

## CHAPTER 2—ALTERNATIVE CONSIDERED IN THIS DRAFT SEIS

This chapter provides the Project background, summarizes the history of the development of alternatives, and identifies and describes the Project elements that are the subject of this Draft Supplemental Environmental Impact Statement (Draft SEIS) and Section 4(f) Evaluation. Chapter 2 of the *Westside Subway Extension Final Environmental Impact Statement/Environmental Impact Report* (Final EIS/EIR) (Metro 2012j) provides a detailed description of the entire Project. Unless otherwise noted, the Project elements considered in this Draft SEIS are consistent with the Project identified in Chapter 2 of the Final EIS/EIR and approved by the Metro Board of Directors in April and May 2012. Alternatives to the Project considered under Section 4(f) are identified and described in Chapter 5 of this Draft SEIS.

### 2.1 Project Background

The Westside Purple Line Extension has been an integral element of local, regional, and federal transportation planning since the early 1980s. Extending westward from the Los Angeles Central Business District, the Westside Purple Line Extension has been the subject of in-depth technical studies and extensive community involvement.

An Alternatives Analysis (AA) Study was initiated in 2007 for all reasonable fixed-guideway alternative alignments and transit technologies. The purpose of the Project, as established in the AA, is to address the mobility needs of residents, workers, and visitors traveling to, from, and within the highly congested Study Area by providing faster and more reliable public transit than existing services, which operate in mixed-flow traffic. The improvement in public transit service will significantly increase east–west capacity and improve mobility by reducing transit travel times. On a county-wide level, the project will strengthen regional access by connecting Metro bus, Metro rail, and Metrolink networks to a high-capacity transit solution serving the Study Area.

The evaluation of alternatives in the AA Study resulted in the identification of heavy rail transit as the preferred technology and the recommendation of two alternative alignments for further consideration in the Draft EIS/EIR. In February 2009, the Metro Board of Directors approved the AA Study and authorized preparation of the Draft EIS/EIR.

FTA and Metro prepared the Draft EIS/EIR for the Westside Purple Line Extension in 2010 with the FTA as the lead agency for the National Environmental Policy Act and Metro as the lead agency for the California Environmental Quality Act. The Draft EIS/EIR defined the Purpose and Need of the Project and described and evaluated the alternatives, including a No Build Alternative, a relatively low-cost Transportation System Management Alternative, and five heavy rail subway alternatives. The Draft EIS/EIR documented the evaluation of the potential transportation and environmental impacts and benefits, mitigation measures, operating and maintenance and capital costs, and potential funding sources for the alternatives. It also included a comparison of alternatives and a discussion of public and agency outreach. The Draft EIS/EIR was published in September 2010.



The Metro Board of Directors reviewed and considered the findings of the Draft EIS/EIR and the public and agency comments on the Draft EIS/EIR received during the official comment period. On October 28, 2010, after deliberation of the benefits and impacts of all the alternatives analyzed and public comments received during the public comment period, the Metro Board of Directors approved the Draft EIS/EIR and identified Alternative 2 (Westwood/Veterans Affairs (VA) Hospital Extension) as the Locally Preferred Alternative (LPA). Alternative 2 was selected as the LPA as it is the alternative that best increases transit ridership and provides benefits at reasonable costs within available financial resources.

The Final EIS/EIR for the LPA was prepared with direction from the Metro Board of Directors to further evaluate station and alignment options and rail support facilities. The Final EIS/EIR evaluation included two station location options for each of the Century City, Westwood/UCLA, and Westwood/VA Hospital Stations, and station entrance options at all seven of the LPA station locations. The Notice of Availability for the Final EIS/EIR was published on March 23, 2012 in the *Federal Register*. The 60-day review period for the Final EIS/EIR concluded on May 22, 2012.

The Metro Board of Directors approved Section 1 of the Project in April 2012 and approved Sections 2 and 3 of the Project in May 2012. FTA issued a Record of Decision (ROD) for the Project in August 2012.

## 2.2 Purpose and Need of the Project

The purpose of this Project is to improve transit travel time and provide more reliable transit service to the 286,250 transit riders who travel through the highly congested Study Area today, as well as to future riders who will be attracted to the system. More specifically, the Project's purpose is as follows:

- Improve Study Area mobility and travel reliability
- Improve transit services within the Study Area
- Improve access to major activity and employment centers in the Study Area
- Improve opportunities for transit-supportive land use policies and conditions
- Improve transportation equity
- Provide a fast, reliable, and environmentally sound transit alternative
- Meet Regional Transit Objectives through the Southern California Association of Governments' performance indicators of mobility, accessibility, reliability, and safety

The need for the Project, as described in Chapter 1 of the Final EIS/EIR, is based on population and employment growth, the high number of major activity centers served by the Project, high existing transit usage, and severe traffic congestion. The Study Area has 12 large population and employment centers located along the corridor, which are served by extremely congested road networks that will deteriorate further with the projected increase in population and jobs. This anticipated growth will further affect transit travel speeds and reliability, even with a dedicated lane for express bus service on Wilshire Boulevard. The improved capacity that will result from the subway extension is the best solution to improve travel times and reliability and to provide a high-capacity, environmentally sound transit alternative.

### 2.2.1 Major Activity Centers and Destinations

Los Angeles has been characterized as a collection of urban centers. The City of Los Angeles “Centers Concept” from the 1960s and 1970s identified urban centers of various types throughout the region that represented concentrations of job centers and higher-density housing. Wilshire Center, Hollywood, Miracle Mile, Sunset Strip, Beverly Hills, Westwood, Santa Monica, and others were all designated centers in the plan. The Centers Concept envisioned that these areas would be interconnected by transit infrastructure. The Westside Purple Line Extension will implement a portion of the plan by linking some of these high-density centers via transit to reduce reliance on automobiles.

The Westside Study Area has the second-highest concentration of employment centers and major attractions in the Southern California region after Downtown Los Angeles. The Study Area is widely recognized as one of the preeminent employment generators in California. The three largest activity centers with the highest density levels are Beverly Hills (26,000 jobs per square mile), Century City (43,000 jobs per square mile), and Westwood (42,000 jobs per square mile). Approximately 147,000 jobs were located in these three centers in 2006.

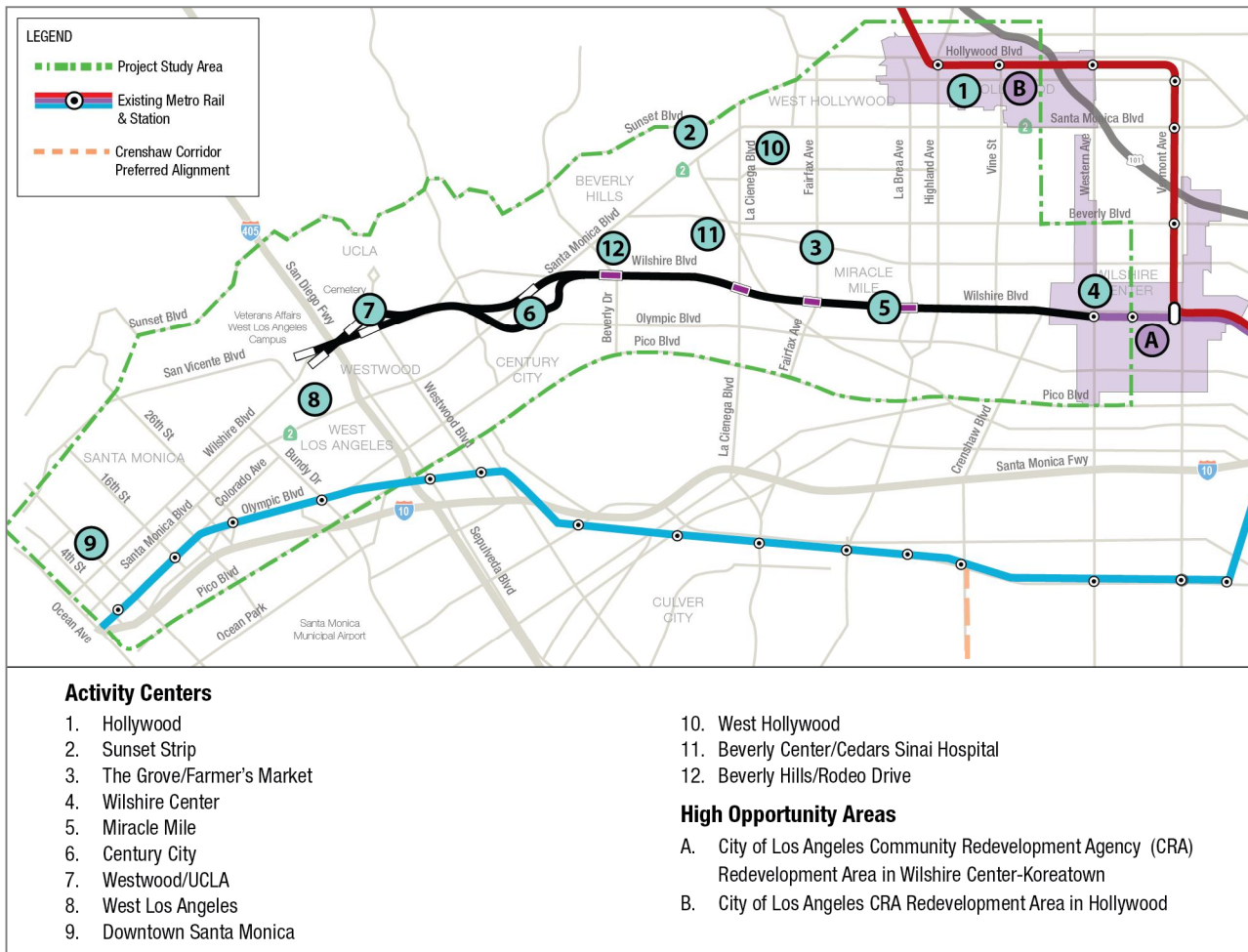
Major activity centers in the Study Area are shown in Figure 2-1. Some of Southern California’s most well-known entertainment, educational, and cultural activity centers are located within the Study Area along the high-density Wilshire and Santa Monica Boulevard corridors.

### 2.2.2 Travel Markets, Transit Usage, Congestion, and Mobility in the Study Area

Currently, the transportation network consists of a well-defined grid of arterials and freeways generally following an east/west or north/south orientation. These freeways and streets carry some of the highest traffic volumes in California and throughout the country.

#### Travel Markets

The primary travel markets in the Study Area are the east/west trips occurring within or traveling to and from the Westside. As shown in Figure 2-2, on an average weekday, about 301,000 home-based work peak trips enter the Study Area from outside origins, while about 123,000 trips leave the Study Area for outside destinations (i.e., more than twice as many work trips enter the Study Area as leave). There are 102,000 daily home-based work peak trips starting and ending within the Study Area, suggesting that approximately one in four Study Area jobs is filled by a local (Study Area) resident. The remaining 75 percent of the jobs were filled by individuals who live outside the Study Area. Projections suggest that the ratio of home-based work peak trips entering or leaving the Study Area daily will remain about the same through 2035.



**Figure 2-1. Activity Centers in the Study Area**

## Transit

All bus service in the Study Area is currently provided in mixed-flow lanes, which subjects buses to the same high levels of congestion experienced by automobiles. The Wilshire Corridor (Line 20/720) is the most used bus corridor in Southern California with nearly 60,000 daily boardings, surpassing the ridership of most light rail transit (LRT) routes.

Since 1990, Metro has invested heavily in a regional fixed-guideway transit system that consists of LRT, heavy rail transit, bus rapid transit, and commuter rail. This system currently includes more than 76 miles of Metro Rail service (heavy rail transit and LRT) and 14 miles of bus rapid transit service. In addition, the Southern California Regional Rail Authority (Metrolink) has opened more than 500 miles of Metrolink commuter rail lines that serve five counties. The existing fixed-guideway transit service in the region is complemented by the transit corridors currently under study or construction. The Westside Purple Line Extension will directly connect the west side of the county to all elements of the existing Metro system.

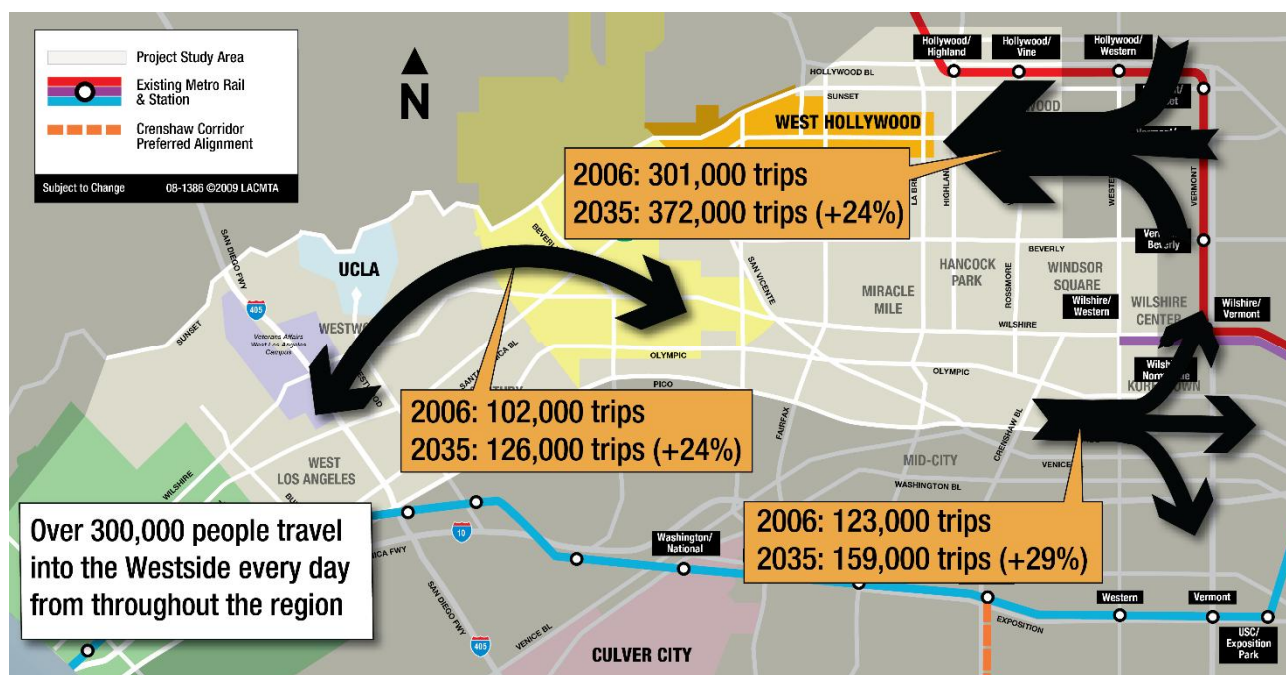


Figure 2-2. Home-Based Work Peak Person Trip Comparison: 2006 to 2035

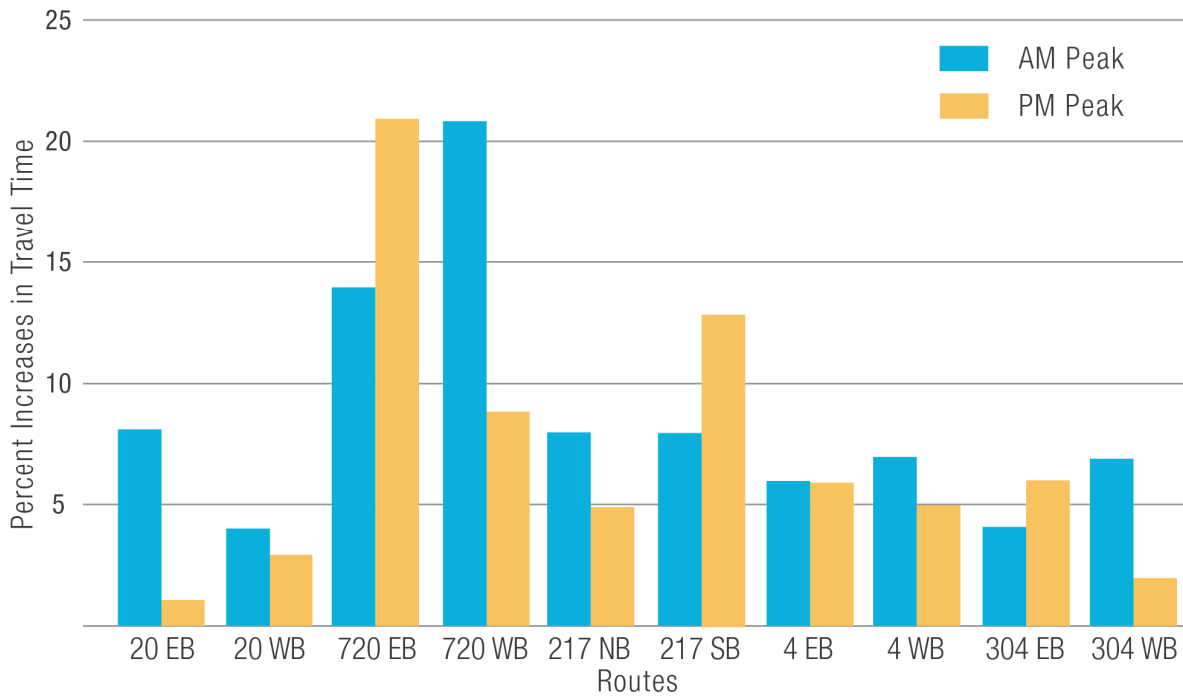
### Congestion and Mobility

Between 2006 and 2035, substantial increases are projected in vehicle miles traveled (VMT) and vehicle hours traveled (VHT). Daily VMT within the Study Area will increase by approximately 26 percent, from 4 million in 2006 to more than 5 million in 2035. During the same period, regional VMT are projected to increase from 304.2 million to 504.7 million, or more than 65 percent. VHT in the Study Area are projected to increase from about 165,000 to 247,000, or almost 50 percent. Regional VHT are projected to increase from 9.5 million to 29.2 million, or about 207 percent between 2006 and 2035.

The Study Area contains some of the most congested arterial streets in the county. Key east/west arterials, such as Wilshire, Santa Monica, Sunset, Hollywood, Olympic, and Pico Boulevards, operate at congested conditions throughout the day. North/south arterials west of Western Avenue include Crenshaw Boulevard, La Brea Avenue, La Cienega Boulevard, Beverly Drive, Westwood Boulevard, Sepulveda Boulevard, Bundy Drive, and Lincoln Boulevard.

Arterials in the Study Area provide access to employment centers as well as local and regional travel. They also are used as alternatives to the Interstate 10 (I-10) and Interstate 405 (I-405) freeways during heavy congestion, accidents, breakdowns, lane closures, and other random events. As a result, the Study Area's roadway capacity is insufficient to handle the traffic volumes, thus reducing travel-time reliability for motorists and transit riders.

The current average speeds of the Metro Rapid buses traveling through the Study Area ranges between 10 and 15 miles per hour (mph) along Wilshire Boulevard and between 11 and 14 mph along Santa Monica Boulevard. The average speeds of both local buses and the Metro Rapid buses traveling through the Study Area are expected to decrease further as traffic congestion increases on roadways. As a result, transit travel times will become longer, as illustrated in Figure 2-3.



**Figure 2-3. Degradation in Transit Travel Times due to Road Congestion – Metro Bus Routes in Study Area, 2003 to 2006**

The Study Area has substantial traffic congestion, high transit ridership and load factors, and closely spaced bus stops. Combined, these factors result in declining bus operating speeds and reliability, making transit less competitive with the private automobile. With high passenger loads and congested roads, desirable headways (frequency of service) are difficult to maintain; this results in overcrowded buses. As the road and transit systems become more congested, the Study Area becomes a less desirable place for people to live and work and less attractive for planned growth and development.

### 2.2.3 Regional Objectives

The Purpose and Need statement in the Final EIS/EIR presented the regional performance indicators for transit projects from the Southern California Association of Governments (SCAG) 2008 *Regional Transportation Plan (RTP)* (SCAG 2008a). In 2016, the SCAG Regional Council adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS)* (SCAG 2016) to establish the goals, objectives, and policies for the transportation system and to establish an implementation plan for transportation investments. The RTP/SCS includes regional performance indicators

with objectives against which specific transportation investments can be measured. Three key performance indicators and their 2012 base year results, 2040 baseline projections, and 2040 Plan objectives are shown in Table 2-1. Designated as one of the most congested areas in the five-county region, significant improvement is needed in the Study Area in these categories to meet regional objectives for location efficiency, mobility and accessibility, and safety and health.

**Table 2-1. Southern California Association of Governments Performance Indicators**

Outcome	Performance Measure	Definition	Category	2012 Baseline	2040 Baseline	2040 Plan
Location Efficiency	Vehicle Miles Traveled (VMT) per capita	Average daily vehicle miles driven per person	Automobiles and light-duty trucks	22.8 miles	22.1 miles	20.5 miles
	Transit mode share	The share of total trips that use transit for work and non-work trips	All trips	2.2%	2.2%	3.1%
			Work trips	4.8%	5.6%	8.2%
Mobility and Accessibility	Person delay per capita	Delay per capita can be used as a supplemental measure to account for population growth impacts on delay	Daily minutes of delay per capita	11.8 mins	15.0 mins	9.2 mins
	Travel time distribution for transit modes	Travel time distribution for transit modes for work and non-work trips	% of PM peak transit trips <45 minutes	N/A	22%	26%
Safety and Health	Collision rates by severity by mode (per 100 million vehicle miles)	Collision rate per 100 million vehicle miles by mode and number of fatalities and serious injuries by mode (all, bicycle/pedestrian)	Serious injuries	4.29	N/A	1.60
			Fatalities	0.83	N/A	0.31

Source: SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) (SCAG 2016)

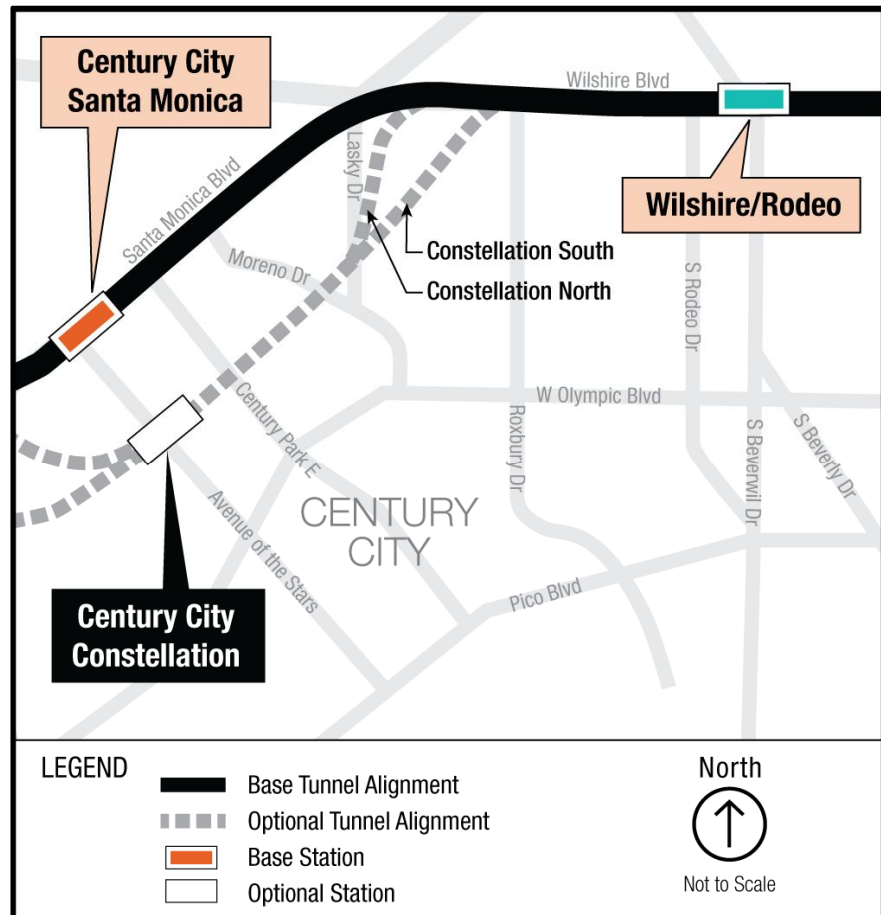
Note: 2012 Baseline Conditions were not presented for all metrics.

## 2.3 Development of the Alternatives for Section 2 of the Project

This Draft SEIS addresses Section 2 of the Project with a focus on the alignment between the Wilshire/Rodeo and Century City Stations, the Century City Station, and the construction activities located in Century City. These project elements underwent a rigorous review process as presented in Chapter 2 of the Final EIS/EIR and are summarized here.

### 2.3.1 Wilshire/Rodeo to Century City Alignment and Century City Station

The Draft EIS/EIR considered two station options for Century City and three alignment options connecting the Wilshire/Rodeo and Century City Stations. Figure 2-4 depicts the station and alignment locations as they were analyzed in the Draft EIS/EIR.



**Figure 2-4. Century City Station and Alignment Options in Draft EIS/EIR**

The two station locations that were considered in the Century City area are as follows:

- Century City Santa Monica Station—located beneath Santa Monica Boulevard centered on Avenue of the Stars
- Century City Constellation Station—located beneath Constellation Boulevard centered on Avenue of the Stars

During the Draft EIS/EIR, the Santa Monica Station and alignment was termed the “base alignment” because it was the shortest alignment. This label was not intended to suggest a proposed action alternative or Locally pPreferred Alternative.

Three alignments were considered to connect the Wilshire/Rodeo Station in Beverly Hills to one of the two studied Century City Station locations:

- Santa Monica Boulevard—extends west from the Wilshire/Rodeo Station beneath Wilshire Boulevard to Santa Monica Boulevard, where it veers southwest to connect to the Century City Station beneath Santa Monica Boulevard
- Constellation North—extends west from the Wilshire/Rodeo Station on Wilshire Boulevard to Lasky Drive, where it turns southwest to connect to the Century City Station beneath Constellation Boulevard



- Constellation South—extends west from the Wilshire/Rodeo Station on Wilshire Boulevard to Bedford Drive, where it turns southwest to connect to the Century City Station beneath Constellation Boulevard

During the public comment period on the Draft EIS/EIR, a significant volume of comments was received regarding the location of the alignment between the Wilshire/Rodeo and Century City Stations and regarding the Century City Station. Those comments in support of one station location generally expressed strong opposition to the other station location, with those in favor of a station beneath Santa Monica Boulevard opposed to a station beneath Constellation Boulevard, and those in favor of Constellation Boulevard opposed to the Santa Monica Boulevard location. The Santa Monica Boulevard location has been strongly supported by the City of Beverly Hills and the Beverly Hills Unified School District. The Century City Constellation Station was supported by the majority of commenters in meetings held outside Beverly Hills. It was, however, strongly opposed by some in Beverly Hills because the alignments between Beverly Hills and Century City (Constellation North and Constellation South) would need to pass beneath property in Southwest Beverly Hills including Beverly Hills High School. The public comments on the Draft EIS/EIR specifically on the location of the Century City Station focused on three main issues: (1) connectivity to activity centers, (2) the Metro decision-making process on where to locate the Century City Station, and (3) the safety of tunneling underneath Beverly Hills High School.

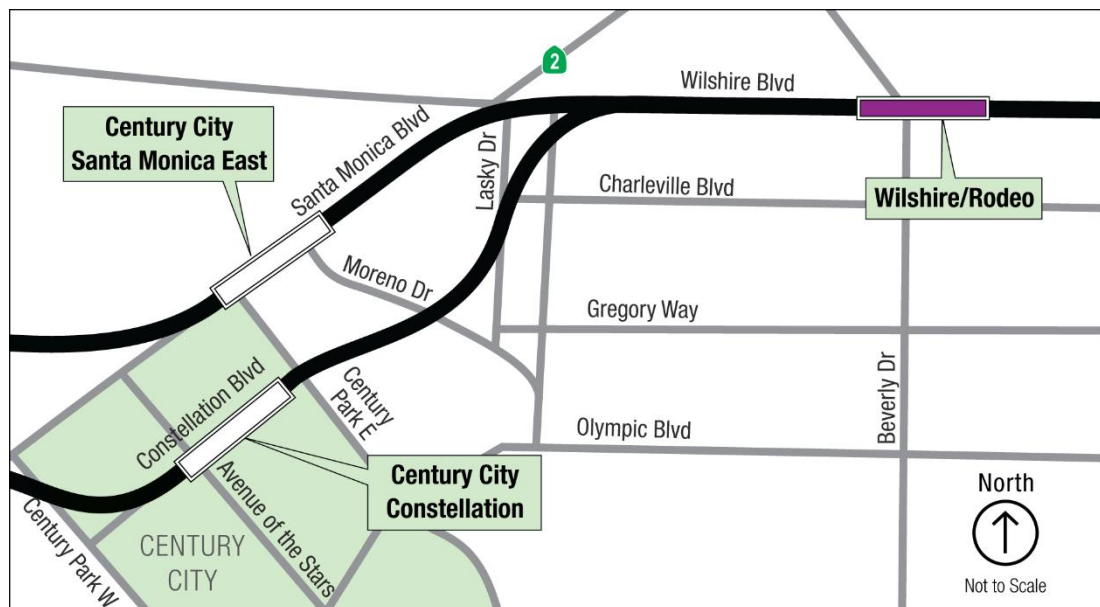
Many commenters expressed concerns about safety-related issues in regard to tunneling, especially in areas where tunnels would be located beneath homes and schools, such as between the Wilshire/Rodeo and Century City Stations. The issues raised included concerns related to seismic safety (specifically related to the Santa Monica Fault), methane gas, abandoned oil wells, subsidence, and liquefaction. The commenters voiced concern about subsurface hazards during both construction and operation of the subway. Numerous comments focused on the Santa Monica Fault, with some questioning the level of information provided about the Santa Monica Fault and why the available information related to the fault was incomplete at the time of publication of the Draft EIS/EIR. Some also suggested that since the Santa Monica Fault is located in Century City, both Century City Station locations would be affected equally by the fault in the event of an earthquake. The public comments on the Draft EIS/EIR, as well as responses to the comments, were published in the Final EIS/EIR.

To address the concerns raised by the community, the Metro Board of Directors decided to continue to discuss both station locations in Century City (Santa Monica Boulevard and Constellation Boulevard) as part of the LPA analysis in the Final EIS/EIR. Specifically, the Metro Board of Directors directed that further discussion of the Century City Station options be included in the Final EIS/EIR to address the concerns raised by the public, the majority of which related to the safety of tunneling directly on a fault (for the Santa Monica Boulevard Alignment) and the safety of tunneling under homes and schools (for the Constellation North and South Alignments).

Of the two alignments that serve the Constellation Station, the Constellation North Alignment was selected by the Metro Board of Directors for further discussion as part of the LPA. The Constellation North Alignment would pass beneath four residential properties

while the Constellation South Alignment would pass beneath 23 residential properties. Both the Constellation North and South Alignments would have similar initial costs. The Santa Monica Boulevard Alignment that follows Wilshire Boulevard and Santa Monica Boulevard was also recommended to be carried forward for further study as part of the LPA so that a route serving the station on Santa Monica Boulevard would also be analyzed. As explained in the Final EIS/EIR, the location of the station on the Santa Monica Boulevard Alignment would present adverse environmental effects and safety issues that cannot be reasonably mitigated because of its location in relation to the Santa Monica Fault.

As directed by the Metro Board, the Final EIS/EIR presented further analysis of the Century City Santa Monica Station and the Century City Constellation Station, as well as the connecting alignments (Figure 2-5). Supplemental geotechnical investigations along Santa Monica Boulevard were conducted as part of the preparation for the Final EIS/EIR to better identify the location of the fault and the safest location for the Century City Station.



**Figure 2-5. Century City Station and Alignment Locations in Final EIS/EIR**

During preparation of the Final EIS/EIR, the location for the Century City Santa Monica station box was refined from the Draft EIS/EIR to attempt to avoid locating the station box within the Santa Monica Fault. As a result, in the Final EIS/EIR, the Century City Santa Monica Station was relocated to the east of the location identified in the Draft EIS/EIR. However, this alternative did not avoid the fault completely and therefore did not reduce the fault hazards, as described in Section 4.8 of the Final EIS/EIR and Section 4.3 of this Draft SEIS. In the Final EIS/EIR, the Century City Constellation Station was analyzed in the same location as identified in the Draft EIS/EIR.

In May 2012, the Metro Board of Directors adopted the Project and selected the location of the Century City Constellation Station, incorporating it in the LPA. Its decision considered the analysis of seismic and geotechnical testing and refined seismic analysis conducted in Century City and presented in the Final EIS/EIR. These conclusions were

supported by the *Westside Subway Extension Century City Area Fault Investigation Report* (Metro 2011c).

The Final EIS/EIR concluded that the location of the Century City Santa Monica Station at Century Park East was located in the West Beverly Hills Lineament/Newport-Inglewood fault zone at the intersection of Santa Monica Boulevard at about South Moreno Drive. Subway stations, because they are structures for human occupancy, should not be built within active fault/deformation zones due to the regulatory code and the difficulty of designing such structures to withstand the potential ground rupture and associated deformations. Thus, the Century City Santa Monica Station was not considered a viable option for the Century City Station.

The *Westside Subway Extension Century City Area Fault Investigation Report* (Metro 2011c) also concluded that there was no evidence of seismic faulting at the proposed Century City Constellation Station. The Final EIS/EIR concluded that tunnels approaching either Century City station location would necessarily cross the Santa Monica and potentially the Newport-Inglewood Faults. In accordance with the Metro Rail Design Criteria, the tunnels can be designed to accommodate rupture (not collapse) for the fault crossings because of the inherent strength in a circular buried tunnel structure. They will be designed to have the ability to accommodate the design fault rupture with engineering design strategies such as steel liners, multiple liners, oversized tunnels, or other design strategies. The faulting hazards are detailed in Section 4.8 of the Final EIS/EIR and Section 4.3 of this Draft SEIS.

A station on Constellation Boulevard not only would avoid building a station in a fault zone but also would be more centrally located within Century City. Even with a slightly longer alignment and slight increase in travel time when compared to the Century City Santa Monica Station, the Metro Travel Demand Model, which was run during preparation of the Final EIS/EIR, predicted more than 3,000 additional daily boardings at the Century City Constellation Station compared to the Century City Santa Monica Station in the Final EIS/EIR. The results of the Metro Travel Demand Model are documented in the *Westside Subway Extension Technical Report Summarizing the Results of the Forecasted Alternatives* (Metro 2012j), which is appended to this Draft SEIS in Appendix C.

To further assess the ridership projections at Century City, Metro conducted a *Century City TOD and Walk Access Study* (Metro 2012i), which is appended to this Draft SEIS as Appendix C. The report evaluated the relative accessibility of three potential station locations to surrounding commercial and residential development within a ½-mile walking distance and estimated the number of Westside Purple Line Extension riders who would walk to and from the stations. This analysis is a supplement to the Metro travel forecasts that were conducted for the two Century City Station options in the Final EIS/EIR.

A review of the literature on walking to transit was conducted to establish best practice in regard to walking and transit. The review shows that walking rates decline significantly as distance increases from the station. The overall proportion of transit riders walking to transit is greatest within ¼-mile or less of a station, typically declining

by 50% between ¼ and ½ -mile, and becoming insignificant beyond ½-mile. Importantly for a major employment center such as Century City, this “distance decay” effect is more pronounced for work trips. The study considered potential pedestrian “walksheds” from the station portals using actual walking distances of 0 to 600 feet, 600 feet to ¼-mile, and ¼-mile to ½-mile.

Table 2-2 summarizes the estimated population and jobs for the walksheds around the Century City Santa Monica East and Century City Constellation stations. Based on existing development, the Constellation Station has approximately twice the number of jobs and residents within the critical 600-foot and ¼-mile walksheds as the Santa Monica Boulevard station location. Within those 600-foot and ¼-mile walksheds, the existing population for the Constellation Station is 20,380 jobs and residents, far larger than the 10,490 for the Santa Monica/Century Park East Station.

**Table 2-2. Century City Station Walkshed Population and Jobs**

	Century City Santa Monica East		Century City Constellation	
	Population	Total Jobs	Population	Total Jobs
<b>Walkshed Population and Jobs – Existing Development</b>				
0 to 600 feet	0	4,820	0	10,260
600 feet to ¼ mile	180	5,490	210	9,910
¼ to ½ mile	1,720	16,980	1,800	10,870
Total	1,900	27,290	2,010	31,040
<b>Walkshed Population and Jobs – Full Development</b>				
0 to 600 feet	0	8,070	0	13,670
600 feet to ¼ mile	180	5,490	820	23,140
¼ to ½ mile	2,310	32,640	7,190	13,160
Total	2,490	46,200	8,010	49,970
<b>Estimate of Ridership</b>				
Existing Development	5,258		7,606	
Full Development	5,492		8,566	

Source: *Century City TOD and Walk Access Study* (Metro 2012i)

The population and jobs estimates under the full development scenario were developed based on current plans and zoning. It was assumed that full development would be 85 percent of the maximum density allowed, a commercial occupancy rate of 90 percent is representative of normal economic conditions, and the average leasable floor area per employee should be 410 square feet. Based on this build-out scenario, the Constellation Station is also expected to have by far the highest concentration of future jobs and residents within the critical 600-foot and ¼-mile walksheds. Within those 600-foot and ¼-mile walksheds, the future population for the Constellation Station is estimated to be 37,630 jobs and residents, far more than the 13,740 for the Santa Monica/Century Park East Station.

Ridership estimates were calculated based upon the watershed population estimates and the major findings coming from the literature review. The Century City Station locations performed differently with respect to the number of employees and residents who will walk to and from transit. Applying the ridership rates calibrated by distance provides the most reasonable approximation of how the alternative station locations are likely to perform. Because of distance decay, the proportion of the population likely to use transit declines as distance from the station increases. As shown in Table 2-2, the 14,005 daily riders estimated in the sensitivity analysis for the Constellation Station is approximately 72 percent greater than the 8,145 daily riders estimated at the Santa Monica/Century Park East Station.

The *Century City TOD and Walk Access Study* concluded that the Century City Constellation Station is, and will continue to be, in the most advantageous location for attracting the most riders compared to the station locations along Santa Monica Boulevard. The Constellation Station has the best pedestrian environment, is expected to attract the most transit riders, and is centrally located to help shape the redevelopment of Century City as an important transit-oriented destination.

At the time of the Final EIS/EIR, the cost of the track and station for the Century City Constellation Station was not significantly different from that of the Century City Santa Monica Station. The Century City Santa Monica Station could require more temporary construction easements and right-of-way acquisitions for station construction sites than the Century City Constellation Station depending on the location of construction staging. However, the Century City Santa Monica Station would require fewer subsurface easements than the Century City Constellation Station. In addition, both station options would require temporary roadway lane closures during construction. Currently, Constellation Boulevard carries 20 percent of the traffic volume of Santa Monica Boulevard and operates at a better level-of-service. Therefore, traffic impacts during construction would be less with the Constellation Boulevard Station option.

Considering these factors, in May 2012 the Metro Board of Directors adopted the Century City Constellation Station and associated alignment as part of the LPA definition. Following adoption of the LPA, the tunnel alignment between Wilshire/Rodeo and Century City Constellation has been slightly refined from the Final EIS/EIR to optimize design curves as described in Section 2.4.1 below.

### **Other Wilshire/Rodeo to Century City Alignment Alternatives Considered**

As part of the Section 4(f) analysis conducted in response to the Final Decision, a range of avoidance alternatives and least overall harm alternatives were considered between the Wilshire/Rodeo and Century City Stations as detailed in Chapter 5 of this Draft SEIS. The Project was determined to have the least overall harm compared to other feasible alternatives when considering mitigation of impacts to, relative severity of harm to, relative significance of, and views of officials with jurisdiction over Section 4(f) properties as well as the degree to which each alternative meets purpose and need, magnitude of impacts to resources not protected by Section 4(f), and substantial differences in cost; therefore, they are not considered further in this Draft SEIS. Figure 2-6 shows the location of all of the feasible avoidance and least overall harm alternatives considered. Refer to Chapter 5 of this Draft SEIS for a detailed analysis of these alternatives.

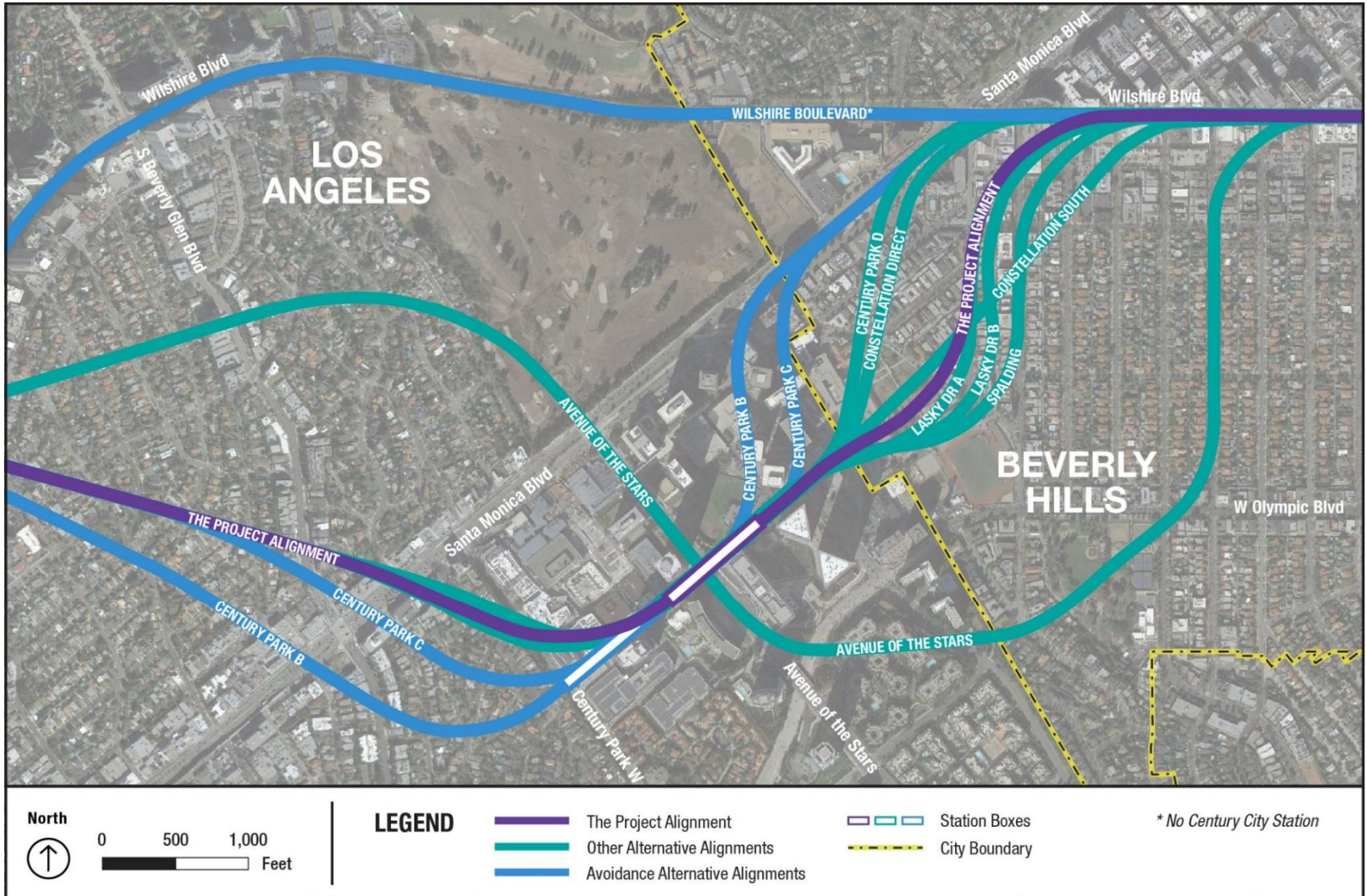


Figure 2-6. Other Feasible Wilshire/Rodeo to Century City Alignment Alternatives Considered

Three feasible avoidance alternatives were identified – Wilshire Boulevard, Century Park B, and Century Park C (Figure 2-6). Wilshire Boulevard was determined to be not prudent because of failure to address purpose and need by not serving Century City and the greater social, economic, environmental community impacts due to the construction staging location along Santa Monica Boulevard. Century Park B and Century Park C were determined to be not prudent because of increase travel time, increased building damage risk, increased displacements, increased cost, and delayed construction schedule. In addition, Century Park C would pose a substantial public and worker safety risk associated with potential rupture or damage to the Stone-Hollywood trunk water line. Therefore, none of the alternatives were determined to be a feasible and prudent alternative that would have no use of Section 4(f) properties in the west Beverly Hills and Century City area and are not considered further in this Draft SEIS.

Because none of the avoidance alternatives evaluated would be feasible and prudent alternatives to the Project, a range of alternatives that would use land below one or more Section 4(f) properties in the west Beverly Hills and Century City area were then evaluated. Feasible least overall harm alternatives were identified, including alternative alignments identified after issue of the ROD – Century Park D, Constellation Direct, Lasky Drive A, Lasky Drive B, Spalding, Constellation South, and Avenue of the Stars (Figure 2-6).

Compared to the Project, the Century Park D Alternative would cross below BHHS Building B2, B3, and B4 and have a substantially greater cost. The Constellation Direct Alternative would cross below BHHS Building B2, tunnel under an additional Section 4(f) property (Perpetual Savings Bank) and would have increased travel time, residential subsurface easements, and cost relative to the Project. The Lasky Drive A Alternative would travel under the same existing Section 4(f)-protected features at BHHS as the Project as well as below the planned future swimming pool, would tunnel under an additional Section 4(f) property (Perpetual Savings Bank), and have increased travel time and cost relative to the Project. The Lasky Drive B Alternative would tunnel under the Swim-Gym as well as the future swimming pool and an additional Section 4(f) property (Perpetual Savings Bank) and would have increased travel time, residential subsurface easements, and cost relative to the Project. The Spalding Alternative would tunnel under an additional Section 4(f) property (Perpetual Savings Bank) and would have increased residential subsurface easements and cost relative to the Project. While the Constellation South Alternative would be less costly than the Project, it would require subsurface easements from more residential properties, tunnel under an additional Section 4(f) property (the Barn), and would cross below BHHS Building B2. The Avenue of the Stars Alternative would have substantial construction-phase impacts to Roxbury Memorial Park, a significant recreational resource, that are relatively more severe than the remaining harm of any other alternative to Section 4(f) properties. It would also have increased travel time, travel under Roxbury Memorial Park, require subsurface easements from substantially more residential properties, and have increased cost relative to the Project.

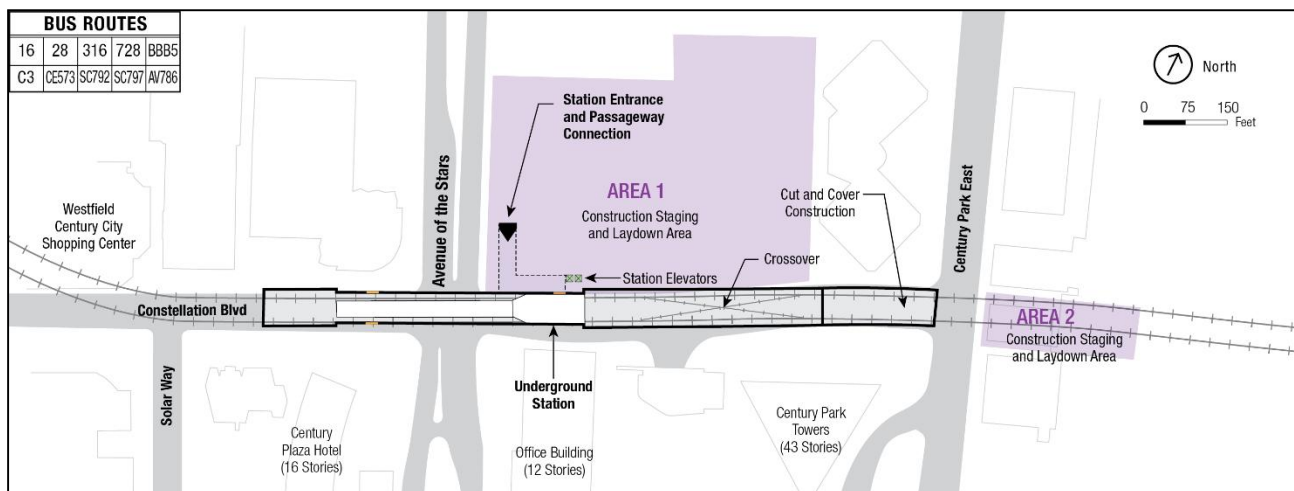
The Project would generate the least overall harm considering the degree to which the alternative meets the purpose and need, the magnitude of other adverse impacts, and substantial differences in costs among the alternatives as detailed in Chapter 5 of this Draft SEIS. Therefore, none of the least overall harm alternatives are considered further in this Draft SEIS.

### 2.3.2 Century City Station Construction Staging

As defined in the LPA and adopted by the Metro Board in May 2012, the Century City Constellation Station included the station entrance located at the northeast corner of Constellation Boulevard and Avenue of the Stars with the entrance oriented toward the north. The parcel surrounding the entrance site would have also served as a construction laydown area to support station and tunneling construction activities. Since then, the practical realities have required the consideration of a new laydown design. In particular, a proposed commercial development on the northeast corner of Constellation Boulevard and Avenue of the Stars would prevent the use of that property for construction staging for the Project as originally planned in the Final EIS/EIR. Therefore, the alternate laydown area plan identified in the Final EIS/EIR along with one additional area as described in this section is proposed.

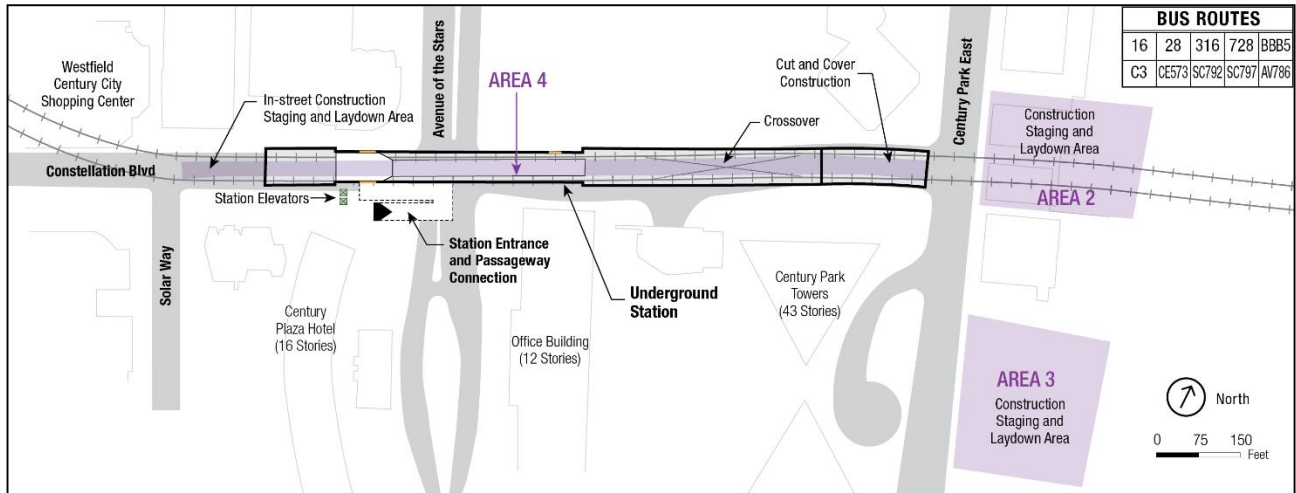
As described in Section 2.6.4 and shown in Figure 2-48, the Final EIS/EIR analyzed two construction staging and laydown areas for the Century City Constellation Station:

- Northeast of Constellation Boulevard and Avenue of the Stars (described here as Scenario A, Figure 2-7)
- Along the east side of Century Park East and within the Constellation Boulevard right-of-way (described here as Scenario B, Figure 2-8)



**Figure 2-7. Final EIS/EIR Century City Constellation Station Construction Staging Scenario A**



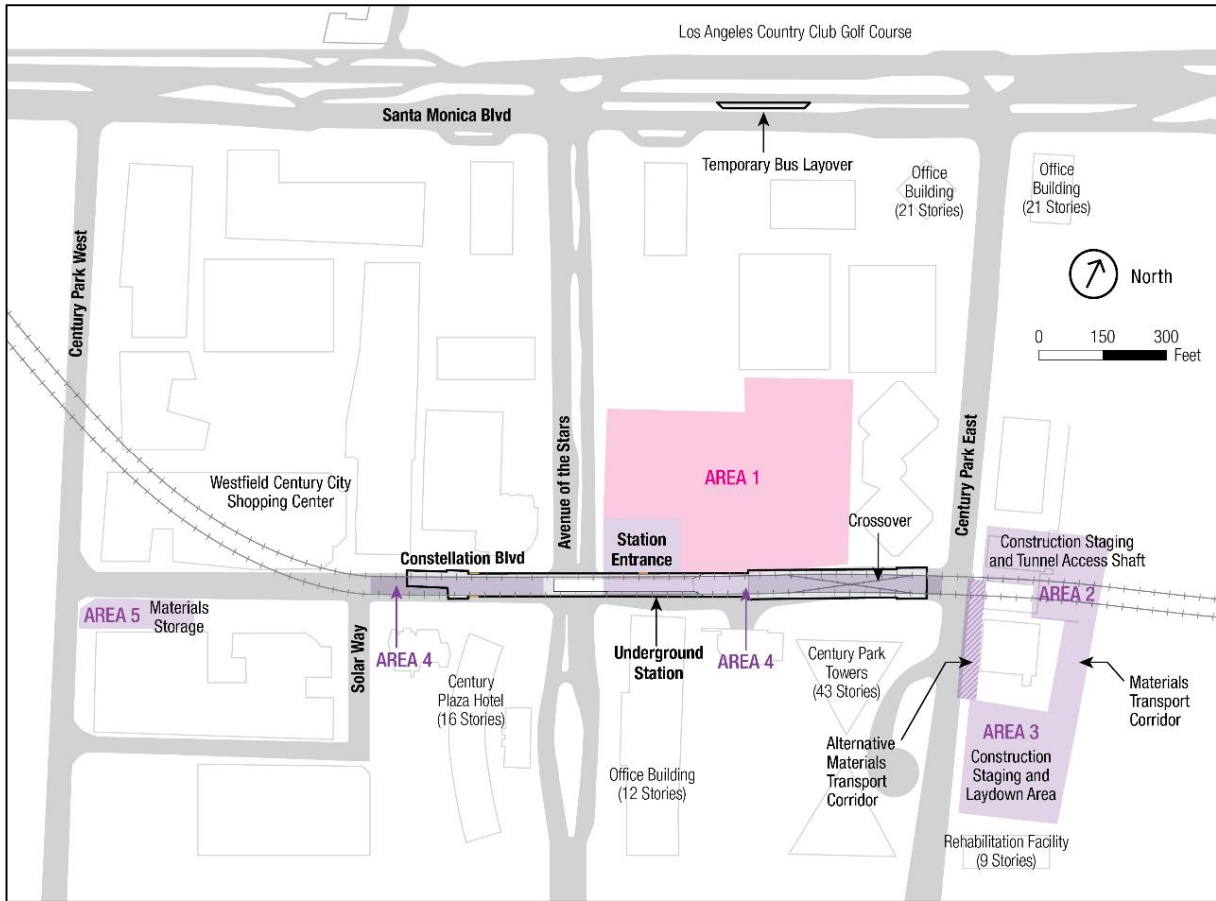


**Figure 2-8. Final EIS/EIR Century City Constellation Station Construction Staging Scenario B**

Scenario A included an approximately 5.5 acre construction staging area located north of Constellation Boulevard between Avenue of the Stars and Century Park East and another site located on the east side of Century Park East at Constellation Boulevard. These areas are identified as Area 1 and Area 2 in Figure 2-9. Area 1, in addition to being the location of the station entrance, would have served as the launch site for the tunnel boring machine (TBM) and the location for equipment storage needed to support operation of the TBM.

As described in Section 2.6.4 and shown in Figure 2-49 of the Final EIS/EIR, under Scenario B, the station entrance would have been located at the southwest corner of Constellation Boulevard and Avenue of the Stars near the Century Plaza Hotel. Construction staging areas would have been located along the east side of Century Park East at the eastern end of Constellation Boulevard and south of the Constellation Boulevard and Century Park East intersection. These areas are identified in Figure 2-9 as Area 2 and Area 3, respectively. Additionally, construction staging would have occurred in the Constellation Boulevard right-of-way from Century Park East to Solar Way, requiring the closure of the middle lanes of traffic for the duration of construction, leaving one westbound and one eastbound lane open.

Scenario A, as identified in the Final EIS/EIR, with the Century City Constellation Station entrance on the northeast corner and an approximately 5.5-acre construction staging and laydown area at the northeast corner of Constellation Boulevard and Avenue of the Stars (Area 1), was selected as part of the LPA by the Metro Board of Directors in May 2012. Because of a proposed development on the northeast corner of Constellation Boulevard and Avenue of the Stars (Area 1 in Figure 2-9), the construction staging area under Scenario A can no longer be used for the Project. Instead, a modified version of the staging areas identified in the Final EIS/EIR as part of Scenario B would be used, shown as Area 2, Area 3, Area 4, and Area 5 in Figure 2-9 and described in detail in Section 2.4.2 of this Draft SEIS.



**Figure 2-9. Century City Constellation Station Construction Staging Areas**

A temporary access shaft, approximately 80 feet in diameter, is needed to provide access to the tunnel for workers and materials and to remove excavated material from the tunnel.

During the initial closures for assembly and launch of the TBMs, the two TBM sub-assemblies would be delivered to the station box excavation on Constellation Boulevard rather than to Area 1 as indicated in the Final EIS/EIR, then lowered into the excavation and assembled, before making the initial drive east to the access shaft. This would require a nine-month full closure of approximately 200 feet of the eastern end of Constellation Boulevard between Century Park East and the first driveway on the north side of the street, which was not included in the Final EIS/EIR.

The station entrance would remain at the northeast corner of Constellation Boulevard and Avenue of the Stars as identified under Scenario A rather than the station entrance location identified as part of Scenario B. The duration of construction (approximately seven years) remains the same as described in the Final EIS/EIR.

### **Alternative Construction Approaches Considered**

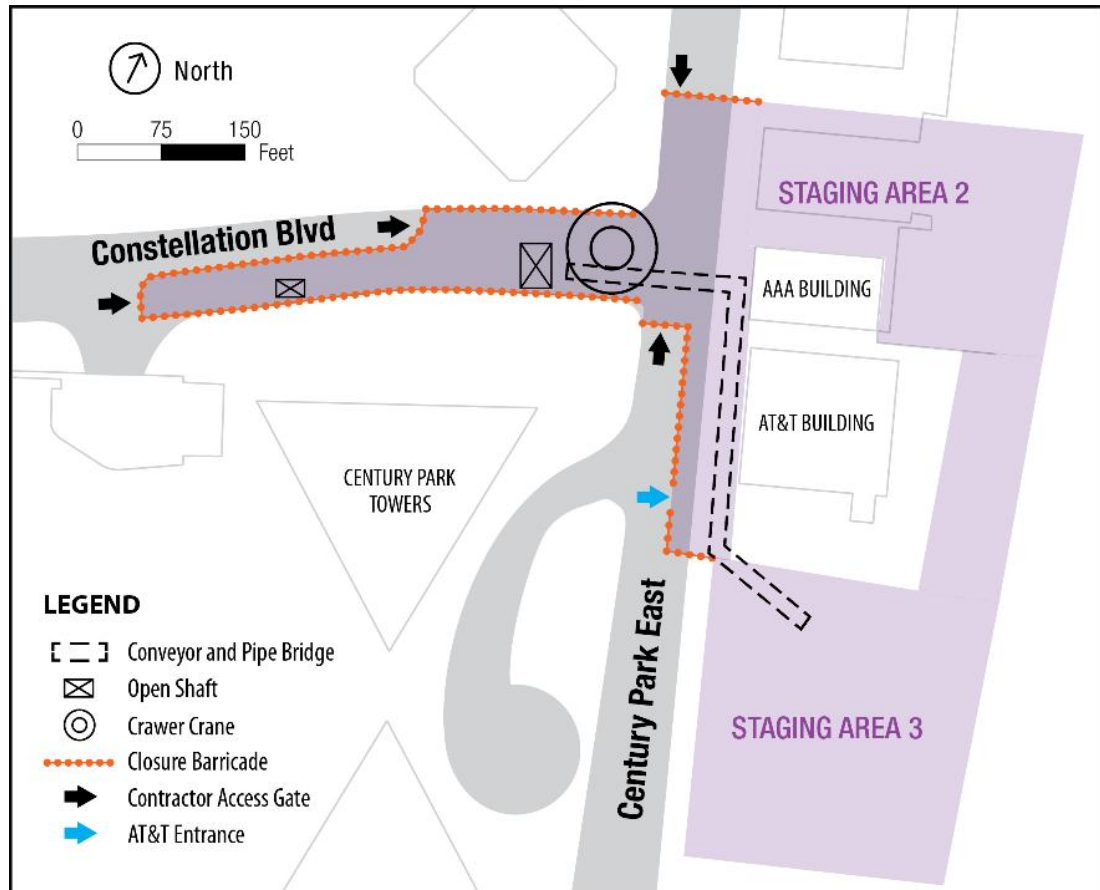
In response to concerns expressed by the City of Beverly Hills and the BHUSD on potential air quality impacts of the construction staging to BHHS, alternative construction approaches to constructing a tunnel access shaft at Area 2 (1950 Century Park East) were considered. Chapter 5 of this Draft SEIS provides further discussion of these alternate tunnel access shaft locations. Due to the physical constraints and environmental impacts associated with placing the access shaft at the alternative sites identified, they are not considered further in this Draft SEIS.

The tunnel access shaft was originally planned to be located in Area 1, adjacent to the tunnel, but since this property will be developed prior to construction, the access shaft can no longer be accommodated at Area 1. The tunnel access shaft also cannot be located in other parts of Area 2, in Area 3, or in Area 5 because the tunnel access shaft must be located on or immediately adjacent to the tunnel alignment. Area 5 is also not large enough to support tunneling activities (0.3 acres). Furthermore, Area 5 is isolated from the station box and the rest of the construction staging sites at Area 2 and Area 3, making it difficult to move materials back and forth efficiently. Area 5 is also adjacent to high-rise residential uses, which are too tall to be protected with a sound barrier during construction; therefore, the residences may have adverse noise impacts during construction.

### ***Access Shaft on Constellation/Century Park East***

Locating the tunnel access shaft at Area 4 (eastern end of the station box on Constellation Boulevard) would be above the tunnel, but would separate the access shaft in Area 4 from the materials storage and stockpile locations in Area 2 and 3 (Figure 2-10). The eastern end of Constellation Boulevard and a section of Century Park East would be closed to support tunneling activities and to allow for the transport of construction equipment and materials between Area 4 and Areas 2 and 3. This location would require long-term (between three and four years) closure of Constellation Boulevard and Century Park East and delay station completion because the eastern end of the station box would be used to move materials into and out of the tunnels. Pedestrian access would also be disrupted, requiring all pedestrians wishing to use Century Park East to detour around the construction area using Avenue of the Stars. The required roadway closures would be dependent on approvals from the Los Angeles Department of Transportation. Garage access would be maintained to surrounding buildings; however, access to garage entrances on Constellation Boulevard east of Avenue of the Stars would be limited to traffic entering from and exiting to Avenue of the Stars. Century Park East would be closed to through traffic requiring traffic to make U-turns when reaching the construction site closures. An overhead conveyor spanning Century Park East and the driveway entrance to the AT&T building would be required to connect the access shaft with Area 3.

In comparison to Area 4, locating the tunnel access shaft within Area 2 minimizes impacts to the community (particularly traffic impacts at Constellation Boulevard and Century Park East) and optimizes construction efficiency by locating the tunnel access shaft contiguous to the materials storage and stockpiles in Area 2 and with a connecting corridor to Area 3. The Area 2 location would not require street closures along Constellation Boulevard for tunneling activities after the initial closures for the assembly and launch of the TBMs, reducing disruption to Century City residents and visitors.



**Figure 2-10. Alternative Construction Staging Area for the Project within Constellation Boulevard (Area 4)**

#### ***Tunnel Boring Machine Launch Site at Wilshire/La Cienega Station***

In addition, relocating tunneling activities to the Wilshire/La Cienega Station was considered. However, the Wilshire/La Cienega Station is located on a densely developed corridor surrounded by residential neighborhoods, making it extremely challenging to assemble three acres of land to support tunneling activities.

To tunnel west from the Wilshire/La Cienega Station, a launch site would be needed that can connect directly to the tailtracks that are west of the station box to continue the tunnels west. The launch site must connect directly to the tunnels, either through a side shaft or through a shaft directly above the tunnels. The least-developed option for a staging site that meets the requirements for size and adjacency would be to acquire two blocks on the south side of Wilshire Boulevard between S. Stanley Drive and S. Willaman Drive. This construction approach would require demolition of several buildings, resulting in commercial and residential displacements, to assemble sufficient space for construction staging and tunneling support. The limitations at the Wilshire/La Cienega Station are detailed in Chapter 5 of this Draft SEIS.

### 2.3.3 Elimination of the Double Crossover at Wilshire/Rodeo Station

The Final EIS/EIR included a double crossover on the east end of the Wilshire/Rodeo Station to allow trains to cross between tunnels, thereby optimizing operations. In September 2014, the Metro Board approved eliminating the double crossover after an operational analysis was performed to verify that operational requirements of the project could be maintained without the double crossover. As a result, the station box shifted east from El Camino Drive to Canon Drive and now extends from Beverly Drive to Canon Drive, reducing the length of the station box and corresponding underground station excavation from approximately 1,150 feet to approximately 950 feet. The shortening of the underground station would result in lower construction costs and slightly reduced impacts to traffic and disruption to the surrounding streets and businesses due to a smaller construction footprint along Wilshire Boulevard, reduced time needed for station excavation, and fewer truck trips needed for hauling excavated material.

### 2.4 Alternative Considered in this SEIS

The alternative considered in this Draft SEIS is the LPA as identified in the ROD. Other alternatives considered under Section 4(f) are discussed in Chapter 5. The subject of this Draft SEIS is Section 2 of the Project with a focus on the portion extending from the Wilshire/Rodeo Station to the Century City Station. Specifically, this Draft SEIS focuses on the following Section 2 Project elements:

- The tunnel alignment beneath the Beverly Hills High School Campus
- The construction staging sites to support the Century City Constellation Station
- The Century City Station location

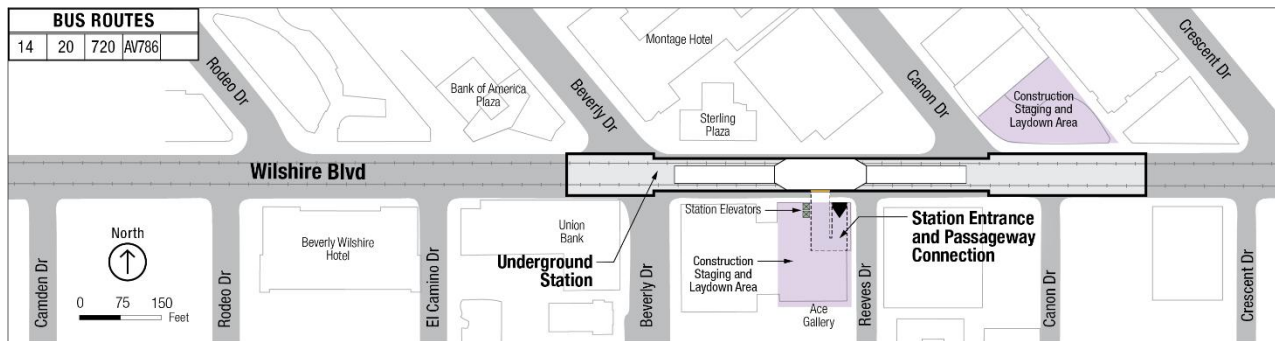
The project definition is consistent with that described in the Final EIS/EIR and approved as part of Section 2 by the Metro Board of Directors in May 2012, with the exception of adjustments to the construction staging sites to support the Century City Station.

#### 2.4.1 Tunnel Alignment and Stations

##### **Wilshire/Rodeo Station**

The Wilshire/Rodeo Station will serve the Beverly Hills “Golden Triangle,” a local and regional shopping destination and a hub for tourists visiting the famous Rodeo Drive, as well as shops, restaurants, and hotels along Wilshire Boulevard, Beverly Drive, and other streets. All of these activities make this area of Beverly Hills a major employment center.

The Wilshire/Rodeo Station would lie beneath Wilshire Boulevard, extending between Beverly Drive on the west and Canon Drive on the east (Figure 2-11). The station box was shortened to 950 feet as a result of the elimination of the double crossover structure. The station entrance would be located on the southwest corner of Wilshire Boulevard and Reeves Drive at the site of the former Ace Gallery. The site would also be used for construction staging and laydown following demolition of the Ace Gallery building. The entrance would be oriented to the north and would consist of two sets of stairs and escalators. The station elevators would be located to the north of the entrance on the same site. A knockout panel, allowing for the development of a future station entrance on the north side of Wilshire Boulevard, would be located on the north side of the station box.



**Figure 2-11. Wilshire/Rodeo Station**

In addition to the construction activity around the station entrance, approximately 1 acre of construction staging and laydown area would be needed at this site to support construction of the Wilshire/Rodeo Station. This station site would not support tunnel construction activities, such as the TBM launch or tunnel excavation. Construction staging areas would be located at the southwest corner of Wilshire Boulevard and Reeves Drive at the site of the former Ace Gallery and on the northeast corner of Wilshire Boulevard and Canon Drive. All existing structures on the properties identified for construction staging and laydown would be demolished to accommodate construction activities.

### **Wilshire/Rodeo to Century City Tunnel Alignment**

From the Wilshire/Rodeo Station, the alignment would travel westward toward Linden Drive, curve southwesterly at Linden Drive to Lasky Drive, and travel under Lasky Drive to just north of Young Drive where it would then pass beneath private properties and Beverly Hills High School to the east of the proposed station. The alignment would then turn southwesterly under Constellation Boulevard to connect to the Century City Constellation Station between Century Park East and Avenue of the Stars.

The tunnel alignment has been slightly refined from the Final EIS/EIR to optimize design curves. The alignment refinement results in the avoidance of tunneling beneath the Perpetual Savings Bank Building (9720 Wilshire Boulevard), but does require subsurface easements beneath two properties that were not identified in the Final EIS/EIR:

- 216 South Lasky Drive (AIN: 4328-007-016)
- 2029 Century Park East (AIN: 4319-016-029)

From station box to station box, the tunnel would be approximately 1.3 miles long. The tunnels would be approximately 21 feet in diameter bored side-by-side and would be separated by a pillar of ground between them. Subway train tracks would range from approximately 65 to 135 feet below the surface for the stretch between the Wilshire/Rodeo and Century City Stations. While the profile of the alignment also has been refined by a few feet, the depth remains within the range presented and analyzed in the Final EIS/EIR.

Refer to Figure 2-12 for a map of the proposed alignment and the locations of the Wilshire/Rodeo and Century City Constellation Stations. Figure 2-13 shows the depth of the tunnels (to track in feet) between the Wilshire/Rodeo and Century City Constellation Stations. The plan and profile for Section 2 of the Project is provided in Appendix G of this Draft SEIS.

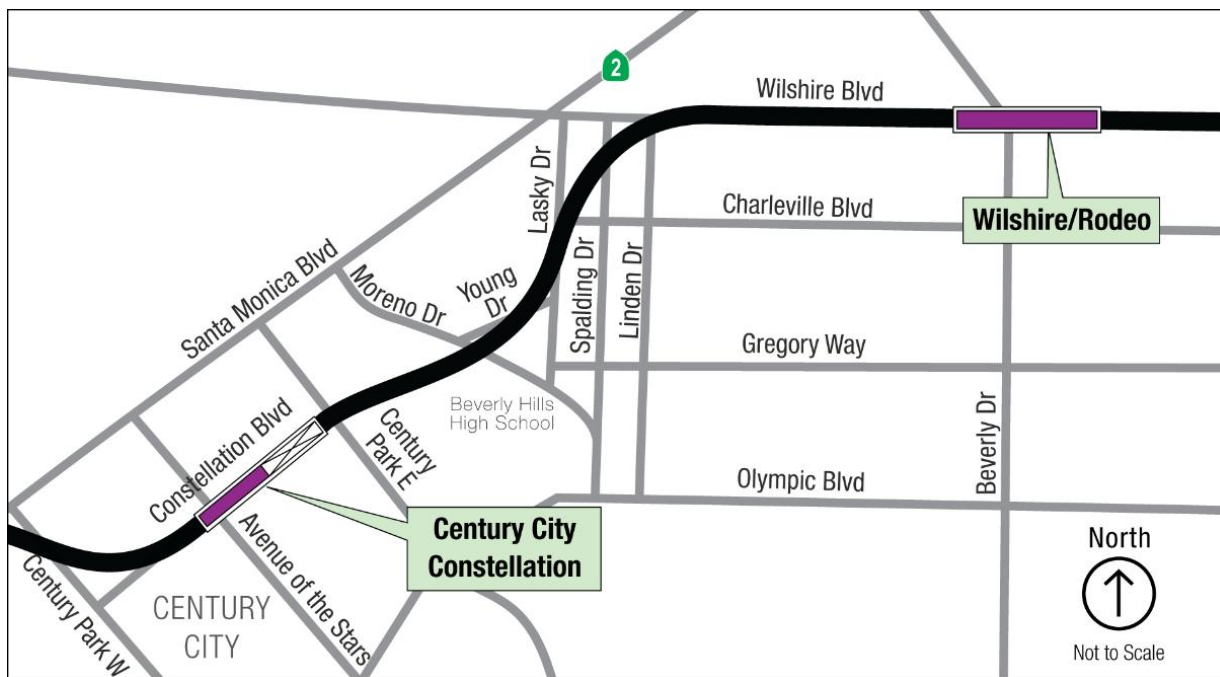


Figure 2-12. Westside Purple Line Extension between Wilshire/Rodeo and Century City Constellation Stations



Figure 2-13. Tunnel Depth to Track between Wilshire/Rodeo and Century City Constellation Stations

### Century City Constellation Station

The Century City Constellation Station would serve a high-density commercial, employment, and residential center. As approved by the Metro Board of Directors in May 2012, the Century City Constellation Station would be located underneath Constellation Boulevard from west of Avenue of the Stars to just west of Century Park East. The double crossover tracks would be located to the east of the station box between Avenue of the Stars and Century Park East.

The station entrance would be located on the northeast corner of Constellation Boulevard and Avenue of the Stars. The entrance would consist of two stairways, escalators, and two elevators. Knockout panels, which provide the opportunity to construct additional entrances in the future, would be located near the northwest and southwest corners of Constellation Boulevard and Avenue of the Stars.

The station entrance may be incorporated into future development to be constructed at this location. Metro would coordinate with the property developer regarding the station entrance so as not to preclude a future connection to the development. If development of the site has not yet begun when construction of the Century City Constellation Station begins, the station entrance would be designed as described in the Final EIS/EIR. Further, if the site is not developed at the start of the Century City Constellation Station construction, it is possible that a portion or all (0.25 to 5.5 acres) of Area 1 would be used for construction activities, as identified in the Final EIS/EIR.

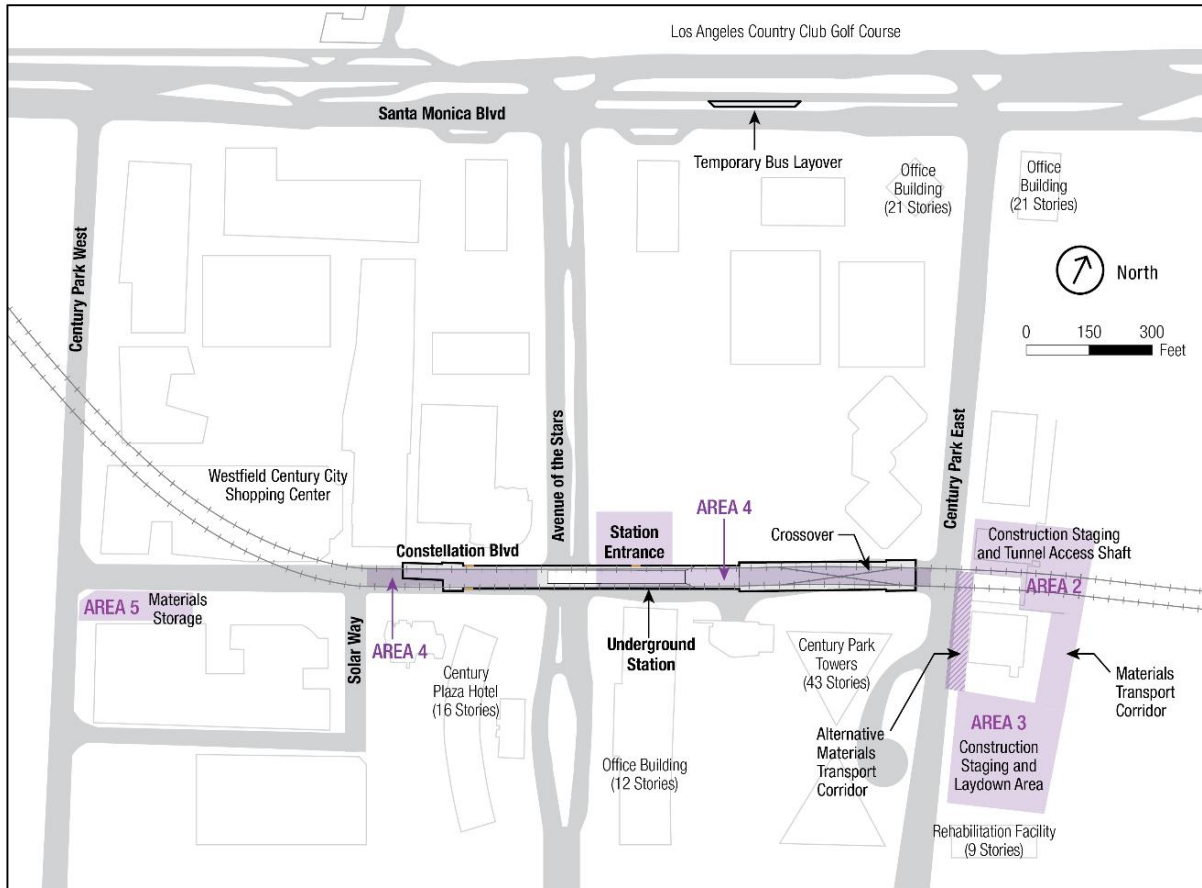
#### 2.4.2 Century City Constellation Station Construction Staging

As explained in Section 2.3.2 of this Draft SEIS, modifications have been made to the Century City Constellation Station construction staging areas due to a proposed development. This section provides a detailed description of these modified construction staging and activities planned for the Century City Constellation Station. A more detailed overview of construction activities is provided in Section 4.5 of this Draft SEIS.

In addition to supporting station construction activities, the Century City Constellation Station would serve as a launch site for TBMs and the location for the equipment needed to support tunneling operations. As a result, approximately 3 acres of construction staging and laydown area are needed at this station.

Figure 2-14 depicts the construction staging locations. The construction staging sites include two locations along Century Park East (Area 2 and Area 3) that require full acquisition of 1940 Century Park East, 1950 Century Park East, and 2040 Century Park East. The existing structure at 1940 Century Park East would be demolished to accommodate construction staging activities. The parking structure of 1950 Century Park East would also be demolished and the site would be used as a construction staging area, but the Automobile Club of Southern California (AAA) Building at 1950 Century Park East would remain intact. Area 2 and Area 3 would be used for the duration of construction, which would occur for approximately seven years to support tunneling and station construction activities. An access shaft would be located in Area 2 behind the AAA Building to allow excavated materials to be brought to the surface for disposal.





**Figure 2-14. Century City Station Construction Staging Sites**

Approximately 0.25 acre would be required for construction of the station entrance at the northeast corner of Constellation Boulevard and Avenue of the Stars. Lane closures would occur along Constellation Boulevard (Area 4) to support station box construction and the launch of the TBMs from the station box. A material storage area would be placed at the existing 0.3-acre bus layover site on the southeast corner of Century Park West and Constellation Boulevard (Area 5).

All construction staging areas would be surrounded by a 20-foot noise barrier wall, which would serve the dual purpose of mitigating noise as well as providing a security measure to prevent trespassers from accessing the construction sites. A typical noise barrier wall is shown in Figure 2-15.

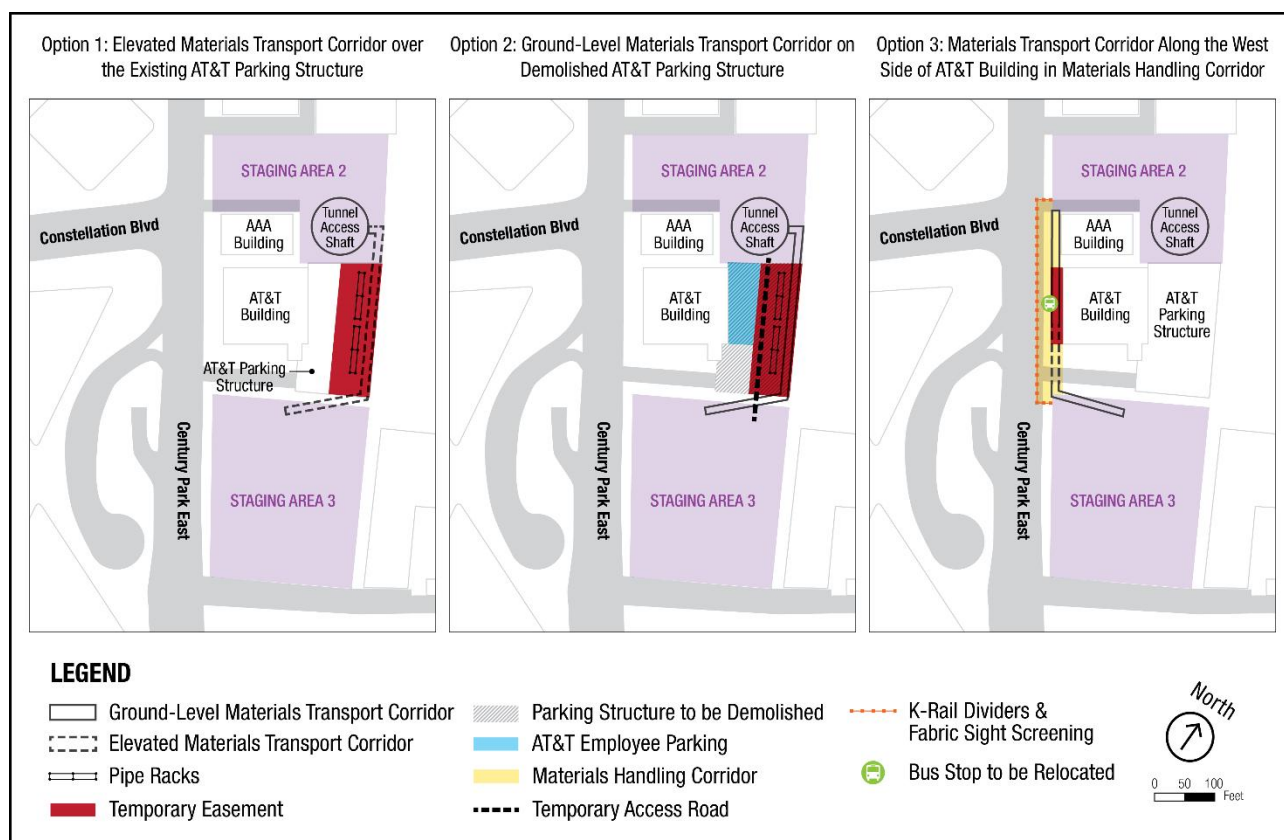


Figure 2-15. Typical 20-foot Noise Barrier at Construction Staging Areas

### Installation of Tunnel Access Shaft and Materials Transport Corridor (Area 2 and Area 3)

A temporary access shaft, approximately 80 feet in diameter, would be constructed in Area 2 to provide access to the tunnel for workers and materials and to remove excavated material from the tunnel. The placement of an access shaft in Area 2 was not included as part of the construction staging scenario presented in the Final EIS/EIR. The location of the access shaft is shown in Figure 2-16.

Work at the access shaft would include three phases: (1) construction of the shaft; (2) operations conducted through the shaft, including tunnel and cross-passage construction, concrete work within tunnels and cross-passages, and rail welding, track work, and systems installation; and (3) backfill of the shaft. The operations conducted through the shaft, which support tunneling activities, are anticipated to last between two and three years.



**Figure 2-16. Tunnel Access Shaft and Options for Materials Transport Corridor Locations**

Because Areas 2 and 3 are not adjacent, a materials transport corridor would be located along the AT&T property at 2010 Century Park East to move excavated materials and construction equipment between the tunnel access shaft in Area 2 and the staging area in Area 3. The excavated materials would be moved via an enclosed conveyor system located within the materials transport corridor (refer to Figure 2-17 for an example of a typical enclosed conveyor system). The materials transport corridor would be in place for five years to support tunnel and cross-passage construction, concrete work within tunnels and cross-passages, and rail welding, track work, and systems installation. The conveyor would operate for approximately three of those five years to move materials excavated from the tunnel and cross-passages. Should a slurry type TBM be used, the conveyance system would carry slurry feed and discharge pipes from the tunnel access shaft to a slurry separation plant in Area 3. There are three proposed location options for the materials transport corridor, with the final location to be determined after negotiations with the property owner and consideration of length and potential impacts. Option 1 and Option 2 provide the most direct connection between Areas 2 and 3 and avoid a lane closure along Century Park East.



**Figure 2-17. Typical Enclosed Conveyor**

#### ***Materials Transport Corridor Option 1***

The first option aligns the conveyor system from the access shaft in Area 2 and travels approximately 400 feet along the east side of the AT&T property at 2010 Century Park East to Area 3 (Option 1 in Figure 2-16). The conveyor would span the top of the existing parking structure located on the east side of the building. In addition to the conveyor, temporary pipe racks carrying utility lines, water, grout, foam, compressed air, etc. would be installed over the top of the parking structure. This option would require Metro to obtain a temporary easement for approximately five years along the eastern portion of the AT&T property.

#### ***Materials Transport Corridor Option 2***

The second option is also located along the east side of the AT&T building at 2010 Century Park East (Option 2 in Figure 2-16). With this option, the parking structure located at the AT&T property would be demolished. The parking structure is structurally unsound and only partially used. Due to structural safety issues, only a dozen spaces on the ground floor of the garage are currently used. Should AT&T agree to remove the parking structure, the enclosed conveyor system would be placed at ground level between Areas 2 and 3. Removal of the parking structure would also allow for additional area behind the AT&T building to be used for construction staging and laydown activities and for movement of materials and equipment on a temporary access road between Areas 2 and 3. In addition, the area immediately adjacent to the east side of the building would be available for use as parking for employees of the AT&T facility. Similar to the first option, this option would require Metro to obtain a temporary easement along the eastern portion of the AT&T property for approximately five years.

### **Materials Transport Corridor Option 3**

The third option would place the conveyor system along the west side of the AT&T building in a materials handling corridor (Option 3 in Figure 2-16). This option would require Metro to obtain a temporary easement along the narrow western edge of the AT&T property for approximately five years and would only be used if an easement along the east side of the AT&T building is not feasible. The corridor would extend from staging Area 2 to Area 3, a distance of approximately 400 feet, with a width encompassing one northbound traffic lane and sidewalk in the public right-of-way along the eastern side of Century Park East, and the space between the AT&T building and the eastern edge of the sidewalk. The corridor would be separated from traffic on Century Park East by K-Rail dividers and fencing with fabric sight screening. Materials handling equipment would travel on the closed street lane. The enclosed conveyor would be elevated such that traffic entering the AT&T facility could pass beneath the conveyor structure. Access to the AT&T building and its facilities would be maintained through the period of use, which is approximately five years. The materials handling corridor along Century Park East would require the temporary relocation of one bus stop serving the Metro 28 line and Los Angeles Department of Transportation Commuter Express line 534.

### **TBM Launch Box and Station Box Construction**

The TBM launch box and the Century City Constellation Station box would be constructed within Constellation Boulevard (Area 4 in Figure 2-14). In the Final EIS/EIR, the TBMs would have been launched from the site on the northeast corner of Constellation Boulevard and Avenue of the Stars. However, since that site is no longer available, the TBMs would be launched from a TBM launch box located on the eastern end of the Century City Constellation Station box.

Phased lane closures consisting of sequenced partial and full street closures would be required on Constellation Boulevard to support the TBM launch box and station box construction activities. Constellation Boulevard is a minor four-lane east/west collector street traversing approximately 0.4 mile between Century Park West and Century Park East. It is classified as an Avenue II in the *City of Los Angeles Mobility Plan 2035* (LA 2016). Constellation Boulevard has two travel lanes in each direction with painted two-way left-turn lanes, primarily providing a means of access to the properties along its length.

During the installation of soldier piling for the TBM launch box, phased lane closures would occur on Constellation Boulevard over the course of two to four months. The decking of the TBM launch box would require full closure of a 200 foot segment of Constellation Boulevard for a period of approximately six weeks. During excavation of the TBM launch box, Constellation Boulevard will be partially closed for approximately five to six months.

Once excavated, TBMs and support equipment would be delivered and lowered into the TBM launch box, which will be located on the eastern end of the station box excavation on Constellation Boulevard. Cranes on Constellation Boulevard would also be used to assemble and launch the TBMs in the launch box excavation beneath the street. This would require a full closure of approximately 200 feet of the eastern end of Constellation

Boulevard between Century Park East and the first driveway on the north side of the street. The full closure of this short section of the noncontiguous Constellation Boulevard would be in place for approximately nine months but would not block any building or driveway entrances.

The excavation of the station box is consistent with the timeline presented in the Final EIS/EIR. During soldier pile installation for the station box, phased lane closures would take place on Constellation Boulevard. Following the soldier piling installation, a series of 22 consecutive 56-hour weekend closures would be needed to install decking spanning the full width of Constellation Boulevard. Once decking is installed, Constellation Boulevard would be closed except for one traffic lane in each direction for approximately four years for station excavation and construction. The street closures are detailed in Section 3.2 of this Draft SEIS.

### **Use of Existing Bus Layover Area for Construction Material Storage**

In addition to the Century Park East sites identified in the Final EIS/EIR, a material storage area would be placed at the existing 0.3-acre bus layover site on the southeast corner of Century Park West and Constellation Boulevard (refer to Area 5 in Figure 2-9). The bus layover was built by the property owner as a requirement of the *City of Los Angeles Century City North Specific Plan* (LA 1981). The layover area was dedicated by the Owner to the City of Los Angeles for use by municipal bus operators, including Metro. Metro has been operating out of the layover area since 2005. The property owner also uses the site for a fuel cell installation to generate electricity for the office tower at 10250 Constellation Boulevard. The fuel cell installation is located on the northwest corner of the property. Access to the fuel cell installation would be maintained during the entire time the site is used by Metro for construction-related purposes. There would be no ground-disturbing activity at the site other than for installation and removal of sound walls, and for removal and restoration of curbs and landscaping. Following construction of the station, the site would be returned to its current use as a layover facility for Metro buses. The site would be used for approximately seven years for trailer offices, storage of construction materials, and parking of construction equipment associated with station construction.

### **Temporary Bus Layover on Santa Monica Boulevard**

As a result of the use of the existing bus layover site (Area 5) for construction material storage, a new temporary bus layover would be constructed in the median of Santa Monica Boulevard between Avenue of the Stars and Century Park East (Figure 2-18). The layover would be approximately 500 feet long and 12 feet wide and provide parking for up to five buses. Restroom facilities for Metro bus operators also would be included. The layover zone would be located in the landscaped median between the eastbound lanes of Santa Monica Boulevard and a dedicated bus lane, and would be in use for approximately seven years. Following completion of the Century City Constellation Station, the area would be restored to its existing condition.

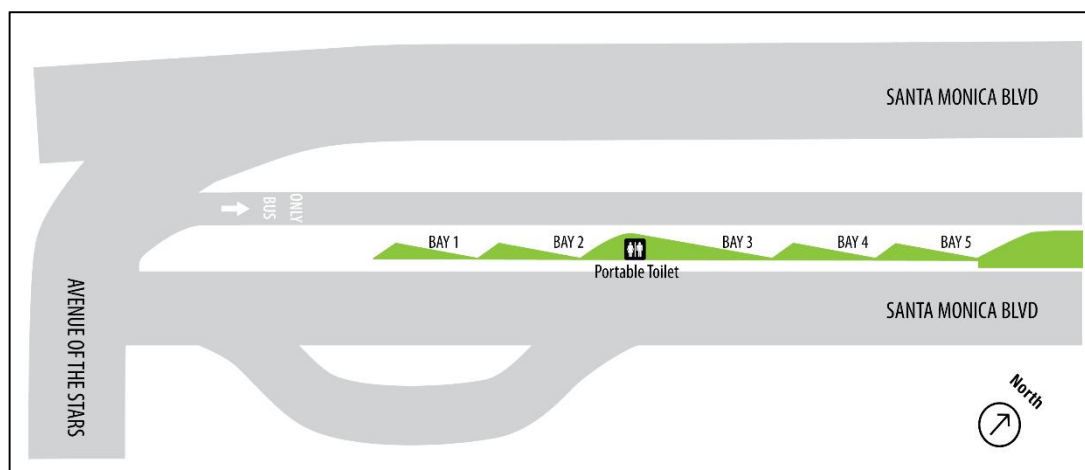


Figure 2-18. Temporary Santa Monica Boulevard Bus Layover Design

### Ventilation/Exhaust Structures into the Westfield Century City Property

Metro would require temporary and permanent easements into the Westfield Century City mall property (Westfield Mall) for the purpose of constructing ventilation ducts to service the subway. Metro is currently in discussions with the property owners regarding the placement of the station appendages (exhaust and vent shafts) within the Westfield Mall property.

## 2.5 Section 2 Construction Schedule

Figure 2-19 summarizes the construction schedule for Section 2 of the Project, which is consistent with the construction timeline presented in the Final EIS/EIR. Section 4.5 of this Draft SEIS provides a more detailed discussion of the construction methods.

Section 2 early construction activities began in late 2016 and are expected to last through 2019. These early construction activities include survey work, utility relocation, and preparation of staging areas, which includes real estate acquisition and demolition, fencing and securing the staging areas, and leveling and graveling the staging areas to control dust and water runoff.

Major construction activities could begin as early as January 2018 with piling for the station box. Work at the Wilshire/Rodeo and Century City Constellation Stations, from the commencement of temporary station shoring and street decking to the removal of street decking and street reinstatement, would take approximately seven years to complete.

Construction of the Century City Constellation Station would begin with the piling and excavation of the TBM launch box, which would be located within the eastern end of the station box. The piling and decking of the TBM launch box will take approximately three to five months, with excavation of the TBM launch box taking another five to six months. Once the TBM launch box is excavated, it would take approximately nine months to assemble and launch the TBM within Constellation Boulevard.



**Figure 2-19. Construction Schedule for Section 2**

In total, the station box piling and decking of the Wilshire/Rodeo and Century City Constellation Stations would last approximately 12 to 15 months and would consist of the installation of excavation support, installation of dewatering and instrumentation wells, removal of street pavement and subgrade, and installation of deck beams and precast concrete deck panels. Following the piling and decking, the station box excavation would extend for another year.

Once the TBMs are launched from the station box within Constellation Boulevard, they would tunnel eastward toward the Wilshire/La Cienega Station, which will be completed as part of Section 1. Tunneling of Section 2 is anticipated to extend from late 2019 through the end of 2020. Starting in mid-2020, excavation work would begin on cross-passages, tunnel inverts, and walkways, which would extend into 2022. This three-year period of tunneling and excavation activities would be the most intense construction period with excavated materials removed through the access shaft in Area 2, conveyed to Area 3, and removed via haul trucks. Other activities to support tunneling would include slurry pumping and delivery of segments and tunnel supplies via the access shaft in Area 2.

The station construction activities would last four to five years and would include forming and placing concrete station structures and installing architectural and mechanical elements. The system installation and facilities would begin in 2022 and last approximately two years and would consist of installation of the trackbed, rail, and third rail (traction power); conduits for systems installations; electrical substations; and communications and signaling. The station backfill and street restoration would begin in 2023 and would take approximately a year to complete.

Once construction activities are complete, system testing and pre-revenue operations would begin in late 2024 and last through early 2026. Section 2 revenue operations are anticipated to commence in 2026.