side of Wilshire Boulevard, east of Beverly Drive with an additional stop west of Rodeo Drive (westbound buses) and on the south side of Wilshire Boulevard west of Beverly Drive with an additional stop west of El Camino Drive (eastbound buses). Bus stops for Metro Line 14 are on the west side of Beverly Drive, south of Wilshire Boulevard (southbound buses) and on the side of Wilshire Boulevard east of Beverly Drive shared with the Rapid bus stop (northbound buses). Commuter service provided by Antelope Valley Transit Line 786 also serves this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.6 Century City Station

The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOS and Build Alternatives.

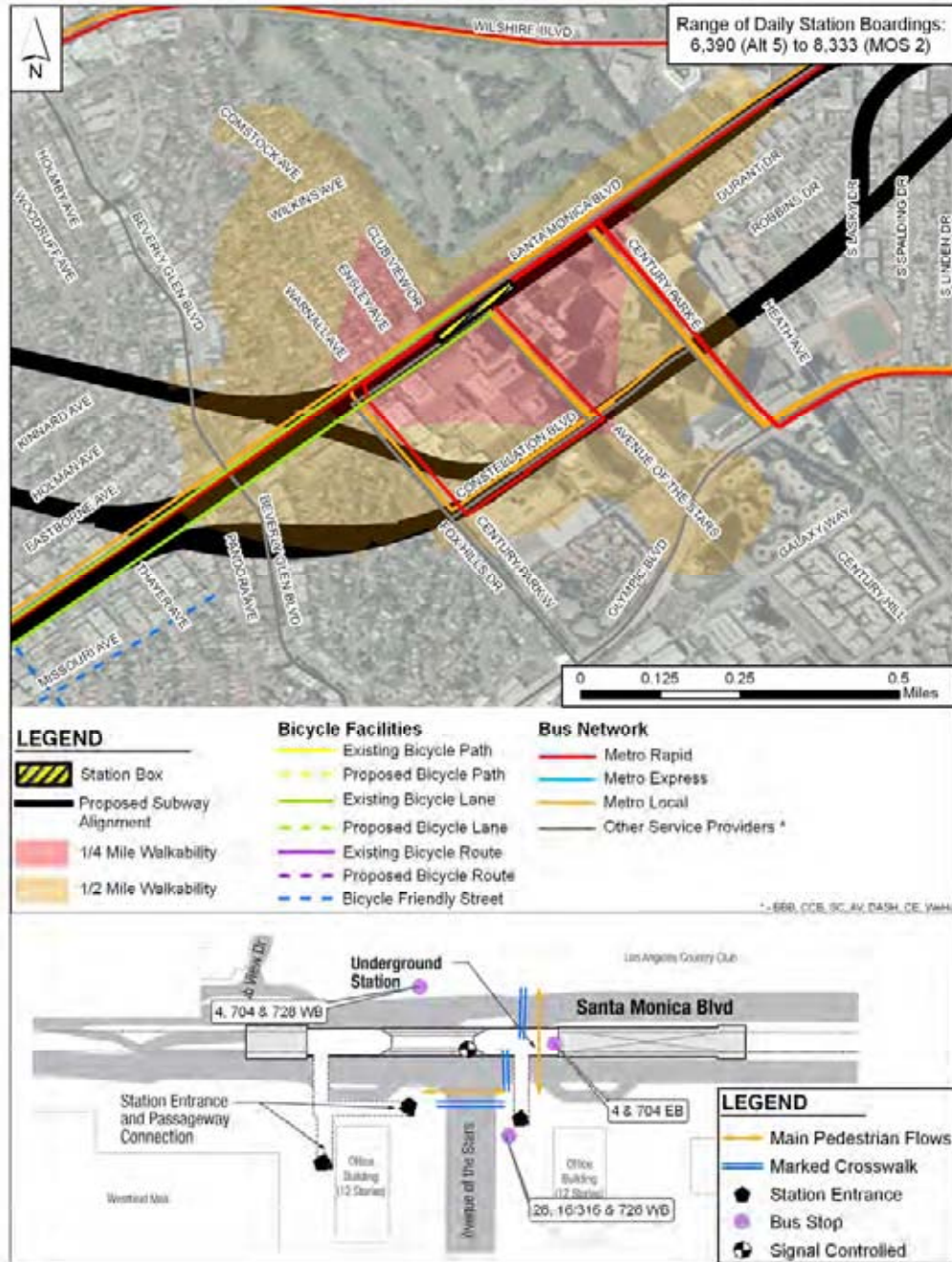
5.6.1 Pedestrian & Bicycle Interface

This station is centered under Santa Monica Boulevard, with the station box centered on Avenue of the Stars and the western end extending to Club View Drive (see Figure 5-8). There are three potential station entrances: on the southeast corner of the intersection of Santa Monica Boulevard and Avenue of the Stars; on the southwest corner of the intersection of Santa Monica Boulevard and Avenue of the Stars; and at the Westfield Mall entrance mid-block south of Santa Monica Boulevard and west of Avenue of the Stars.

The intersection of Avenue of the Stars and Santa Monica Boulevard is signalized with protected left-turn phasing in all directions and right-turn overlaps eastbound on Santa Monica Boulevard and northbound on Avenue of the Stars. Marked crosswalks are currently provided on the south and east legs of the intersection.



Figure 5-8. Century City Station





Bicycle lanes are provided on Santa Monica Boulevard. Missouri Avenue and Prosser Avenue are designated as bicycle friendly streets.

5.6.2 Bus Interface

Figure 5-8 also illustrates bus stop locations. Bus stops for Metro Rapid Line 704 and Line 4 are on the north side of Santa Monica Boulevard, just west of Avenue of the Stars (westbound buses) and in the center median of Santa Monica Boulevard just east of Avenue of the Stars Beverly Drive (eastbound buses). Bus stops for Metro Rapid Line 728, and Metro Lines 16/316 and 28 are on the north side of Santa Monica Boulevard, just west of Avenue of the Stars (eastbound buses) and on the east side of Avenue of the Stars south of Santa Monica Boulevard (westbound buses). Commuter service provided by Antelope Valley Transit Line 786, Commuter Express Lines 534 and 573, and Santa Clarita Transit Lines 792 and 797 also serve this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.6.3 Century City Optional Station

The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed MOS and Build Alternatives.

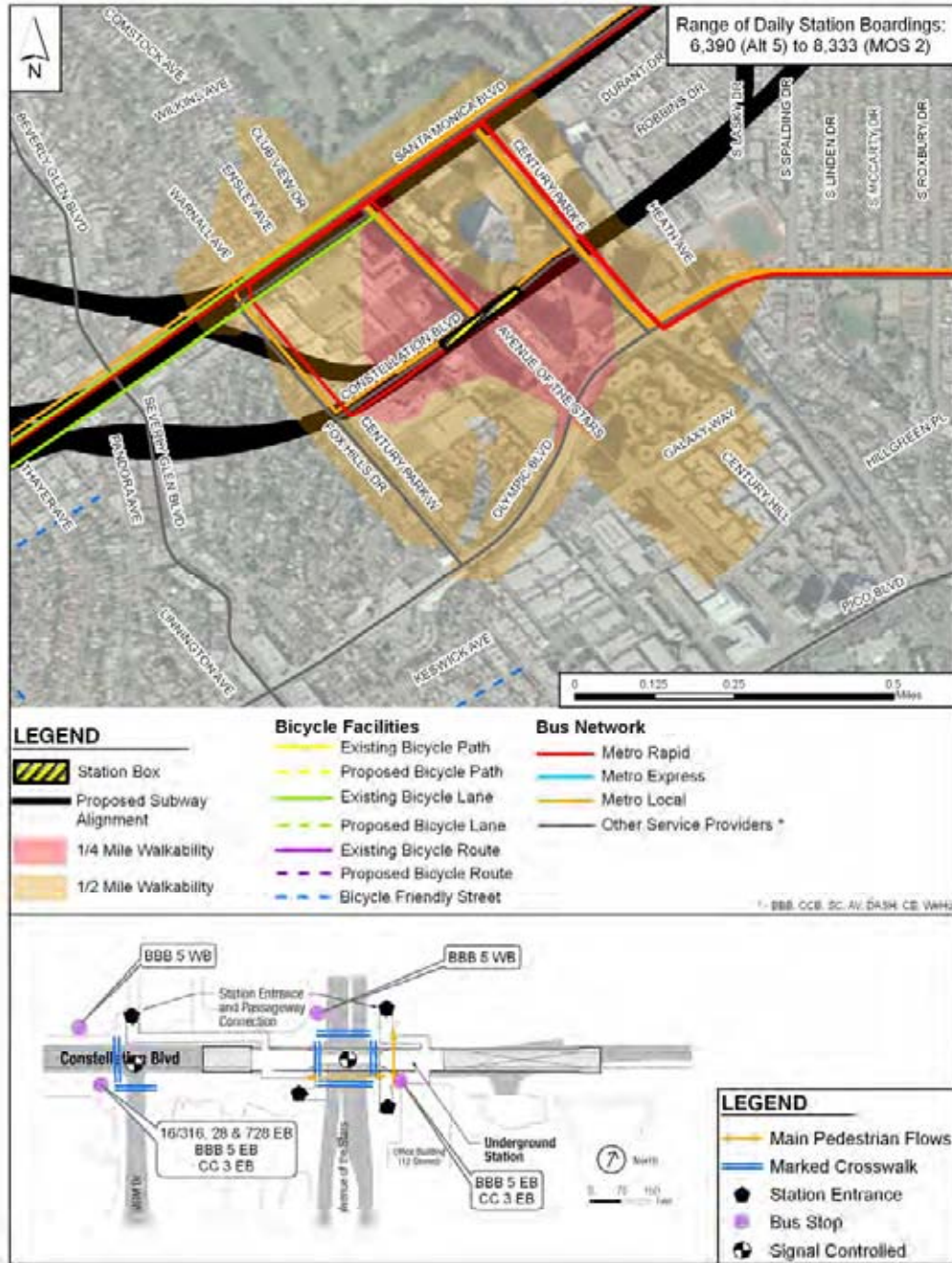
5.6.3.1.1 Pedestrian & Bicycle Interface

This station is under Constellation Boulevard, straddling Avenue of the Stars and extending westward toward MGM Drive (see Figure 5-9). There are four potential station entrances: on the northeast, southeast, and southwest corners of the intersection of Constellation Boulevard and Avenue of the Stars; and on the north side of Constellation Boulevard at MGM Drive.

The intersection of Avenue of the Stars and Constellation Boulevard is signalized with protected/permissive left-turn phasing along Constellation Boulevard, protected left-turn phasing along Avenue of the Stars, and right-turn overlap phasing eastbound on Constellation Boulevard. Marked crosswalks are currently provided on all legs of the intersection. Bicycle facilities are described above for the Century City Station.



Figure 5-9. Century City Optional Station





5.6.3.1.2 Bus Interface

Figure 5-9 also illustrates bus stop locations. Bus stops for Metro Lines 16/316, 28, and 728, Big Blue Bus Line 5, and Culver City Line 3, are located on the west side of MGM Drive, south of Constellation Boulevard. Big Blue Bus Line 5 and Culver City Line 3 also have stops east of Avenue of the Stars south of Constellation Boulevard. Only Big Blue Bus Line 5 has westbound stops in the station area, north of Constellation Boulevard west of MGM Drive and north of Constellation Boulevard west of Avenue of the Stars. Commuter service provided by Commuter Express Lines 534 and 573, and Santa Clarita Transit Lines 792 and 797 also serve this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.7 Westwood/UCLA Station

The following Build Alternatives include this station:

- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

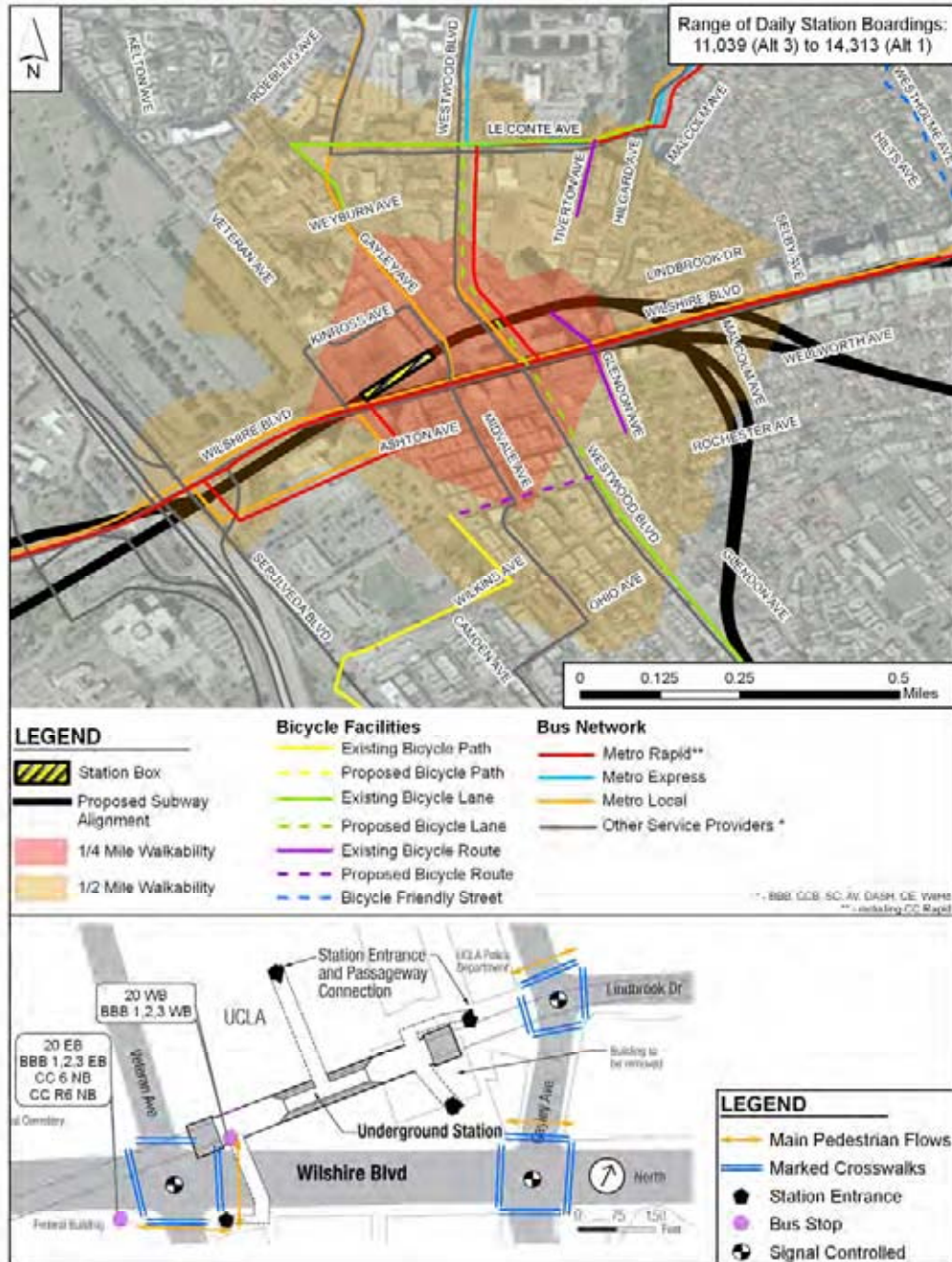
5.7.1 Pedestrian & Bicycle Interface

This station is located under the UCLA Lot 36 on the north side of Wilshire Boulevard between Gayley and Veteran Avenues (see Figure 5-10). There are four potential station entrances: on the northwest corner of the intersection of Gayley/Midvale Avenues and Wilshire Boulevard; on the southeast corner of the intersection of Veteran Avenue and Wilshire Boulevard; on the north end of Lot 36 near Kinross Avenue; and on the eastern end of Lot 36 near Lindbrook Drive.

The intersection of Gayley/Midvale Avenues and Wilshire Boulevard is signalized with protected left-turn phasing eastbound on Wilshire Boulevard, protected/permissive left-turn phasing northbound on Midvale Avenue, permissive phasing westbound on Wilshire Boulevard and southbound on Gayley Avenue, and right-turn overlap phasing southbound on Gayley Avenue. Marked crosswalks are provided on all legs of the intersection.



Figure 5-10. Westwood/UCLA Station - Off-Street





A bicycle path is located south of Rochester Avenue and west of Veteran Avenue. Bicycle lanes are provided on Le Conte Avenue, a short portion of Gayley Avenue, and Westwood Boulevard south of Rochester Avenue. A short portion of Tiverton and Glendon Avenues are designated as bicycle routes. In the Draft Los Angeles Bicycle Plan Update, a bicycle route is designated on Rochester Avenue between the existing bicycle path and Westwood Boulevard.

5.7.2 Bus Interface

Figure 5-10 also illustrates bus stop locations. Bus stops for Metro Rapid Lines 720 and 920 are at Westwood Boulevard, and are described below for the optional station location. The bus stops for Metro Line 20 and Big Blue Bus Lines 1, 2 and 3 are on the north side of Wilshire Boulevard, east of Veteran Avenue (westbound buses) and on the south side of Wilshire Boulevard west of Veteran Avenue (eastbound buses). The bus stop for Culver City Bus Rapid Line 6 is on the south side of Wilshire Boulevard west of Veteran Avenue (northbound buses). Southbound Culver City Bus Rapid Line 6 and Line 6 buses travel south on Westwood Boulevard. Commuter service provided by Antelope Valley Transit Line 786, Commuter Express Lines 431, 534 and 573, and Santa Clarita Transit Lines 792 and 797 also serve this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.7.3 Westwood/UCLA Optional Station (Option E)

The following Build Alternatives include this station:

- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

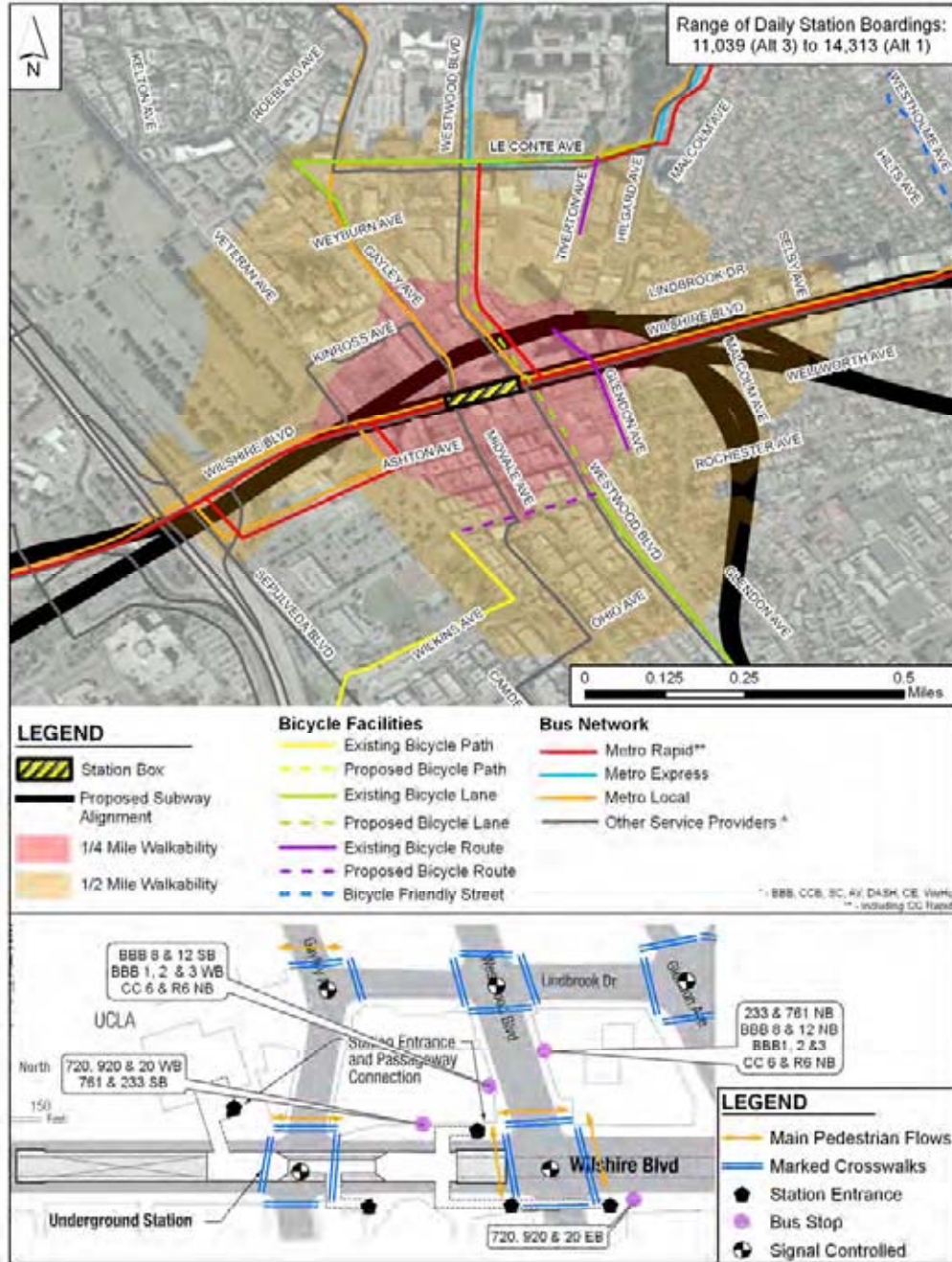
The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.7.3.1.1 Pedestrian & Bicycle Interface

This station would be located under the center of Wilshire Boulevard, immediately west of Westwood Boulevard (see Figure 5-11). There are five potential station entrances: on the northwest corner of the intersection of Gayley



Figure 5-11. Westwood/UCLA Optional Station





Avenue and Wilshire Boulevard intersection near Lot 36 and the proposed hotel development; on the sidewalks on the northwest, southwest, and southeast corners of the intersection of Westwood and Wilshire Boulevards; and on the southeast corner of the intersection of Midvale Avenue and Wilshire Boulevard.

The intersection of Westwood and Wilshire Boulevards is signalized with protected left-turn phasing along Wilshire Boulevard, protected/permissive phasing northbound on Westwood Boulevard, permissive phasing southbound on Westwood Boulevard, and right-turn overlap phasing southbound on Westwood Boulevard. Marked crosswalks are provided on all legs of the intersection. The intersection of Gayley/Midvale Avenues and Wilshire Boulevard is signalized with protected left-turn phasing eastbound on Wilshire Boulevard, protected/permissive left-turn phasing northbound on Midvale Avenue, permissive phasing westbound on Wilshire Boulevard and southbound on Gayley Avenue, and right-turn overlap phasing southbound on Gayley Avenue. Marked crosswalks are provided on all legs of the intersection.

Bicycle facilities have been described above for the Westwood/UCLA Station.

5.7.3.1.2 Bus Interface

Figure 5-11 also illustrates bus stop locations. Bus stops for Metro Rapid Lines 720 and 920, as well as Metro Line 20, are on the north side of Wilshire Boulevard, west of Westwood Boulevard (westbound buses) and on the south side of Wilshire Boulevard east of Westwood Boulevard (eastbound buses). Bus stops for Metro Rapid Line 761 are on the north side of Wilshire Boulevard, west of Westwood Boulevard at the 720/920 Rapid stop (southbound buses) and on the east side of Westwood Boulevard south of Lindbrook Drive (northbound buses). Bus stops for Metro Line 233 are located on the north side of Wilshire Boulevard, west of Westwood Boulevard at the 720/920 Rapid stop (southbound buses) and on the east side of Westwood Boulevard south of Lindbrook Drive (northbound buses). Bus stops for Big Blue Bus Lines 1, 2 and 3 are on the west side of Westwood Boulevard (westbound buses) north of Wilshire Boulevard, and on the east side of Westwood Boulevard (eastbound buses) south of Lindbrook Drive (westbound buses). Bus stops for Big Blue Bus Lines 8 and 12 are on the west side of Westwood Boulevard (southbound buses) north of Wilshire Boulevard, and on the east side of Westwood Boulevard (northbound buses) south of Lindbrook Drive. Bus stops for Culver City Bus Rapid Line 6 and Line 6 are on Westwood Boulevard north of Wilshire Boulevard (southbound buses), and on the west side of Westwood Boulevard south of Lindbrook Drive (northbound buses). Commuter service provided by Antelope Valley Transit Line 786, Commuter Express Lines 431, 534 and 573, and Santa Clarita Transit Lines 792 and 797 also serve this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.



5.8 Westwood/VA Hospital Station

The following Build Alternatives include this station:

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.8.1 Pedestrian & Bicycle Interface

This station is below the VA Hospital parking lot in between the I-405 exit ramp and Bonsall Avenue (see Figure 5-12) on the south side of Wilshire Boulevard. The station would have an at-grade entrance plaza with a fare collection area and pedestrian connections to VA buildings and Bonsall Avenue.

The intersection of Bonsall Avenue and Wilshire Boulevard is grade-separated, with Wilshire Boulevard passing over Bonsall Avenue. Access ramps from Wilshire Boulevard provide one-way vehicular access to Bonsall Avenue, both to the north and south of Wilshire Boulevard. The intersections of Bonsall Avenue and the Wilshire Boulevard access ramps are unsignalized, with stop controls on the Wilshire Boulevard access roads. Marked crosswalks are currently provided on the west and south legs of the intersection of Bonsall Avenue and the eastbound Wilshire Boulevard access ramp and on the west and north legs of the intersection of Bonsall Avenue and the westbound Wilshire Boulevard access ramp. A sidewalk is provided through the Bonsall Avenue underpass that provides pedestrian links between these intersections.

The bicycle path described in Section 5.7.1 continues on Ohio Avenue to Purdue Avenue. San Vicente Boulevard (westbound) designated as a bicycle route west of Federal Avenue. In the Draft Los Angeles Bicycle Plan Update, a bicycle path is proposed on San Vicente Boulevard (eastbound).

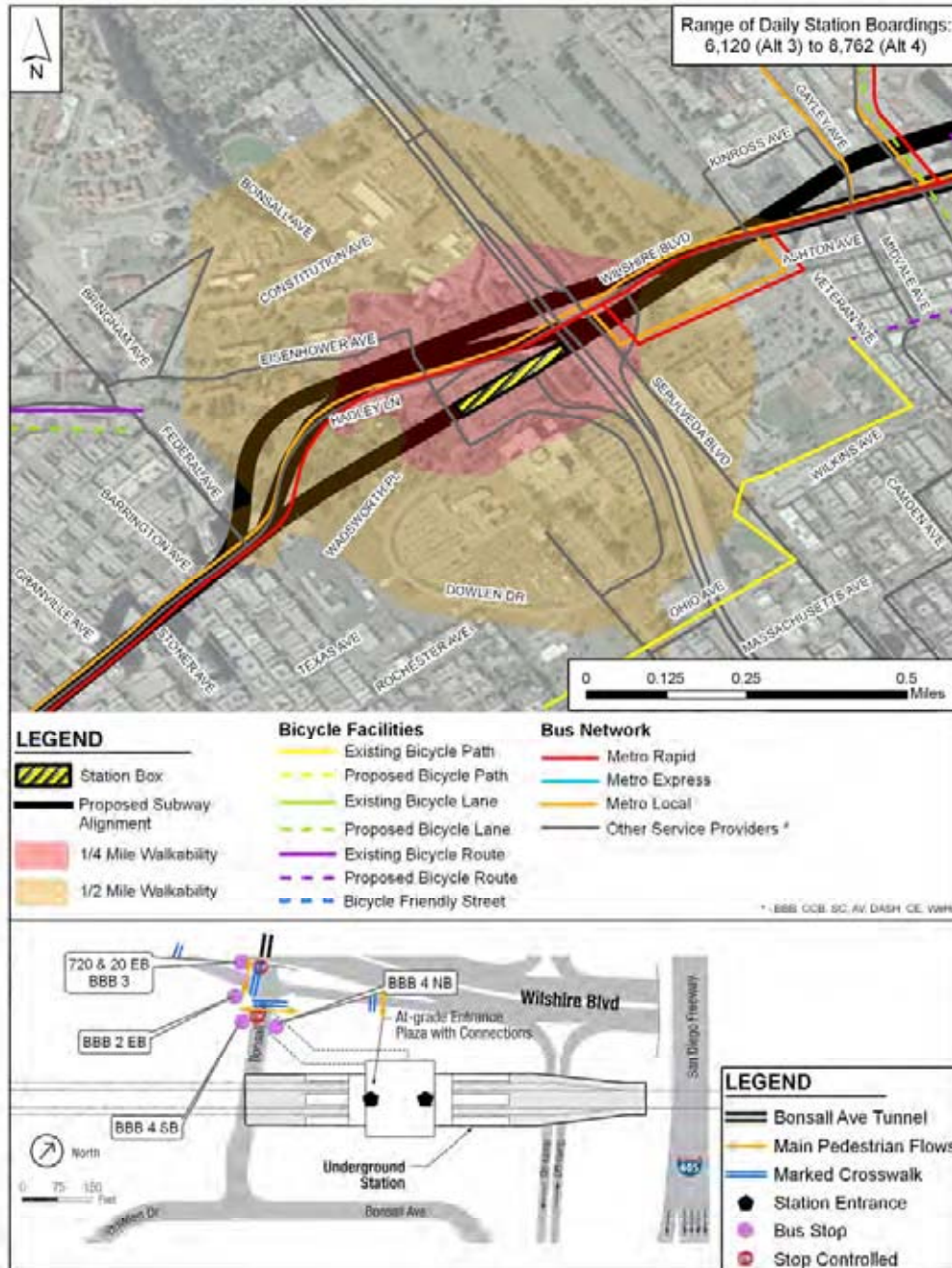
The intersection of Federal Avenue and Wilshire Boulevard is signalized with protected left-turn phasing westbound on Wilshire Boulevard, permissive phasing eastbound on Wilshire Boulevard, northbound/southbound split phasing on San Vicente/Federal Avenues, and right-turn overlap phasing northbound on Federal Avenue. Marked crosswalks are provided on all legs of the intersection.

**5.8.2 Bus Interface**

The westbound bus stops for Metro Rapid Line 720, Metro Line 20 and Big Blue Bus Line 3 are on the north side of Wilshire Boulevard, in a bus-only turnout on the Wilshire Boulevard overpass of Bonsall Avenue. The eastbound bus stop is on a similar bus-only turnout on the south side of Wilshire Boulevard. The eastbound and westbound bus stops for Big Blue Bus Line 2 are located at the intersection of Bonsall Avenue and the Wilshire Boulevard access ramps. Northbound and southbound stops for Big Blue Bus Line 4 are located on Bonsall Avenue, north and south of the Wilshire Boulevard access ramps.



Figure 5-12. Westwood/VA Hospital Station





5.8.3 Westwood/VA Hospital Optional Station (Option F)

The following Build Alternatives include this station:

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.8.3.1.1 Pedestrian & Bicycle Interface

This station would be on the north side of Wilshire Boulevard west of Bonsall Avenue (see Figure 5-13). The station would have an at-grade entrance plaza with a fare collection area and pedestrian connections to VA buildings and Bonsall Avenue. The signal controls and crosswalk facilities of the grade-separated intersection of Bonsall Avenue and Wilshire Boulevard have been described above for the preferred station location.

The bicycle path described in Section 5.7.1 continues on Ohio Avenue to Purdue Avenue. San Vicente Boulevard (westbound) designated as a bicycle route west of Federal Avenue. In the Draft Los Angeles Bicycle Plan Update, a bicycle path is proposed on San Vicente Boulevard (eastbound).

5.8.3.1.2 Bus Interface

Bus stop locations have been described above for the Westwood/VA Hospital Station location.

5.9 Wilshire/Bundy Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.9.1 Pedestrian & Bicycle Interface

The station is under Wilshire Boulevard, east of Bundy Drive, extending just east of Saltair Avenue (see Figure 5-14). There are two potential station entrances: on the northeast and southeast corners of the intersection of Bundy Drive and Wilshire Boulevard.



Figure 5-13. Westwood/VA Hospital Optional Station

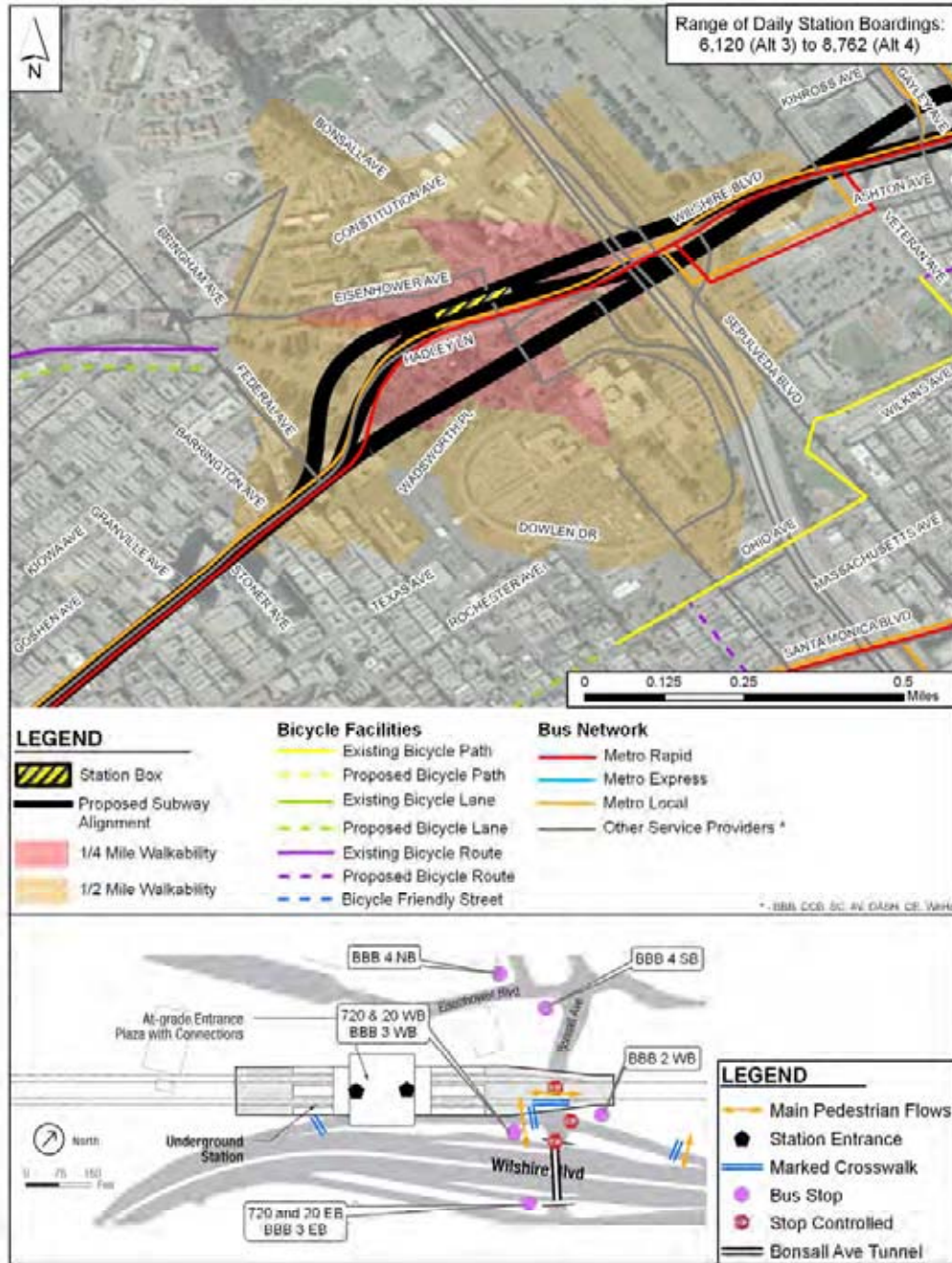
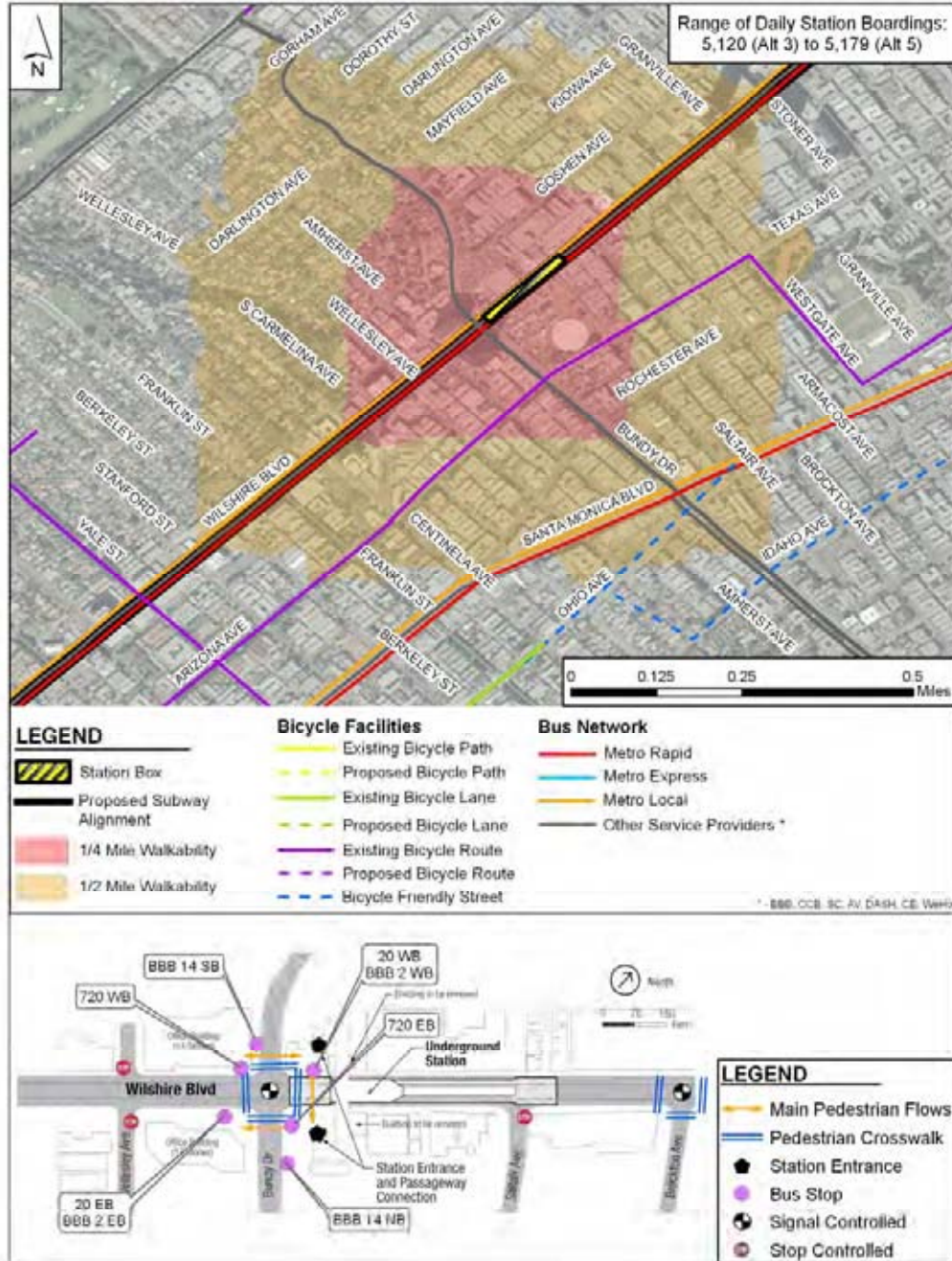




Figure 5-14. Wilshire/Bundy Station





The intersection of Bundy Drive and Wilshire Boulevard is signalized with protected/permissive phasing in all four directions. Marked crosswalks are provided on all legs of the intersection.

Bicycle lanes are provided on Ohio Avenue west of Centinela Avenue. Portions of Ohio Avenue, Texas Avenue, Arizona Avenue, Westgate Avenue, and Yale Street, are designated as bicycle routes. Portions of Ohio, Idaho, and Carmelina Avenues are designated as bicycle friendly streets.

5.9.2 Bus Interface

Figure 5-14 also illustrates bus stop locations. Bus stops for Metro Rapid Line 720 are located on the north side of Wilshire Boulevard, west of Bundy Drive (westbound buses) and on the south side of Wilshire Boulevard east of Bundy Drive (eastbound buses). Bus stops for Metro Line 20 and Big Blue Bus Line 2 are on the north side of Wilshire Boulevard, east of Bundy Drive (westbound buses) and on the south side of Wilshire Boulevard west of Beverly Drive (eastbound buses). Bus stops for Big Blue Bus Line 14 are on the east side of Bundy Drive south of Wilshire Boulevard (northbound buses), and on the west side of Bundy drive north of Wilshire Boulevard (southbound buses).

5.10 Wilshire/26th Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

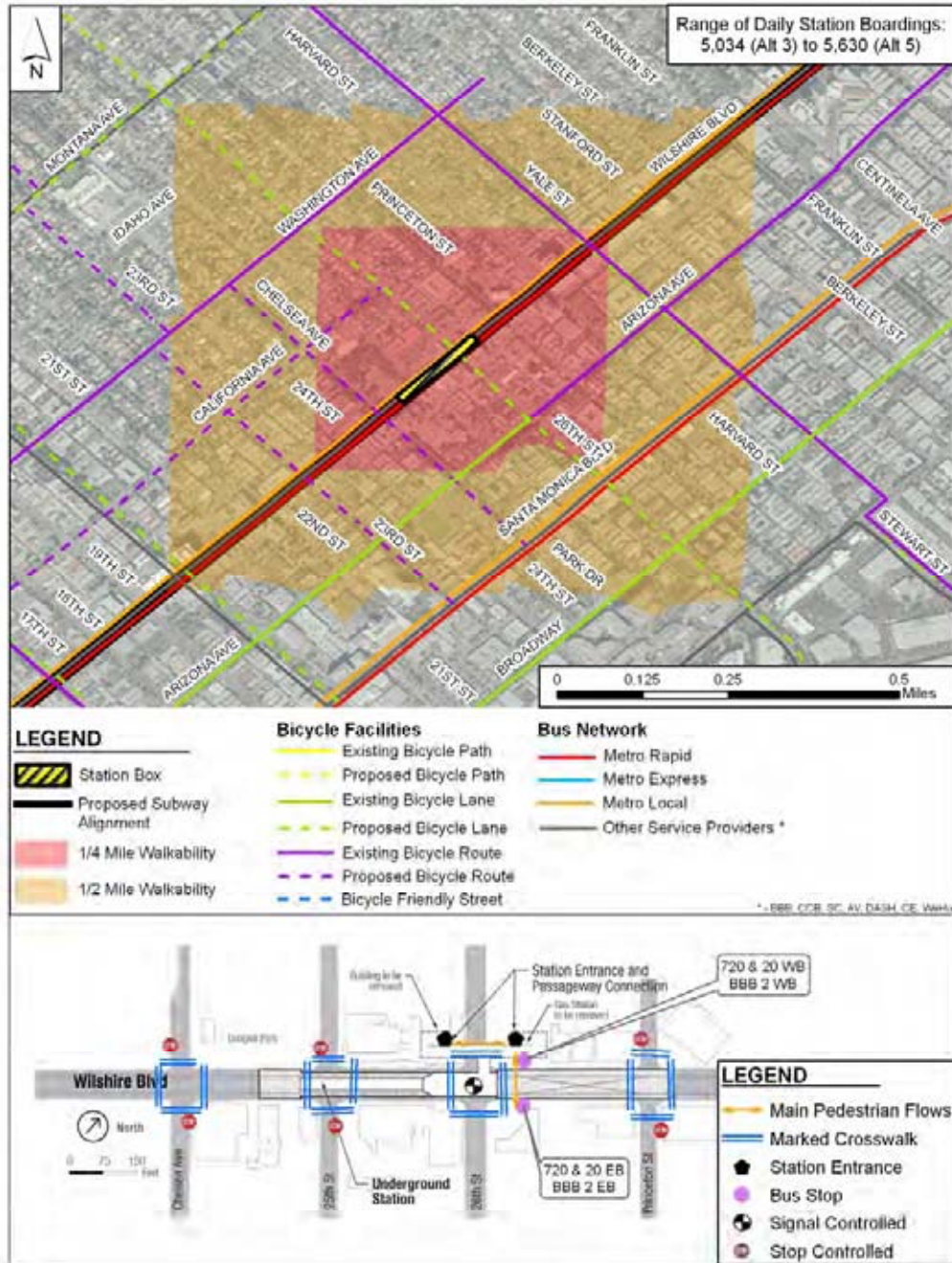
5.10.1 Pedestrian & Bicycle Interface

This station is 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 (see Figure 5-15). There are two potential station entrances: on the northeast and northwest corners of the intersection of 26th Street and Wilshire Boulevard.

The intersection of 26th Street and Wilshire Boulevard is signalized with protected/permissive phasing in all directions. Marked crosswalks are provided on all legs of the intersection.



Figure 5-15. Wilshire/26th Station





Bicycle lanes are provided on Arizona Avenue west of 26th Street and on Broadway Street. In the City of Santa Monica's Land Use and Circulation Element (LUCE) bicycle lanes are proposed on 20th and 26th Street. Washington Avenue west of Stanford Street, Arizona Avenue east of 26th Street, and Yale Street are designated as bicycle routes. In the LUCE, additional bicycle routes are proposed for California Avenue west of 26th Street, and on 23rd Street and Chelsea Avenue.

5.10.2 Bus Interface

Figure 5-15 also illustrates bus stop locations. Bus stops for Metro Rapid Line 720, Metro Line 20, and Big Blue Bus Line 2 are located on the north side of Wilshire Boulevard, east of 26th Street (westbound buses) and on the south side of Wilshire Boulevard east of 26th Street (eastbound buses).

5.11 Wilshire/16th Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

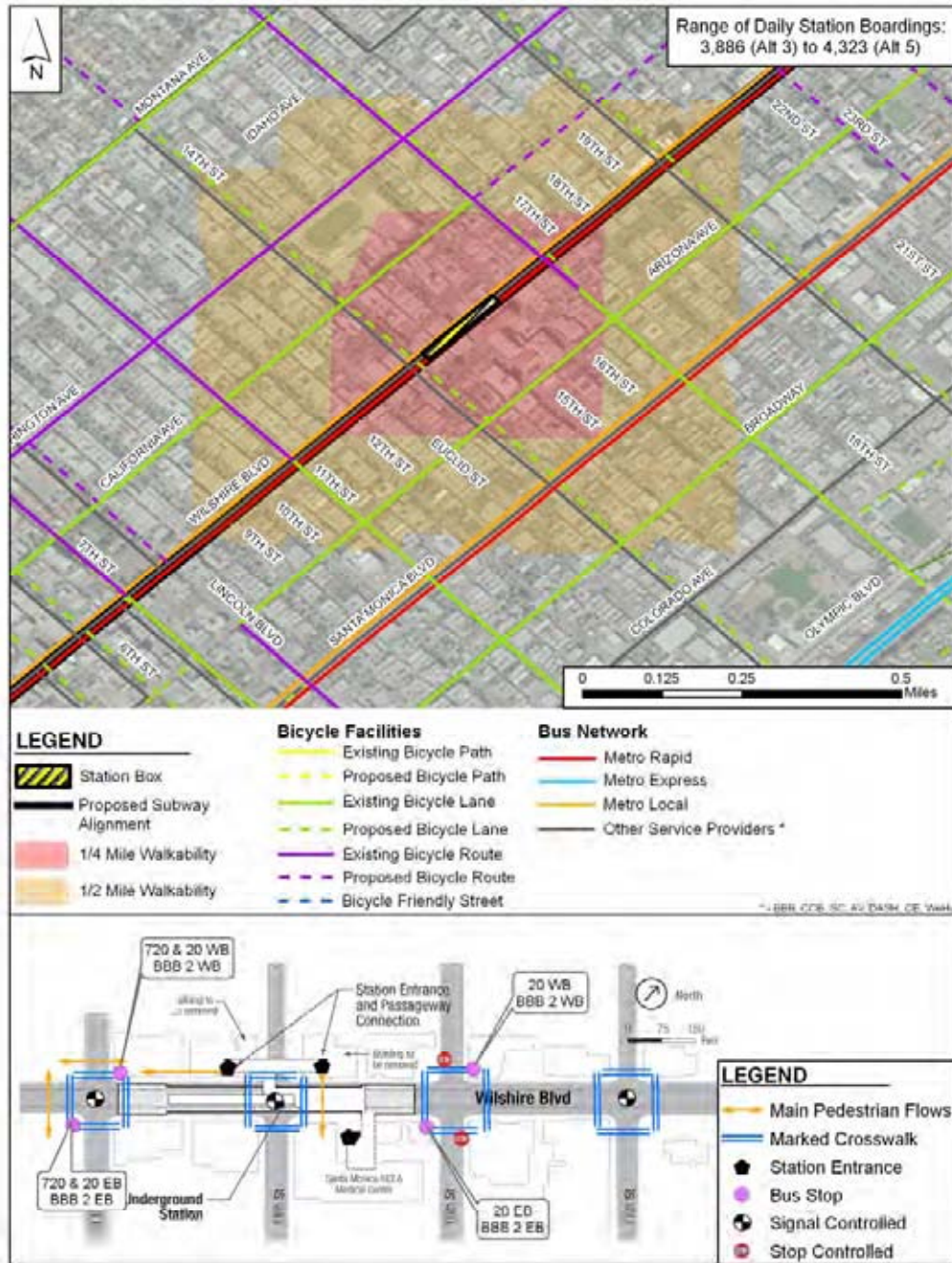
5.11.1 Pedestrian & Bicycle Interface

This station would be under Wilshire Boulevard with the eastern end just west of 16th Street and the western end west of 15th Street (see Figure 5-16). There are three potential station entrances: on the northwest and northeast corners of the intersection of 15th Street and Wilshire Boulevard, and on the south side of Wilshire Boulevard, mid-block between 15th and 16th Streets.

The intersection of 16th Street and Wilshire Boulevard is unsignalized with stop controls on northbound and southbound 16th Street. Marked crosswalks are provided on all legs of the intersection. A raised median with mid-block pedestrian refuge is provided on Wilshire Boulevard both east and west of 16th Street. The intersection of 15th Street and Wilshire Boulevard is signalized with permissive phasing in all directions. Marked crosswalks are provided on all legs of the intersection. The intersection of 14th Street and Wilshire Boulevard is signalized with permissive phasing in all directions. Marked crosswalks are provided on all legs of the intersection.



Figure 5-16. Wilshire/16th Station





Bicycle lanes are provided on Montana and California Avenues west of 17th Street, on Arizona Avenue, Broadway Street, and 7th and 17th Street south of Wilshire Boulevard. Bicycle routes are designated on Washington Avenue, 7th Street, and portions of Lincoln Boulevard. In the LUCE, bicycle lanes are proposed on 5th and 6th Street, and bicycle routes are proposed on California Avenue, Lincoln Boulevard north of Wilshire Boulevard, and 23rd Street.

5.11.2 Bus Interface

Figure 5-16 also illustrates bus stop locations. Bus stops for Metro Rapid Line 720 are on the north side of Wilshire Boulevard, east of 14th Street (westbound buses) and on the south side of Wilshire Boulevard west of 14th Street (eastbound buses). Bus stops for Metro Line 20 and Big Blue Bus Line 2 are on the north side of Wilshire Boulevard, east of 14th Street, with an additional stop east of 16th Street (westbound buses) and on the south side of Wilshire Boulevard west of 14th Street, with an additional stop west of 16th Street (eastbound buses).

5.12 Wilshire/4th Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.12.1 Pedestrian & Bicycle Interface

This station is under Wilshire Boulevard and is a long station box that extends from just west of 6th Street on the east to just east of Ocean Avenue on the west (see Figure 5-17). There are two potential station entrances: on the northeast and southeast corners of the intersection of 4th Street and Wilshire Boulevard.

The intersection of 4th Street and Wilshire Boulevard is signalized with protected/permissive phasing westbound on Wilshire Boulevard and permissive phasing in all other directions. Marked crosswalks are provided on all legs of the intersection.

A bicycle path is provided on the beach. Bicycle lanes are provided on California Avenue, portions of Arizona Avenue, portions of Broadway Street, Ocean Avenue, 7th Street, and 11th Street. Bicycle routes are designated on Washington Avenue, and portions of 7th Street and Lincoln Boulevard. In the LUCE, bicycle lanes are proposed on portions of 5th and 6th Street, and bicycle routes are proposed on portions of 2nd and 5th Streets, and Lincoln Boulevard.



Figure 5-17. Wilshire/4th Station





5.12.2 Bus Interface

Figure 5-17 also illustrates bus stop locations. Bus stops for Metro Rapid Lines 720/920 and Metro Line 20 are on the north side of Wilshire Boulevard, east of 4th Street (westbound buses) and on the south side of Wilshire Boulevard west of 4th Street (eastbound buses). The bus stop for eastbound Big Blue Bus Lines 2, 3, and 4, and northbound Big Blue Bus Line 9 is on the east side of 4th Street south of Wilshire Boulevard. The bus stop for westbound Big Blue Bus Lines 2, 3, and 4, and southbound Big Blue Bus Lines Rapid 3, Line 3 and Line 9 are on the west side of 4th Street south of Wilshire Boulevard

5.13 Hollywood/Highland Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.13.1 Pedestrian & Bicycle Interface

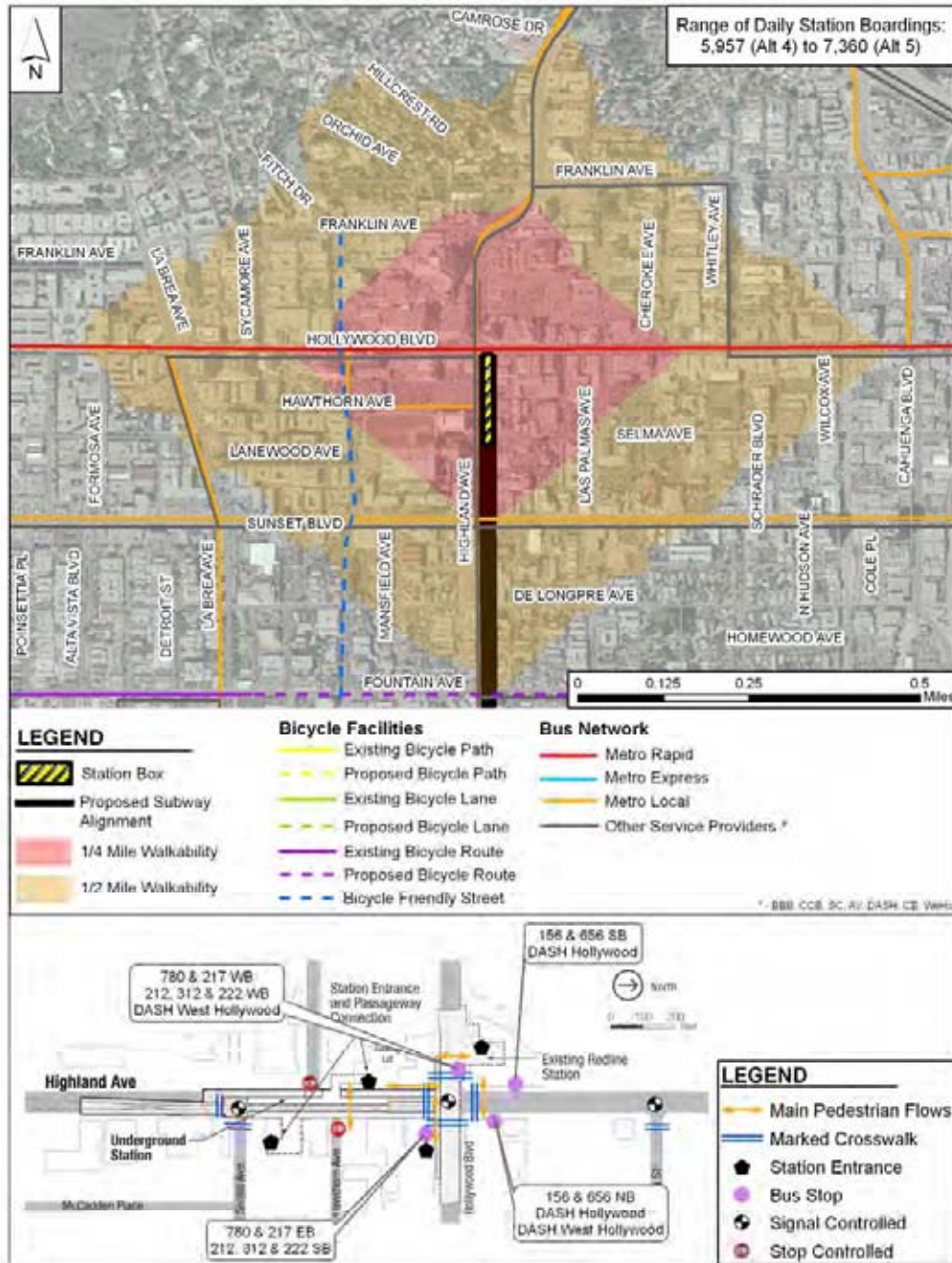
This station is under Highland Avenue (see Figure 5-18). The station would provide a transfer option to the existing Hollywood/Highland station under Hollywood Boulevard. In addition to the existing Metro entrance on the north side of Hollywood Boulevard west of Highland Avenue, three potential station entrances are under consideration: on the northeast corner of the intersection of Highland Avenue and Selma Avenue, on the south side of Hollywood Boulevard east of Highland Avenue, and on the northwest corner of Highland Avenue and Hawthorne Avenue.

The intersection of Highland Avenue and Hollywood Boulevard is signalized with protected/permissive left-turn phasing in all directions and right-turn overlap phasing along Wilshire Boulevard. Marked crosswalks are provided on all legs of the intersection. The intersection of Highland Avenue and Hawthorn Avenue is unsignalized with stop controls on the eastbound and westbound approaches. Marked crosswalks are currently not provided on any legs of the intersection. The intersection of Highland Avenue and Selma Avenue is signalized with permissive phasing in all directions. Marked crosswalks are provided on the southern and eastern legs of the intersection.

A bicycle route is designated on Fountain Avenue west of La Brea Avenue, and Orange Drive is designated as a bicycle friendly street. In the Draft Los Angeles Bicycle Plan Update, Fountain Avenue is proposed to be designated as a bicycle route east of La Brea Avenue.



Figure 5-18. Hollywood/Highland Station





5.13.2 Bus Interface

Figure 5-18 also illustrates bus stop locations. Bus stops for Metro Rapid Line 780 and Metro Line 217 (westbound buses), Metro Lines 212/312 and 222 (southbound buses), and the DASH West Hollywood Line (westbound buses) are on the north side of Hollywood Boulevard, west of Highland Avenue.

Bus stops for Metro Rapid Line 780 and Metro Line 217 (eastbound buses) and Metro Lines 212/312 and 222 (northbound buses) are on the south side of Hollywood Boulevard east of Highland Avenue. Bus stops for Metro Lines 156/656 and the DASH Hollywood Line are on the east side of Highland Avenue north of Hollywood Boulevard (northbound buses) and on the west side of Highland Avenue (southbound buses). The bus stop for the DASH West Hollywood Line (eastbound) is also on the east side of Highland Avenue north of Hollywood Boulevard.

5.14 Santa Monica/La Brea Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.14.1 Pedestrian & Bicycle Interface

This station is under Santa Monica Boulevard, just west of La Brea Avenue, and extends westward to the center of the Santa Monica Boulevard/Formosa Avenue intersection (see Figure 5-19). There are four potential station entrances: on the northwest, northeast, southeast and southeast corners of the intersection of La Brea Avenue and Santa Monica Boulevard.

The intersection of La Brea Avenue and Santa Monica Boulevard is signalized with protected/permissive left-turn phasing in all directions. Marked crosswalks are provided on all legs of the intersection.

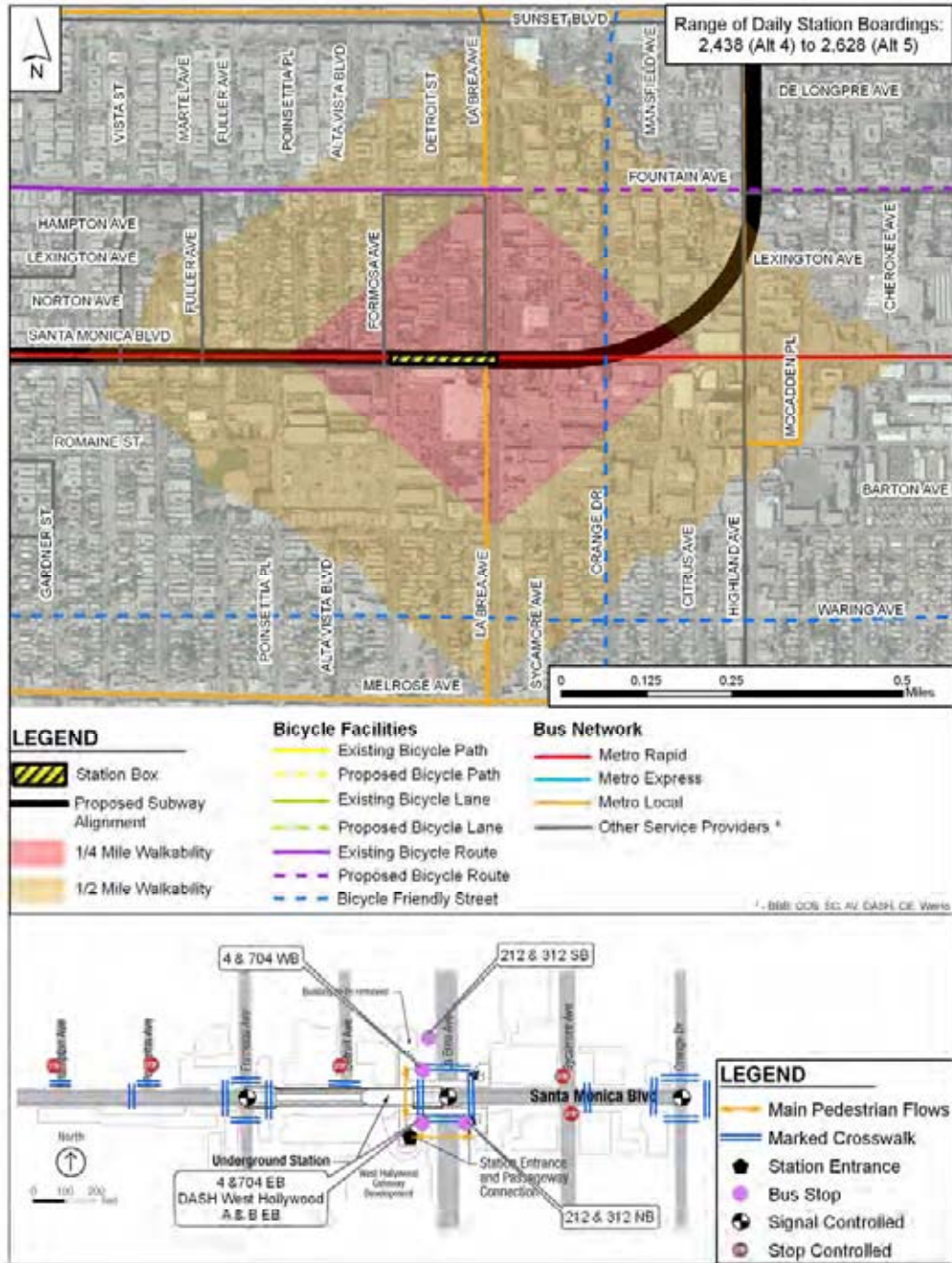
A bicycle route is designated on Fountain Avenue west of La Brea Avenue, and Waring Avenue and Orange Drive are designated as bicycle friendly streets. In the Draft Los Angeles Bicycle Plan Update, Fountain Avenue is proposed to be designated as a bicycle route east of La Brea Avenue.

5.14.2 Bus Interface

Figure 5-19 also illustrates bus stop locations. Bus stops for Metro Rapid Line 704 and Metro Line 4 are on the north side of Santa Monica Boulevard, west of La Brea Avenue (westbound buses) and on the south side of Santa Monica



Figure 5-19. Santa Monica/La Brea Station





Boulevard west of La Brea Avenue (eastbound buses). Bus stops for local Metro Lines 212/312 are on the east side of La Brea Avenue south of Santa Monica Boulevard (northbound buses) and on the west side of La Brea Avenue north of Santa Monica Boulevard (southbound buses). The bus stop for the West Hollywood CityLine Routes A and B are located at the bus stop in the southwest corner of the intersection. Commuter service provided by Antelope Valley Transit Line 786 also serves this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.15 Santa Monica/Fairfax Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

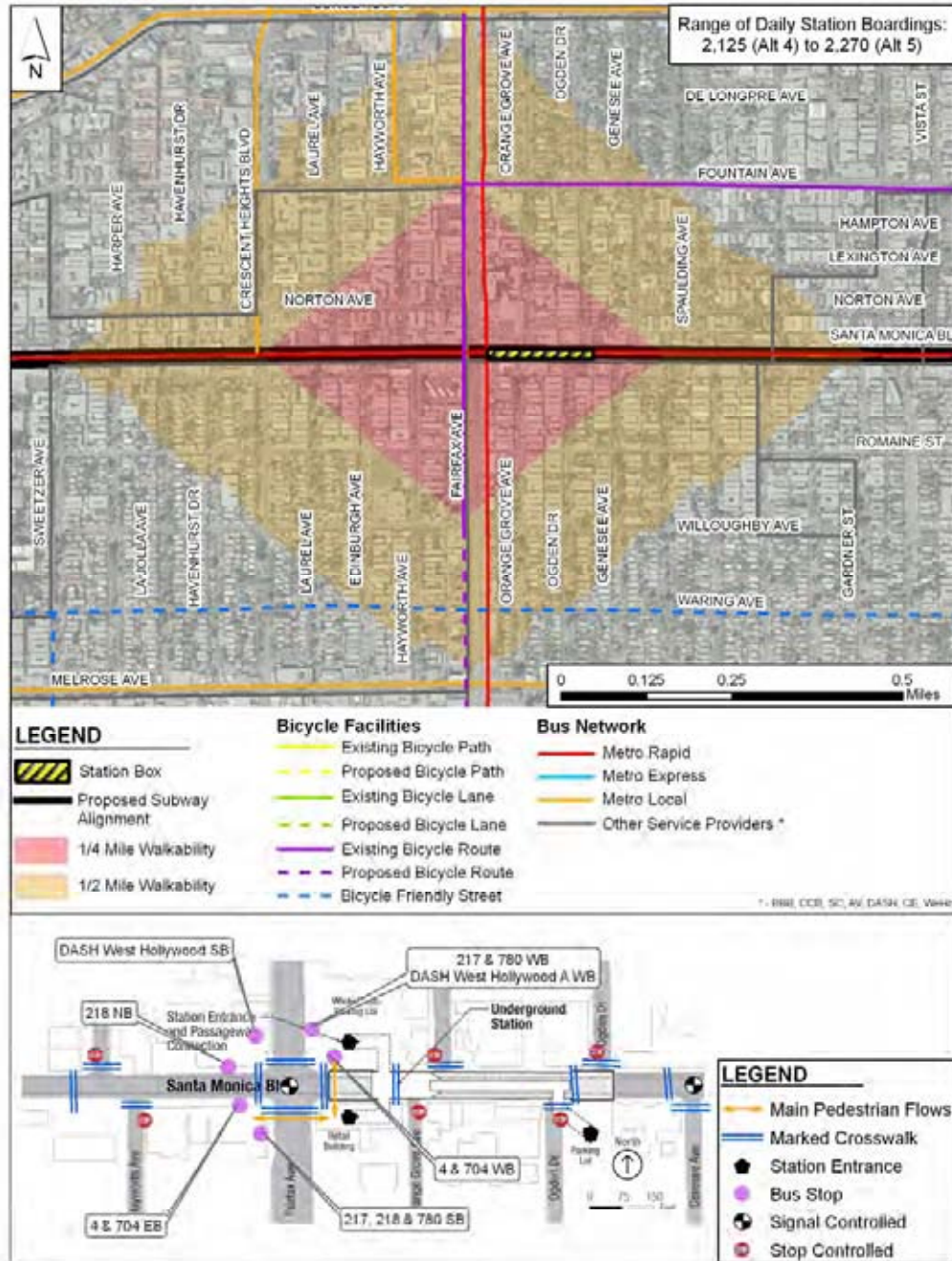
5.15.1 Pedestrian & Bicycle Interface

This station is under Santa Monica Boulevard and extends from just east of Fairfax Avenue on the west to just east of Ogden Drive on the east (see Figure 5-20). There are three potential station entrances: on the northeast and southeast corners of the intersection of Fairfax Avenue and Santa Monica Boulevard; and on the southeast corner of the intersection of Ogden Drive and Santa Monica Boulevard.

The intersection of Fairfax Avenue and Santa Monica Boulevard is signalized with protected left-turn phasing in all directions. Marked crosswalks are provided on all legs of the intersection. The intersection of Orange Grove Avenue and Santa Monica Boulevard is unsignalized with stop controls on the northbound and southbound approaches. Marked crosswalks are currently provided on the northern and western legs of the intersection. A raised median with mid-block pedestrian refuge is provided on Santa Monica Boulevard east of Orange Grove Avenue. The intersection of Ogden Drive and Santa Monica Boulevard is unsignalized with stop controls on the northbound and southbound approaches. Marked crosswalks are currently provided on the southern and eastern legs of the intersection.

A bicycle route is designated on Fountain Avenue east of Orange Grove Avenue, and Orange Grove Avenue north of Willoughby Avenue. Waring and Sweetzer Avenues are designated as bicycle friendly streets.

Figure 5-20. Santa Monica/Fairfax Station





5.15.2 Bus Interface

Figure 5-20 also illustrates bus stop locations. Bus stops for Metro Rapid Line 704 and Metro Line 4 are on the north side of Santa Monica Boulevard, east of Fairfax Avenue (westbound buses) and on the south side of Santa Monica Boulevard west of Fairfax Avenue (eastbound buses). Bus stops for Metro Rapid Line 780 and Metro Line 217 are located on the east side of Fairfax Avenue north of Santa Monica Boulevard (northbound buses) and on the west side of Fairfax Avenue south of Santa Monica Boulevard (southbound buses). Bus stops for Metro Line 218 are on the north side of Santa Monica Boulevard west of Fairfax Avenue (northbound buses) and on the west side of Fairfax Avenue south of Santa Monica Boulevard (southbound buses). The Bus stop for the West Hollywood CityLine Route A is located at the bus stop on the northeast corner of the intersection. The bus stop for Route B is located at the northwest corner. Commuter service provided by Antelope Valley Transit Line 786 also serves this station area. Interface between the Westside Subway Extension and commuter transit services is expected to be minimal, because commuter services typically serve the end destination for riders.

5.16 Santa Monica/San Vicente Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.16.1 Pedestrian & Bicycle Interface

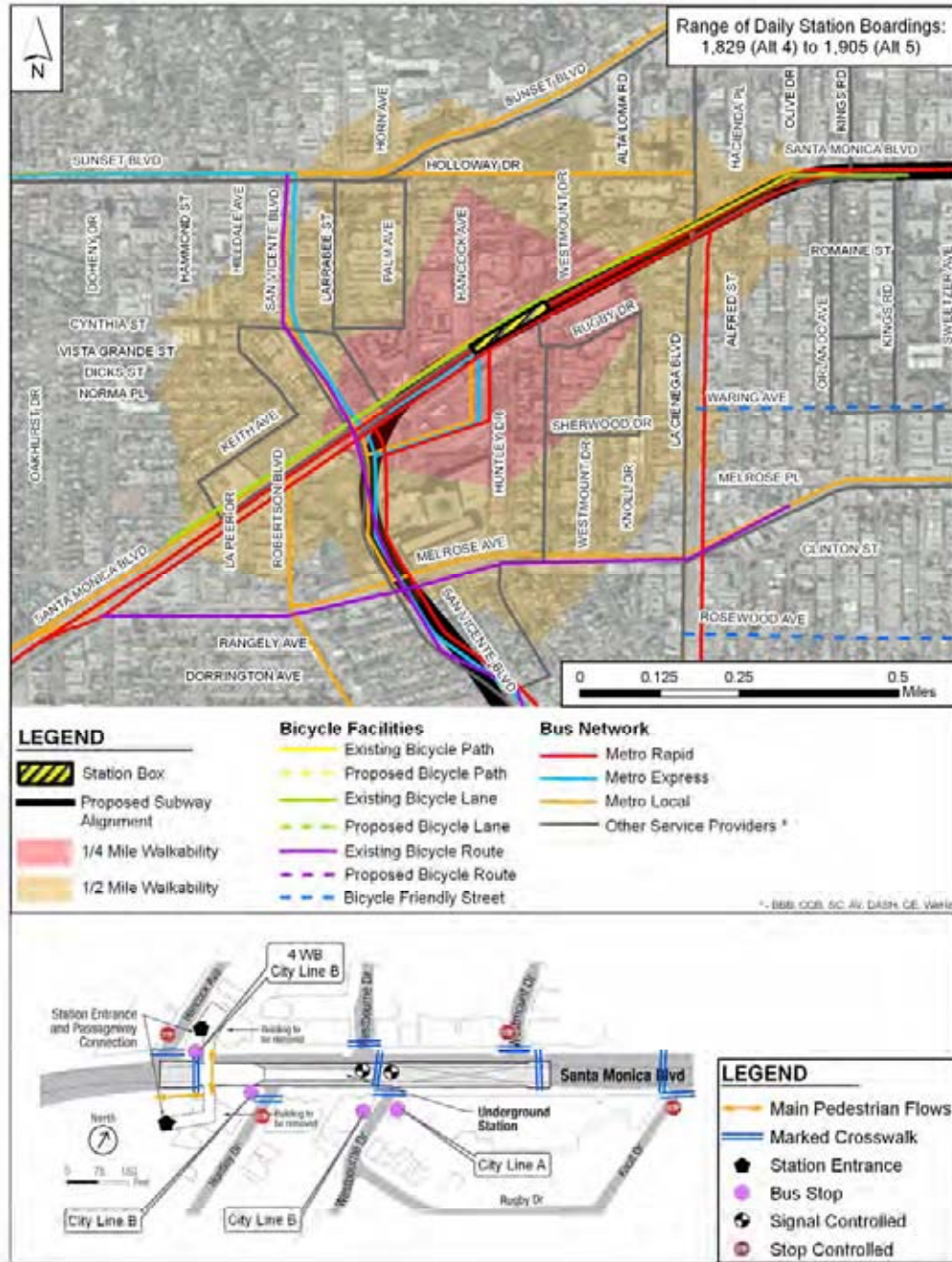
This station would be under Santa Monica Boulevard and extend from just west of Hancock Avenue on the west to just east of Westmount Drive on the east (see Figure 5-21). There are two potential station entrances: on the northeast corner of the intersection of Hancock Avenue and Santa Monica Boulevard, and on the south side of Santa Monica Boulevard, west of Huntley Drive on Metro property.

The intersection of Hancock Avenue and Santa Monica Boulevard is unsignalized with stop controls on the northbound Metro driveway and southbound Hancock Drive. Marked crosswalks are currently provided on the northern and eastern legs of the intersection. A raised median with mid-block pedestrian refuge is provided on Santa Monica Boulevard east of Hancock Avenue.

Bicycle lanes are provided on Santa Monica Boulevard. Melrose Avenue east of Santa Monica Boulevard and San Vicente Boulevard south of Sunset Boulevard are designated as bicycle routes.



Figure 5-21. Santa Monica/San Vicente Station





5.16.2 Bus Interface

Figure 5-21 also illustrates bus stop locations. Bus stops for Metro Line 4 are on the north side of Santa Monica Boulevard, west of Hancock Avenue (westbound buses) and on the south side of Santa Monica Boulevard just east of the Metro driveway. Metro Rapid Lines 704 and 705, and Metro Lines 10, 105, 305, and 550 stop at San Vicente Boulevard, three blocks to the west.

5.17 Beverly Center Area Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The pedestrian, bicycle, and bus transit interface discussion for this station detailed below is applicable to all of the above listed Build Alternatives.

5.17.1 Pedestrian & Bicycle Interface

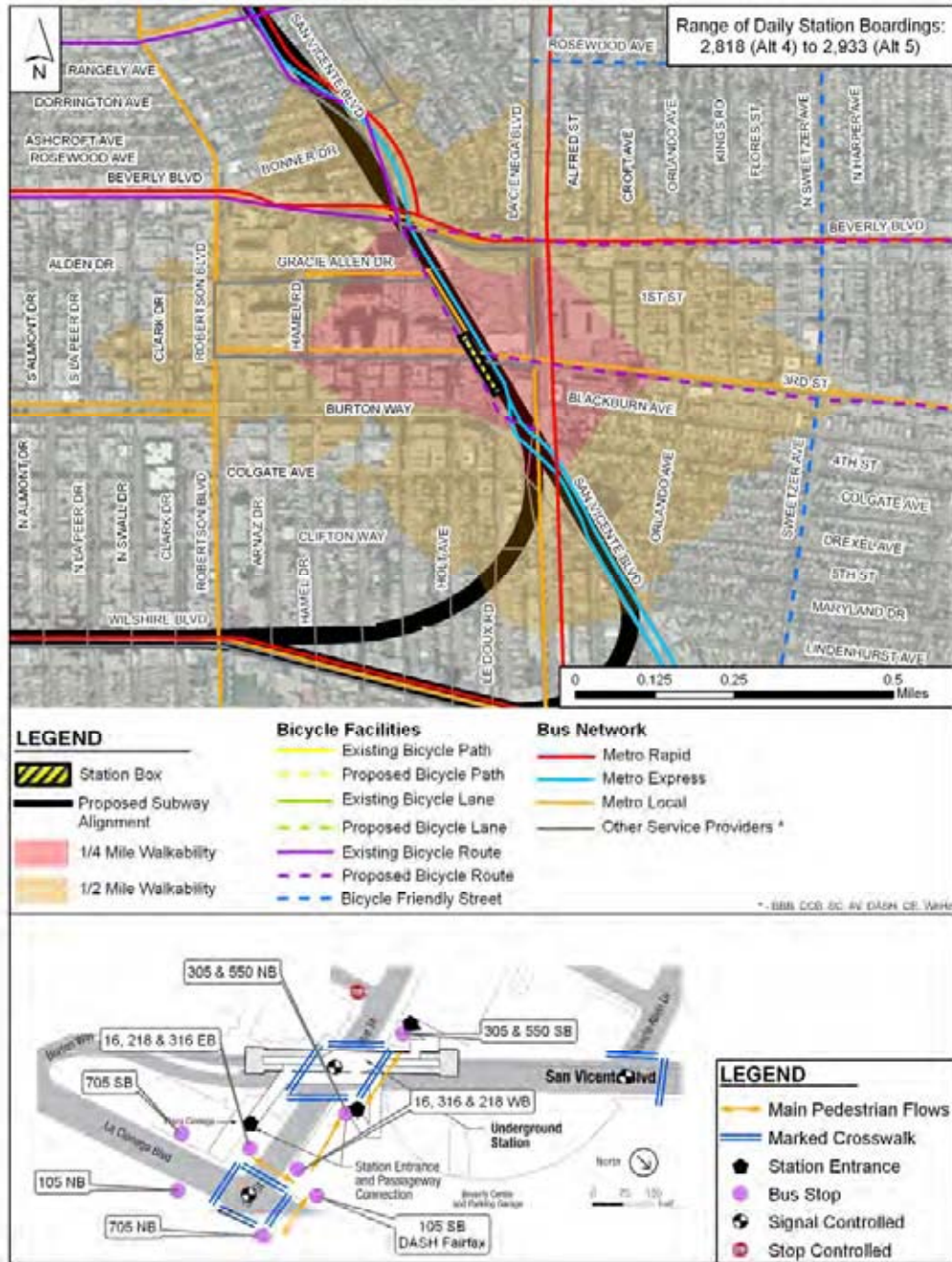
This station is under San Vicente Boulevard, extending north of Gracie Allen Drive, south of Third Street (see Figure 5-22). There are three potential station entrances: on the south side of Third Street, mid-block between San Vicente and La Cienega Boulevards; on the northeast corner of the intersection of San Vicente Boulevard and Third Street, in the Beverly Center shopping center; and on the northwest corner of San Vicente Boulevard and Third Street.

The intersection of San Vicente Boulevard and Third Street is signalized with permissive left-turn phasing in all directions. Marked crosswalks are currently provided on all legs of the intersection. The intersection of Third Street and La Cienega Boulevards is signalized with protected left-turn phasing in northbound and southbound directions and signalized with protected/permissive left-turn phasing in eastbound and westbound directions. Marked crosswalks are provided on all legs of the intersection. The intersection of Third Street and Holt Avenue is unsignalized with a stop control on the northbound approach. There are no marked crosswalks in any direction at this intersection.

Beverly Boulevard west of San Vicente Boulevard and San Vicente Boulevard north of Beverly Boulevard are designated as bicycle routes. Rosewood Avenue and Sweetzer Avenue are designated as bicycle friendly streets. In the Draft Los Angeles Bicycle Plan Update, portions of Beverly Boulevard, 3rd Street, and San Vicente Boulevard are proposed to be designated as bicycle routes.



Figure 5-22. Beverly Center Area Station





5.17.2 Bus Interface

Figure 5-22 also illustrates bus stop locations. Bus stops for Metro Rapid Line 705 are on the east side of La Cienega Boulevard north of 3rd Street (northbound buses) and the west side south of 3rd Street (southbound buses). Bus stops for Metro Line 105 are on the west side of La Cienega Boulevard north of 3rd Street (northbound buses) and the east side south of 3rd Street (southbound buses). Bus stops for Metro Lines 305 and 550 are on the east side of San Vicente Boulevard north of 3rd Street (northbound buses) and on the west side of San Vicente Boulevard north of 3rd Street (southbound buses). The DASH West Hollywood and Fairfax lines stop at the northwest corner of La Cienega and 3rd Street.



This page intentionally left blank.



6.0 IMPACT ASSESSMENT

This section presents the evaluation of the potential impacts of the Westside Subway Extension Project Alternatives on the interfacing transit and non-motorized (pedestrian and bicycle) systems. The forecast mode-of-access data presented in Section 4, and the pedestrian/bicycle and transit station interface described in Section 5 is used for this evaluation.

6.1 Methodology

The implementation of the Build Alternatives would increase transit capacity, speed of travel, reliability, and travel time certainty in the study area. Overall, the project would have a beneficial impact on the regional transit network and for individuals making trips via transit in the Study Area. For the transit impact analysis, the evaluation of significance under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) was conducted at the station-area level, where the potential for localized impacts could occur. Two criteria were developed and applied at the station-area level for determination of impacts for each of the Project Alternatives:

1. Would the location of project station entrances lead to excessive delays for riders transferring to interfacing bus transit lines? For the purposes of this analysis, excessive delay has been defined as the need to cross more than one roadway, or walk at least one full block to transfer between subway and bus.
2. Would the location of project station entrances have the potential to increase pedestrian/bicycle safety hazards? For the purposes of this analysis, safety hazards have been defined as the need for pedestrians and bicyclists to cross roadways of more than two lanes at unsignalized locations, or at locations where marked crosswalks are not installed.

6.2 No-Build Alternative Impact Determination

By definition, the No-Build Alternative would not result in adverse transit-related impacts.

6.3 TSM Alternative Impact Determination

6.3.1 Criteria 1 and 2

By definition the TSM Alternative would not result in Criteria 1 and 2 impacts because no project station entrances would be constructed.

6.4 Build Alternatives Impact Determination

6.4.1 Wilshire/Crenshaw Station

The following MOSs and Build Alternatives include this station:

- MOS 1



- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed MOSs and Build Alternatives.

6.4.1.1.1 Impact Determination

Criterion 1

The proposed station entrance is on the southwest corner of the intersection of Crenshaw and Wilshire Boulevards. Project riders arriving on westbound Metro Rapid Line 720 or Metro Line 20, would need to cross both Wilshire and Crenshaw Boulevards to access the station entrance, and would experience excessive bus transfer delay. Therefore Criterion 1 would be met, and a significant and adverse project-related bus transfer delay impact is projected for this station.

Criterion 2

A crosswalk is not provided on the western leg of the intersection. Therefore, project riders would experience potential safety hazards attempting to cross Wilshire Boulevard west of Crenshaw Boulevard to travel northwest or to transfer to westbound Metro Rapid Line 720 or 20 buses. Therefore Criterion 2 would be met, and a significant and adverse project-related pedestrian safety impact is projected for this station.

6.4.2 Wilshire/La Brea Station

The following MOSs and Build Alternatives include this station:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed MOSs and Build Alternatives.



6.4.2.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northwest, southwest, and southeast corners of the intersection of Wilshire Boulevard and La Brea Avenue. Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both Wilshire Boulevard and La Brea Avenue. Therefore Criterion 1 could be met, and a potential significant and adverse bus transfer delay impact is projected for this station. If the station entrance on the southwest corner is constructed, riders would only need to cross either Wilshire Boulevard or La Brea Avenue, therefore a Criterion 1 impact would not be projected if this entrance is constructed.

Criterion 2

Because the intersection of La Brea Avenue and Wilshire Boulevard is signalized and crosswalks are provided on all legs of the intersection, Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.3 Wilshire/Fairfax

The following MOSs and Build Alternatives include this station:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed MOSs and Build Alternatives.

6.4.3.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northwest and northeast corners of the intersection of Wilshire Boulevard and Fairfax Avenue. If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross both Wilshire Boulevard and Fairfax Avenue. Therefore, Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The northeast entrance is preferred for minimizing bus transfer delay because it is in front of the existing westbound Metro Rapid bus stop, and riders transferring to the eastbound Metro Rapid bus stop would only need to cross Wilshire Boulevard.



Criterion 2

Because the intersection of Fairfax Avenue and Wilshire Boulevard is signalized and crosswalks are provided on all legs of the intersection, Criterion 2 would not be met, so no project-related pedestrian safety impact are projected for this station.

6.4.4 Wilshire/Fairfax (Optional Station)

6.4.4.1.1 Impact Determination

Criterion 1

The optional station location proposes the same entrances described above for the preferred station location, but adds a potential station entrance near the southeast corner of the intersection of Orange Grove Avenue and Wilshire Boulevard. As with the preferred station location, if only one of the potential station entrances is constructed, Criterion 1 project impacts could occur due to excessive bus transfer delay.

Criterion 2

The intersection of Orange Grove Avenue and Wilshire Boulevard is unsignalized and no crosswalks across Wilshire Boulevard are provided at this intersection. Because of the location of the station entrance and the lack of crosswalks across Wilshire Boulevard, project riders would experience potential safety hazards attempting to cross Wilshire Boulevard to travel northbound, or to transfer to westbound Metro Rapid Line 720. Therefore Criterion 2 would be met, and a significant and adverse project-related pedestrian safety is projected for this station. Criterion 2 impacts would not be projected if either entrance at Fairfax Avenue is ultimately constructed.

6.4.5 Wilshire/La Cienega Station

The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed MOSs and Build Alternatives.

6.4.5.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northeast corner of the intersection of Wilshire and La Cienega Boulevards, and on the southwest corner



of Wilshire Boulevard and Hamilton Drive. If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross both Wilshire Boulevard and La Cienega Avenue. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The northeast entrance is preferred for minimizing bus transfer delay because it is located closer to existing bus stops than the southern entrance

Criterion 2

The intersection of Hamilton Drive and Wilshire Boulevard is unsignalized, and no crosswalks across Wilshire Boulevard are provided at this intersection. If the southern station entrance is ultimately constructed, project riders could experience potential safety hazards attempting to cross Wilshire Boulevard at this unsignalized location to travel northbound. Therefore Criterion 2 could be met, and a potential significant and adverse project-related pedestrian safety impact is projected for this station. Criterion 2 impacts would not be projected if the northern entrance is ultimately constructed.

6.4.6 Wilshire/La Cienega (Optional Station)

6.4.6.1.1 Impact Determination

Criterion 1

The optional station location proposes entrances at the northwest corner of the intersection of La Cienega and Wilshire Boulevards, and at the northwest corner of Le Doux Road and Wilshire Boulevard. Riders transferring to eastbound Metro Rapid Line 720 and Metro Line 20, and northbound Metro Line 105 would need to cross both Wilshire and La Cienega Boulevards to access the station entrance, and would experience excessive bus transfer delay. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The entrance at La Cienega and Wilshire Boulevards is preferred for minimizing bus transfer delay because it is located closer to existing bus stops than the entrance at Le Doux Road and Wilshire Boulevard.

Criterion 2

The intersections of Le Doux Road and Wilshire Boulevard and Stanley Drive and Wilshire Boulevard are unsignalized, and no crosswalks across Wilshire Boulevard are provided at either intersection. If the western station entrance is ultimately constructed, project riders could experience potential safety hazards attempting to cross Wilshire Boulevard at these unsignalized locations. Therefore Criterion 2 could be met, and a potential significant and adverse project-related pedestrian safety impact is projected for this station. Criterion 2 impacts would not be projected if the eastern entrance is ultimately constructed.

6.4.7 Wilshire/Rodeo Station

The following MOSs and Build Alternatives include this station:

- MOS 2



- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed MOS and Build Alternatives.

6.4.7.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northwest corner of the intersection of Canon Drive and Wilshire Boulevard, the southwest corner of the intersection of Reeves Drive and Wilshire Boulevard, the northwest and northeast corners of the intersection of Beverly Drive and Wilshire Boulevard, and the southeast corner of El Camino Drive and Wilshire Boulevard. If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross both Wilshire Boulevard and one of the intersecting streets listed above. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The proposed entrance on the northwest corner of Wilshire Boulevard and Beverly Drive is preferred for minimizing bus transfer delay because most of the interfacing bus lines could be accessed without needing to cross more than one street.

Criterion 2

The intersection of El Camino Drive and Wilshire Boulevard is signalized with crosswalks across the western and southern legs of the intersection. There are no crosswalks on the eastern leg of the intersection of El Camino Drive and Wilshire Boulevard or on any leg of the intersection of Reeves Drive and Wilshire Boulevard (but are located to the east at Canon Drive). If either the entrance on the southeast corner of the intersection of or El Camino Drive and Wilshire Boulevard, or the southwest corner of Reeves Drive and Wilshire Boulevard is ultimately constructed project riders could experience potential safety hazards attempting to cross Wilshire Boulevard at locations without marked crosswalks. Therefore Criterion 2 could be met, and a potential significant and adverse project-related pedestrian safety impact is projected for this station. Criterion 2 impacts would not be projected if either of the two entrances, at Beverly Drive or Canon Drive, is ultimately constructed.

6.4.8 Century City Station

The following MOSs and Build Alternatives include this station:

- MOS 2
- Alternative 1



- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed MOS and Build Alternatives.

6.4.8.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the southwest and southeast corners of the intersection of Avenue of the Stars and Santa Monica Boulevard, and in the Westfield Century City shopping center. Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both Santa Monica Boulevard and Avenue of the Stars. Therefore Criterion 1 could be met, and a potential significant and adverse bus transfer delay impact is projected for this station. If the station entrance on the southeast corner is constructed, riders would only need to cross either Santa Monica Boulevard or Avenue of the Stars, therefore a Criterion 1 impact would not be projected if this entrance is constructed.

Criterion 2

The intersection of Avenue of the Stars and Santa Monica Boulevard is signalized with crosswalks provided on the southern and eastern legs of the intersection. If either the entrance on the southwest corner of the intersection of Avenue of the Stars and Santa Monica Boulevard, or the entrance adjacent to the Westfield Century City shopping center is ultimately constructed, project riders could experience potential safety hazards attempting to cross Santa Monica Boulevard at locations without marked crosswalks. Therefore Criterion 2 could be met, and a potential significant and adverse project-related pedestrian safety impact is projected for this station. Criterion 2 impacts would not be projected if the entrance at the southeast corner of the intersection of Santa Monica Boulevard and Avenue of the Stars is ultimately constructed.

6.4.9 Century City (Optional Station)

6.4.9.1.1 Impact Determination

Criterion 1

Potential station entrances for the optional station are proposed on the northeast, southeast, and southwest corners of the intersection of Avenue of the Stars and Constellation Boulevard, and on the north side of Constellation Boulevard at MGM Drive (at the entrance to the Westfield shopping center). Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both Avenue of the Stars and Constellation Boulevard. Therefore Criterion 1 could be met, and a potential significant and adverse bus transfer delay impact is projected for this station. If the station entrance at MGM Drive is constructed, riders would only need to cross



Constellation Boulevard. Therefore, a Criterion 1 impact would not be projected if this entrance is constructed.

Criterion 2

The intersection of Avenue of the Stars and Constellation Boulevard is signalized with crosswalks provided on all legs of the intersection. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.10 Westwood/UCLA Station

The following Build Alternatives include this station:

- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.10.1.1 Impact Determination

Criterion 1

The four potential station entrances are on the northwest corner of Wilshire Boulevard and Gayley Avenue, on the southeast corner of the Wilshire Boulevard and Veteran Avenue, on the north end of Lot 36 near Kinross Avenue, and on the eastern end of Lot 36 near Lindbrook Drive. Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both Veteran Avenue and Wilshire Boulevard. Therefore Criterion 1 could be met, and a potential significant and adverse bus transfer delay impact is projected for this station. If the station entrance on the southeast corner of the intersection of Veteran Avenue and Wilshire Boulevard is constructed, riders transferring to the interfacing bus transit lines that serve this intersection would only need to cross one of the streets, thus minimizing bus transfer delay. However, most of the bus routes that serve the Westwood area, including all of the Metro Rapid Lines have bus stops located adjacent to the intersection of Wilshire and Westwood Boulevards. Therefore, riders would need to cross Gayley Avenue, and potentially Wilshire and/or Westwood Boulevard to access most interfacing bus transit. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station.

Criterion 2

The intersections of Veteran Avenue and Wilshire Boulevard and Gayley Avenue and Wilshire Boulevard are both signalized with crosswalks provided on all legs of both intersections. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.



6.4.11 Westwood/UCLA (Optional Station)

6.4.11.1.1 Impact Determination

Criterion 1

Potential station entrances for the optional station location are proposed on the northwest corner of the intersection of Gayley Avenue and Wilshire Boulevard, the northwest, southwest and southeast corners of the intersection of Westwood and Wilshire Boulevards, and an entrance near the southeast corner of Midvale Avenue and Wilshire Boulevard. If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross Wilshire Boulevard and Gayley Avenue and/or Westwood Boulevard. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The proposed entrance on the northwest corner of Westwood and Wilshire Boulevards is preferred for minimizing bus transfer delay because most of the interfacing bus lines could be accessed without needing to cross more than one street.

Criterion 2

The intersections of Gayley Avenue and Wilshire Boulevard, and Westwood and Wilshire Boulevards are both signalized with crosswalks provided on all legs of both intersections. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.12 Westwood/VA Hospital Station

The following Build Alternatives include this station:

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.12.1.1 Impact Determination

Criterion 1

A potential station entrance is proposed in an at-grade entrance plaza south of Wilshire Boulevard and east of Bonsall Avenue, with pedestrian walkway connections to the VA hospital building and Bonsall Avenue. With the location of the proposed entrance, riders transferring to eastbound Big Blue Bus Line 2 would need to cross Bonsall Avenue to access the bus stop. Riders transferring to eastbound Metro Rapid Line 720 and Metro Line 20 would need to cross Bonsall Avenue and the Wilshire Boulevard access ramp and travel up the stairs to Wilshire Boulevard. Riders transferring to westbound buses would need to cross under Wilshire Boulevard on the Bonsall Avenue underpass, as well as cross the



westbound Wilshire Boulevard access ramps. As a result, Criterion 1 would be met.

Criterion 2

The intersection of the eastbound Wilshire Boulevard access ramp and Bonsall Avenue is unsignalized with crosswalks provided on the western and southern legs of the intersection. The intersections of Wilshire Boulevard access ramps and Bonsall Avenue have stop signs. Because the roadways are unsignalized and experience low traffic volumes, the station location would not generate pedestrian/bicycle safety hazards and Criterion 2 would not be met. Therefore no significant or adverse project-related pedestrian safety impacts are projected for this station.

6.4.13 Westwood/VA Hospital (Optional Station)

6.4.13.1.1 Impact Determination

Criterion 1

The station entrance proposed for the optional station is in an at-grade entrance plaza north of Wilshire Boulevard and west of Bonsall Avenue, with pedestrian walkway connections to the VA hospital building and Bonsall Avenue. With the location of the proposed entrance, riders transferring to westbound Big Blue Bus Line 2 would need to cross Bonsall Avenue to access the bus stop. Riders transferring to westbound Metro Rapid Line 720 and Metro Line 20 would need to travel down the stairs from Wilshire Boulevard, cross both the westbound Wilshire Boulevard access ramp and Bonsall Avenue to access the bus stop. Riders transferring to eastbound buses would need to cross under Wilshire Boulevard on the Bonsall Avenue underpass, as well as cross the eastbound Wilshire Boulevard access ramps. As a result, Criterion 1 would be met.

Criterion 2

The intersection of the westbound Wilshire Boulevard access ramp and Bonsall Avenue is unsignalized with crosswalks provided on the western and southern legs of the intersection. The intersections of Wilshire Boulevard access ramps and Bonsall Avenue have stop signs. Because the roadways are unsignalized and experience low traffic volumes, the station location would not generate pedestrian/bicycle safety hazards and Criterion 2 would not be met. Therefore no significant or adverse project-related pedestrian safety impacts are projected for this station.

6.4.14 Wilshire/Bundy Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.



6.4.14.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northeast and southeast corners of the intersection of Bundy Drive and Wilshire Boulevard. If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross both Bundy Drive and Wilshire Boulevard. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The proposed northeast entrance is preferred for minimizing bus transfer delay because most of the interfacing bus lines could be accessed without needing to cross more than one street.

Criterion 2

The intersection of Bundy Drive and Wilshire Boulevard is signalized with crosswalks provided on all legs of the intersection. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.15 Wilshire/26th Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.15.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northwest and northeast corners of the intersection of 26th Street and Wilshire Boulevard. Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both 26th Street and Wilshire Boulevard. Therefore Criterion 1 could be met, and a potential significant and adverse bus transfer delay impact is projected for this station. If the station entrance on the northeast corner is constructed, riders would only need to cross Wilshire Boulevard. Therefore a Criterion 1 impact would not be projected if this entrance is constructed.

Criterion 2

The intersection of 26th Street and Wilshire Boulevard is signalized with crosswalks provided on all legs. Therefore Criterion 2 would not be met, and no project-related pedestrian safety impacts are projected for this station.

6.4.16 Wilshire/16th Station

The following Build Alternatives include this station:



- Alternative 3
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.16.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northwest and northeast corners of the intersection of 15th Street and Wilshire Boulevard, as well as an entrance in front of the Santa Monica/UCLA Medical Center on the south side of Wilshire Boulevard east of 15th Street. Bus stops for Metro Rapid Line 720, Metro Line 20, and Big Blue Bus Line 2 are on 14th Street. Riders transferring to westbound interfacing bus transit lines would not need to cross any streets assuming the northwest entrance was constructed, but would need to walk an entire block to access buses. Riders transferring to eastbound buses would need to cross 14th Street and Wilshire Boulevard as well as walk an entire block to access buses. If other entrances were ultimately built, transferring riders would need to walk further. Therefore Criterion 1 would be met, and significant and adverse project-related bus transfer delay impacts are projected for this station. The proposed entrance on the northwest corner of the intersection of 15th Street and Wilshire Boulevard is preferred for minimizing bus transfer delay because most of the interfacing bus lines could be accessed without needing to cross more than one street.

Criterion 2

The intersections of 14th and 15th Streets with Wilshire Boulevard are all signalized with crosswalks provided on all legs of both intersections. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.17 Wilshire/4th Station

The following Build Alternatives include this station:

- Alternative 3
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.17.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northeast and southeast corners of the intersection of 4th Street and Wilshire Boulevard. Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both 4th Street and Wilshire Boulevard. Therefore Criterion 1 could be met, and a potential significant and adverse bus



transfer delay impact is projected for this station. If the station entrance on the southeast corner is constructed, riders would only need to cross Wilshire Boulevard, or 4th Street. Therefore a Criterion 1 impact would not be projected if this entrance is constructed.

Criterion 2

The intersection of 4th Street and Wilshire Boulevard is signalized with crosswalks provided on all legs of the intersection. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.18 Hollywood/Highland Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.18.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the south side of Hollywood Boulevard east of Highland Avenue, the northwest corner of the intersection of Highland and Hawthorne Avenues, and the northeast corner of Highland Avenue and Selma Place. The station could also be accessed via the existing Metro Red Line Station entrance just west of the northwest corner of the intersection of Highland Avenue and Hollywood Boulevard. Bus stops for the numerous lines that serve the station area are located on or near the northwest, northeast and southeast corners of the intersection of Highland Avenue and Hollywood Boulevard. If the potential entrance on the south side of Hollywood Boulevard east of Highland Avenue is constructed, (in addition to the existing Metro Red Line entrance), riders transferring to the interfacing bus transit lines would need to cross either Highland Avenue or Hollywood Boulevard, and Criterion 1 would not be met. If the entrance at the northwest corner of the intersection of Highland and Hawthorne Avenues is constructed (in addition to the existing Metro Red Line entrance), riders transferring to the interfacing bus transit lines would need to cross either Highland Avenue or Hollywood Boulevard. However, because the Highland/Hawthorne entrance would be up to a block south of Hollywood Boulevard, Criterion 1 would be met, and significant and adverse project-related bus transfer delay impacts are projected for this station. Criterion 1 would also be met for the entrance on the northeast corner of Highland and Selma, because it would require crossing several streets to transfer to connecting bus service, and it is a full block south of Hollywood Boulevard.



Criterion 2

The intersection of Highland Avenue and Hollywood Boulevard is signalized with crosswalks provided on all legs of both intersections. The intersection of Highland and Hawthorn Avenues is unsignalized, with stop controls on eastbound and westbound Hawthorn Avenue. No marked crosswalks are provided at this intersection. The intersection of Highland Avenue and Selma Place is signalized with crosswalks provided on the southern and eastern legs of the intersection. Because the intersection of Highland and Hawthorn Avenues is unsignalized and without crosswalks, and because the northern leg of the intersection of Highland Avenue and Selma Place (where the potential station entrances would be located) does not have a marked crosswalk, project riders could experience potential safety hazards attempting to cross Highland Avenue at these locations. Therefore Criterion 2 would be met for these entrances, and a significant and adverse project-related pedestrian safety impact could occur if these station entrances are constructed. Criterion 2 impacts would not be projected for the existing Red Line station entrance, nor are they projected for the potential entrance on the south side of Hollywood Boulevard east of Highland Avenue—therefore, it is the recommended station entrance.

6.4.19 Santa Monica/La Brea Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.19.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on all four corners of the intersection of La Brea Avenue and Santa Monica Boulevard. Depending on which station entrance is ultimately constructed, some riders transferring to interfacing bus transit lines would need to cross both La Brea Avenue and Santa Monica Boulevard. Therefore Criterion 1 could be met, and a potential significant and adverse bus transfer delay impact is projected for this station. If the station entrance on the southwest corner is constructed, riders would only need to cross La Brea Avenue or Santa Monica Boulevard. Therefore a Criterion 1 impact would not be projected if this entrance is constructed.

Criterion 2

The intersection of La Brea Avenue and Santa Monica Boulevard is signalized with crosswalks provided on all legs of both intersections. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.



6.4.20 Santa Monica/Fairfax Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.20.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northeast and southeast corners of the intersection of Fairfax Avenue and Santa Monica Boulevard. If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross both Fairfax Avenue and Santa Monica Boulevard. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The proposed southeast entrance is preferred for minimizing bus transfer delay because most of the interfacing bus lines (including all Metro Rapid stops) could be accessed without needing to cross more than one street.

Criterion 2

The intersection of Fairfax Avenue and Santa Monica Boulevard is signalized with crosswalks provided on all legs of the intersection. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.

6.4.21 Santa Monica/San Vicente Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.21.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northeast corner of the intersection of Hancock Avenue and Santa Monica Boulevard, and on the south side of Santa Monica Boulevard, west of Huntley Drive on Metro property. If either potential entrance is constructed, riders transferring to both eastbound and westbound Metro Line 4 would only need to cross Santa Monica Boulevard, thus minimizing bus transfer delay. However, most of the bus routes that serve the proposed station area, including all of the Metro Rapid Lines have bus stops located at San Vicente Boulevard, three blocks to the west. Therefore Criterion 1



would be met, and significant and adverse project-related bus transfer delay impacts are projected for this station.

Criterion 2

The intersection of Hancock Avenue/Metro Driveway and Santa Monica Boulevard is unsignalized with stop controls on the northbound and southbound approaches. Marked crosswalks are installed on the northern and the eastern legs of the intersection. Therefore Criterion 2 would be met, and significant and adverse project-related pedestrian safety impacts are projected for this station.

6.4.22 Beverly Center Area Station

The following Build Alternatives include this station:

- Alternative 4
- Alternative 5

The impact determination detailed below for this station is applicable to all of the above listed Build Alternatives.

6.4.22.1.1 Impact Determination

Criterion 1

Potential station entrances are proposed on the northwest, northeast and southeast corners of the intersection of San Vicente Boulevard and 3rd Street.

If only one of the potential station entrances is constructed, some riders transferring to interfacing bus transit lines would need to cross both La Cienega Boulevard and 3rd Street. Therefore Criterion 1 would be met, and a significant and adverse bus transfer delay impact is projected for this station. The proposed southeast entrance is preferred for minimizing bus transfer delay because more interfacing bus lines operating on La Cienega Boulevard could be accessed without needing to cross more than one street.

Criterion 2

The intersections of San Vicente Boulevard and 3rd Street and La Cienega Boulevard and 3rd Street are both signalized with crosswalks provided on all legs of each intersection. Therefore Criterion 2 would not be met, so no project-related pedestrian safety impacts are projected for this station.



6.5 Impact Summary

Table 6-1 summarizes the impact determination for each Build Alternative. Because it has the most stations of any alternative, Alternative 5 is projected to have the most impacted station areas, with a total of 11 impacted stations. At some locations, alternatives to added or relocated entrances could be considered. Further information is provided in Section 7 – Mitigation Measures.

Table 6-1. Transit and Non-Motorized Impact Summary

Station	MOS 1	MOS 2	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
1. Wilshire/Crenshaw Station	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted
2. Wilshire/La Brea Station	Potential *	Potential *	Potential *	Potential *	Potential *	Potential *	Potential *
3. Wilshire/Fairfax Station	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted
Optional Station	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted
4. Wilshire/La Cienega Station	—	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted
Optional Station	—	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted
5. Wilshire/Rodeo Station	—	Impacted	Impacted	Impacted	Impacted	Impacted	Impacted
6. Century City Station	—	Potential *	Potential *	Potential *	Potential *	Potential *	Potential *
Optional Station	—	Potential *	Potential *	Potential *	Potential *	Potential *	Potential *
7. Westwood/UCLA Station	—	—	Impacted	Impacted	Impacted	Impacted	Impacted
Optional Station	—	—	Impacted	Impacted	Impacted	Impacted	Impacted
8. Westwood/VA Hospital Station	—	—	—	Impacted	Impacted	Impacted	Impacted
Optional Station	—	—	—	Impacted	Impacted	Impacted	Impacted
9. Wilshire/Bundy Station	—	—	—	—	Impacted	—	Impacted
10. Wilshire/26 th Station	—	—	—	—	Potential *	—	Potential *
11. Wilshire/16 th Station	—	—	—	—	Impacted	—	Impacted
12. Wilshire/4 th Station	—	—	—	—	Potential *	—	Potential *
13. Hollywood/Highland Station	—	—	—	—	—	Potential *	Potential *
14. Santa Monica/La Brea Station	—	—	—	—	—	Potential *	Potential *
15. Santa Monica/Fairfax Station	—	—	—	—	—	Impacted	Impacted
16. Santa Monica/San Vicente Station	—	—	—	—	—	Impacted	Impacted
17. Beverly Center Area Station	—	—	—	—	—	Impacted	Impacted
Total Impacted Station Areas **	2	4	5	6	8	9	11

Source: Fehr & Peers, April 2010

Note: * Station area would not be impacted if recommended entrance is constructed. Otherwise station area would be impacted. ** Impact totals reflect the fact that either the preferred station or the optional station will be built at station areas, not both.



This page intentionally left blank.



7.0 MITIGATION MEASURES

This section details the measures proposed to mitigate the significant and adverse project-related impacts detailed in Section 6 to less than significant levels.

7.1 Wilshire/Crenshaw Station

This station area is expected to be impacted under the following MOSs and Build Alternatives:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these MOSs and Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

To mitigate impacts under these MOSs and Build Alternatives due to pedestrian safety hazards, the following mitigation measure should be implemented:

- Install a marked crosswalk on the western leg of the intersection

7.2 Wilshire/La Brea Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under the following MOSs and Build Alternatives:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5



If the southwest entrance is not constructed, to mitigate impacts due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.3 Wilshire/Fairfax Station

This station area is expected to be impacted under the following MOSs and Build Alternatives:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these MOSs and Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

7.4 Wilshire/Fairfax Optional Station

This station area is expected to be impacted under the following MOSs and Build Alternatives:

- MOS 1
- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these MOSs and Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:



- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway.

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

To mitigate impacts under these MOSs and Build Alternatives due to pedestrian safety hazards, the following mitigation measure should be implemented:

- Relocate the potential station entrance near the southeast corner of Orange Grove Avenue and Wilshire Boulevard to the southeast corner of Fairfax Avenue. If this mitigation measure is determined to be infeasible, an alternative mitigation measure would be to not construct this potential station entrance.

7.5 Wilshire/La Cienega Station

This station area is expected to be impacted under the following MOS and Build Alternatives:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under MOS 2 and the Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

To mitigate potential impacts under the MOS 2 and the Build Alternatives due to pedestrian safety hazards, the following mitigation measure should be implemented:

- Construct the entrance on the northeast corner of the intersection of La Cienega and Wilshire Boulevards in lieu of the potential entrance proposed at the southwest corner of the intersection of Hamilton Drive and Wilshire Boulevard.
- Alternatively, relocate the entrance at Hamilton Drive and Wilshire Boulevard to the southeast corner of La Cienega and Wilshire Boulevards. If this mitigation measure is determined to be infeasible, signalize the



intersection of Hamilton Drive and Wilshire Boulevard and install marked crosswalks on all four legs of the intersection.

7.6 Wilshire/La Cienega Optional Station

This station area is expected to be impacted under the following MOS and Build Alternatives:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under MOS 2 and the Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

To mitigate potential impacts under MOS 2 and the Build Alternatives due to pedestrian safety hazards, the following mitigation measures should be implemented:

Construct the entrance on the northwest corner of the intersection of La Cienega and Wilshire Boulevards in lieu of the potential entrance proposed at the northwest corner of the intersection of Le Doux Road and Wilshire Boulevard.

Alternatively, signalize the intersection of Le Doux Road and Wilshire Boulevard and install marked crosswalks on all four legs of the intersection.

7.7 Wilshire/Rodeo Station

This station area is expected to be impacted under the following MOS and Build Alternatives:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5



To mitigate impacts under MOS 2 and the Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

To mitigate potential impacts under MOS 2 and the Build Alternatives due to pedestrian safety hazards, the following mitigation measures should be implemented:

- Construct one or more of the potential entrances at Beverly and Canon Drives in lieu of the potential entrances proposed at the southeast corner of El Camino Drive and Wilshire Boulevard, and the southwest corner of Reeves Drive and Wilshire Boulevard

7.8 Century City Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under MOS 2 and the Build Alternatives:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

If the entrance at the southeast corner of the intersection of Avenue of the Stars and Santa Monica Boulevard is not constructed, to mitigate potential impacts due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway.

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

To mitigate potential impacts due to pedestrian safety hazards, the following mitigation measures should be implemented:

- Construct the entrance at the southeast corner of the intersection of Avenue of the Stars and Santa Monica Boulevard in lieu of the other potential entrances



- If the above mitigation measure is determined to be unfeasible, stripe a crosswalk on the western leg of the intersection of Avenue of the Stars and Santa Monica Boulevard.
- If striping a crosswalk is determined to be unfeasible due the roadway geometry of Santa Monica Boulevard, construct a pedestrian underpass across Santa Monica Boulevard

7.9 Century City Optional Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under MOS 2 and the Build Alternatives:

- MOS 2
- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

If the entrance MGM Drive and Constellation Boulevard is not constructed, to mitigate potential impacts due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.10 Westwood/UCLA Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway.



- Alternatively, construct station entrance(s) at the intersection of Westwood and Wilshire Boulevards in lieu of station entrances at Gayley or Veteran Avenues

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.11 Westwood/UCLA Optional Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.12 Westwood/VA Hospital Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- Relocate bus stops currently located in bus turn-outs on Wilshire Boulevard to the Wilshire Boulevard access ramps in front of the station entrance
- Construct a bus turnaround in front of the station to enable westbound buses to stop in front of the station entrance, before circling around, traveling north on Bonsall Avenue, and turning left on the access ramps to continue traveling west on Wilshire Boulevard



7.13 Westwood/VA Hospital Optional Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- Relocate bus stops currently located in bus turn-outs on Wilshire Boulevard to the Wilshire Boulevard access ramps in front of the station entrance
- Construct a bus turnaround in front of the station to enable eastbound buses to stop in front of the station entrance, before circling around, traveling south on Bonsall Avenue, and turning right on the access ramps to continue traveling east on Wilshire Boulevard

7.14 Wilshire/Bundy Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 3
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.15 Wilshire/26th Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under the following Build Alternatives:

- Alternative 3
- Alternative 5

If the entrance at the northeast corner of the intersection of 26th Street and Wilshire Boulevard is not constructed, to mitigate potential impacts due to



excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.16 Wilshire/16th Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 3
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate bus stops at 14th Street and Wilshire Boulevard to 15th Street and Wilshire Boulevard in front of potential station entrances.

7.17 Wilshire/4th Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under the following Build Alternatives:

- Alternative 3
- Alternative 5

If the entrance at the southeast corner of the intersection of 4th Street and Wilshire Boulevard is not constructed, to mitigate potential impacts due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.18 Hollywood/Highland Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under the following Build Alternatives:

Alternative 4

Alternative 5



If the entrance on the south side of Hollywood Boulevard east of Highland Avenue is not constructed, to mitigate potential impacts due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

If the entrance on the south side of Hollywood Boulevard east of Highland Avenue is not constructed, to mitigate potential impacts due to pedestrian safety hazards, the following mitigation measures should be implemented:

- Shift the potential Highland Avenue entrance near Hawthorne Avenue to the southwest corner of the intersection of Highland Avenue and Hollywood Boulevard to the extent feasible. If entrances near the corners of the intersection are not feasible, shift the potential entrance as far to the north as possible.
- If the potential entrance near Selma Place is constructed, install a marked crosswalk on the northern leg of the intersection of Highland Avenue and Selma Place.

7.19 Santa Monica/La Brea Station

Depending on which station entrance is ultimately constructed, this station area has the potential to be impacted under the following Build Alternatives:

- Alternative 4
- Alternative 5

If the entrance at the southwest corner of the intersection of La Brea Avenue and Santa Monica Boulevard is not constructed, to mitigate potential impacts due to excessive bus transfer delay, the following mitigation measure should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.20 Santa Monica/Fairfax Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 4



- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.

7.21 Santa Monica/San Vicente Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 4
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:

- Shift potential entrance(s) to the northeast and/or southeast corners of the intersection of San Vicente and Santa Monica Boulevards to the extent feasible.
- If relocating potential entrances to San Vicente is not feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway.

To mitigate impacts under these Build Alternatives due to pedestrian safety hazards, the following mitigation measures should be implemented:

- Shift potential entrances to the northeast and southeast corners of the intersection of San Vicente and Santa Monica Boulevards to the extent feasible.
- If relocating potential entrances to San Vicente is not feasible, signalize the intersection of Hancock Avenue and Santa Monica Boulevard.

7.22 Beverly Center Area Station

This station area is expected to be impacted under the following Build Alternatives:

- Alternative 4
- Alternative 5

To mitigate impacts under these Build Alternatives due to excessive bus transfer delay, the following mitigation measures should be implemented:



- To the extent it is feasible, relocate or consolidate bus stops to ensure that transfers between bus transit and the subway do not require crossing more than one roadway

At this time it is not known which entrances will be constructed, so this potential mitigation measure does not reference specific station entrances.



8.0 IMPACTS REMAINING AFTER MITIGATION

After implementation of the mitigation measures detailed above for each station location, project-related impacts to the interfacing transit and non-motorized facilities and services would be mitigated to less-than significant levels for all Project Alternatives.



This page intentionally left blank.



9.0 REFERENCES

Antelope Valley Transit Authority	Antelope Valley Transit Authority Ridership Data
Culver CityBus	Culver CityBus Ridership Data
LADOT	LADOT Ridership Data
Metro	Metro Travel Demand Model
Metro	Metro Bus Ridership Data
Santa Clarita Transit	Santa Clarita Transit Ridership Data
Santa Monica Big Blue Bus	Big Blue Bus Ridership Data
Texas Transportation Institute	2009 Mobility Report
West Hollywood CityLine	West Hollywood CityLine Ridership Data