WESTSIDE SUBWAY EXTENSION PROJECT

Century City TOD and Walk Access Study

Metro

February 2012

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1.0 EXECUTIVE SUMMARY

1.1 Purpose

To assist Metro in analyzing station options in Century City, this report evaluates the relative accessibility of three potential station locations to surrounding commercial and residential development within a 1/2-mile walking distance. The report estimates the number of Westside Subway 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 Environmental Impact Assessment/Environmental Impact Report (EIS/EIR)—Century City Constellation (referred to in this report as Constellation/Avenue of the Stars or Constellation Station) and Century City Santa Monica (referred to in this report as Santa Monica Boulevard/Century Park East Station). A third station location on Santa Monica Boulevard at Avenue of the Stars (which is the Century City Santa Monica Station option previously evaluated in the Draft EIS/EIR) was added for this analysis, but a corresponding updated Metro travel forecast has not been prepared.

1.2 Key Findings

This analysis shows the Constellation/Avenue of the Stars Station is, and will continue to be, in the most advantageous location for attracting the most Westside Subway Extension riders compared to the station locations along Santa Monica Boulevard. The Constellation Station outperformed the Santa Monica/Century Park East and the Santa Monica/Avenue of the Stars Stations based all of the key indicators examined in the analysis. It has the best pedestrian environment, can be 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 on the Westside Subway Extension.

A review of literature on walking to transit was conducted to establish best practice in thinking about walking and transit. The review shows that proximity to transit has a bigger impact on ridership than the absolute total number of jobs and residents near transit. This is because as distance increases from the station, walking rates decline significantly. Importantly for a major employment center like Century City, this “distance decay” effect is more pronounced for work trips.

Based on existing development, the Constellation Station has approximately twice the number of jobs and residents within the critical 600-foot and 1/4-mile walksheds than the two Santa Monica Boulevard station locations. Within those 600-foot and 1/4-mile walksheds, the existing population for the Constellation Station is 20,380 jobs and residents, far greater than the 12,160 for the Santa Monica/Avenue of the Stars Station or 10,490 for the Santa Monica/Century Park East Station.

The Constellation Station is expected to have by far the highest concentration of future jobs and residents within the critical 600-foot and 1/4-mile walksheds, as well. Within those 600-foot and 1/4-mile walksheds, the future population for the Constellation station is estimated to be 37,630 jobs and residents, far greater than the 20,920 for the Santa Monica/Avenue of the Stars Station or 13,740 for the Santa Monica/Century Park East Station. As a consequence, the 14,005 riders estimated in the sensitivity analysis for the Constellation Station is approximately 72% greater than the Santa Monica/Century Park East Station and about 50% greater than the Santa Monica/Avenue of the Stars Station, which are expected to have approximately 8,145 and 9,359 riders respectively.

The illustrations in Figures 1-1 and 1-2 provide a comparison of how the station locations stack up against each other under existing and future development.

Under existing development, the Constellation Station has a combined total of approximately 20,380 people in the 0 to 1/4-mile walksheds. Constellation ranks at the top for the intensity of people within the 600-foot walkshed (604 people per acre). By comparison, the Santa Monica/Century Park East Station has 402 people per acre and the Santa Monica/Avenue of the Stars Station has 393 people per acre within the 600-foot walkshed. Constellation also ranks at the top for the intensity of people within the 600 foot to 1/4-mile walkshed, with 185 people per acre, compared to 121 people per acre for the Santa Monica/Century Park East Station and 102 people per acre for the Santa Monica/Avenue of the Stars Station.

Under full development, the Constellation Station is expected to have a combined total of 37,630 people in the 0 to 1/4-mile walksheds, by far the highest of the three stations. Constellation ranks at the top for the intensity of people within the 600-foot walkshed (804 people per acre) under full development. By comparison, the Santa Monica/Century Park East and Santa Monica/Avenue of the Stars Stations are expected to have 673 and 456 people per acre, respectively, within the 600-foot walkshed. Constellation also ranks at the top for the intensity of people within the 600 foot to 1/4-mile walkshed under full development, with 439 people per acre, compared to 155 people per acre for the Santa Monica/Century Park East Station and 287 people per acre for the Santa Monica/Avenue of the Stars Station.

Figure 1-1: Comparison of Century City Stations Full Development Intensity by Walkshed

Santa Monica/Century Park East

Constellation/Avenue of the Stars

Santa Monica/Avenue of the Stars

Figure 1-2: Comparison of Century City Stations Existing Development Intensity by Walkshed

Santa Monica/Century Park East

Constellation/Avenue of the Stars

Santa Monica/Avenue of the Stars

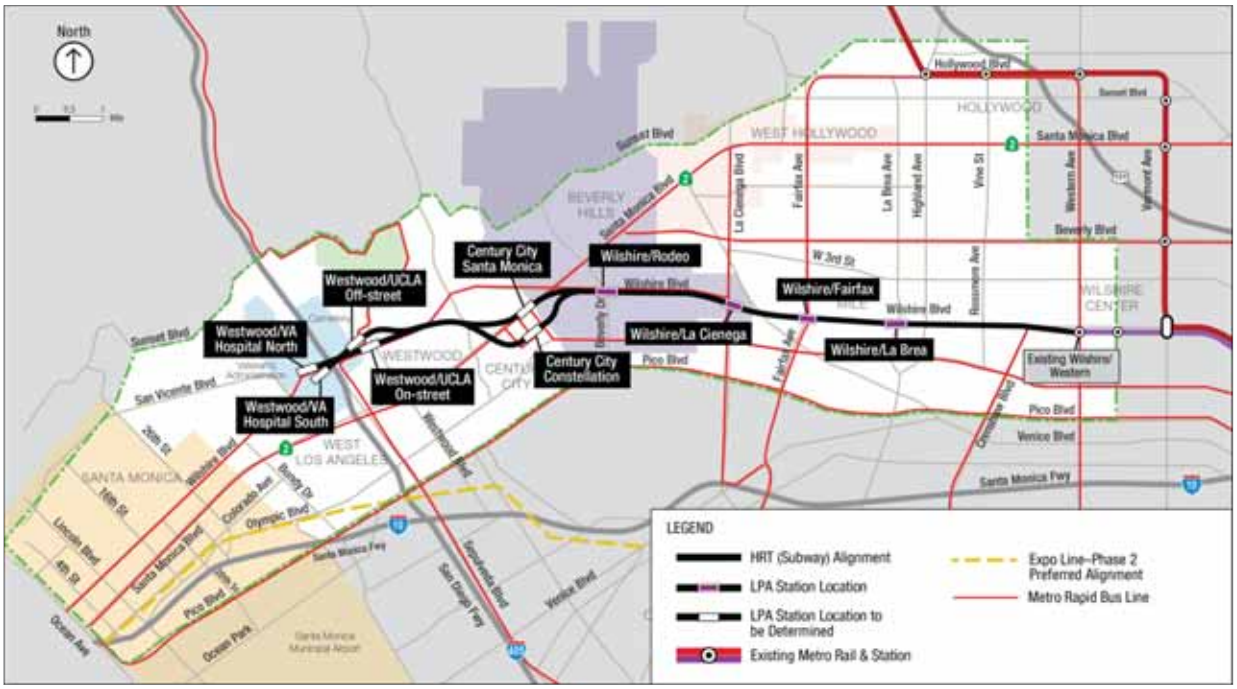
2.0 STUDY OVERVIEW

2.1 Purpose

Metro requested a supplemental evaluation regarding pedestrian access and ridership potential for the following three potential Westside Subway Extension station locations in Century City:

- Santa Monica Boulevard at Century Park East
- Constellation Boulevard at Avenue of the Stars
- Santa Monica Boulevard at Avenue of the Stars

Figure 2-1: Westside Station Locations



The purpose of this analysis is to better understand how the number of potential Westside Subway Extension riders may vary between the Century City Station options. Because transit riders typically do not walk more than 1/2 mile to and from transit, the analysis focused on "walksheds," which identified the areas that could be reached with the following walking distances to and from the alternative station locations:

- 0 to 600 feet
- 600 feet to 1/4 mile
- 1/4 mile to 1/2 mile

2.2 Analysis Summary

The evaluation of the three alternative station locations was conducted by:

- Fehr & Peers to identify "walksheds," which represent the areas that are within 600-foot, 1/4-mile, and 1/2-mile walking distances from the alternative station locations. The existing number of employees and residents was also calculated for each of these walkshed areas. See Appendix A for the complete report.
- Anne Vernez Moudon, Professor of Architecture, Landscape Architecture, University of Washington to conduct a literature review of walking behavior to and from transit and the factors that influence such behavior, along with an analysis of the walking environment surrounding each of the proposed station locations. See Appendix B for the complete report.
- Parsons Brinckerhoff to estimate the number of employees and residents within the station walksheds (identified by Fehr & Peers) assuming full development based upon current plans and zoning and to estimate potential Westside Subway Extension ridership for the three alternative station locations. See Appendix C for information about the calculations leading to the forecast employment and resident population for the station walksheds and Appendix D for estimated ridership calculations.

2.3 Methodology

The analysis methodology included the following steps:

1. **Station Walksheds**—Walkshed areas, based upon actual walking distances on existing public sidewalks, were identified for each of the three station locations.
2. **Existing Population**—The existing number of jobs and residents within the three walkshed areas (0 to 600 feet, 600 feet to 1/4 mile, and 1/4 mile to 1/2 mile) for each station were estimated by evaluating current development within the walksheds.
3. **Full Development Population**—Corresponding estimates of the future number of jobs and residents within the station walksheds, at full development, were also calculated based on existing plans, policies and development approvals.
4. **Walking Behavior Literature Review**—A variety of studies have evaluated the factors, which influence walking behavior to and from transit. These studies were reviewed for information relevant to the alternative Westside Subway Extension station locations.
5. **Walk Environment Evaluation**—Important characteristics of the walking environment, including accessibility, safety, and comfort, were used to assess the quality of the pedestrian experience in the vicinity of the three station locations.
6. **Ridership Estimates**—By applying the walking behavior information to the employee and resident populations within the 600-foot, 1/4-mile, and 1/2-mile walksheds for each station, estimated ridership figures for each station alternative were calculated.

2.4 Assumptions

The six-step methodology included a number of assumptions.

- Identify Station Walksheds. Buildings with entrances within a walkshed were included as part of the walkshed even when a portion of the building extended outside of the walkshed.
- Existing Population. The existing number of jobs were estimated using real estate data from Grubb & Ellis and by applying the following assumptions:
  - 90% occupancy of commercial buildings.
  - Leasable building floor area per employee of 350 square feet—office, 600 square feet—retail, 450 square feet—food service, and 2 rooms—hotel.
  - Residential population was based on 2000 U. S. Census data and the application of growth factors in the 2010 Census Estimates to derive a current residential population estimate.
- Full Development Population. The full development population was calculated based upon several assumptions:
  - Full development at 85% of the maximum density allowed by current plans and zoning.
  - Commercial occupancy of 90% was assumed along with an average leasable floor area of 410 square feet per employee (a blend of office and retail since the plans do not distinguish between the two).
  - 1.9 residents per single or multi-family household.
  - 1 household per single family residential parcel.

2.5 Key Findings

2.5.1 Distance Matters

The literature review reveals a consistent theme regarding walking behavior and transit ridership—distance is the key factor. Studies show that walking rates decline significantly as distance to transit increases (Table 2-1). This "distance decay" effect has also been found to be more pronounced for work–transit trips than for home-transit trips. Overall, the proportion of transit riders walking to transit is greatest within 1/4 network mile or less of a station, typically declining by one-half between 1/4 and 1/2 mile, and becoming insignificant beyond 1/2 mile. Based upon the literature review, Anne Moudon concludes it would be reasonable to assume that work-related walk trips to transit would be 20% within 600 feet, 10% between 600 feet and 1/4 mile, and 5% between 1/4 mile and 1/2 mile. The *2005 Development Related Ridership Survey,* conducted by the Washington Metropolitan Area Transit Authority (WMATA) for its heavy rail transit system, also reflects the research findings, but with a higher mode share for walking.

Table 2-1: Distance and Walk Mode Share

	Metrorail Walk Mode Share	
Walkshed	Office	Residential
At station	35%	54%
600 feet to 1/4 mile	23%	43%
1/4 to 1/2 mile	10%	31%

Source: WMATA, 2005 Development Related Ridership Survey of 13 Metro stations

2.5.2 Influence of the Walking Environment

The quality of the walking environment will also influence one's willingness to walk. As discussed in Appendix B, six characteristics including accessibility, usefulness, safety, comfort, sensory pleasure, and sense of belonging, all can affect walking rates. Anne Moudon evaluated how conducive the three station areas are for walking based on these characteristics. The walking environment for the Constellation/Avenue of the Stars Station was found to be the best of the three.

2.5.3 Population Density and Distribution

Although the employee and resident populations for the three stations are similar within the 1/2-mile walkshed, the Constellation/Avenue of the Stars station has a considerably higher population density within 1/4-mile of the station compared to the two stations on Santa Monica Boulevard, which have a higher percentage of the population between 1/4 mile and 1/2 mile from the stations.

2.5.4 Comparison of Alternative Station Locations

By applying the Moudon walk mode share recommendation and WMATA walk mode share results to the populations within the 600-foot, 1/4-mile, and 1/2-mile walksheds, estimates of the potential ridership were the highest for the Constellation/Avenue of the Stars station primarily because it has the greatest population development density within 1/4-mile of the station. The two stations on Santa Monica Boulevard have lower densities close to the station, in part because of the golf course on the north side of Santa Monica Boulevard.

2.5.5 Comparison to Travel Forecasting Results

As noted in Section 1.1, the forecast ridership analysis serves as a supplement to the Metro travel forecasts, which have been completed for the Constellation/Avenue of the Stars and Santa Monica Boulevard/Century Park East stations. The methodology followed in this study and the Metro travel forecast serve different purposes, rely on different data, and are not intended to yield the same results. However, a comparison between this study and the travel forecast does reveal a similar result regarding the relative desirability of the three station locations in terms of ridership. This study and the travel forecast share the same overall conclusion—the anticipated ridership will be the greatest at the Constellation/Avenue of the Stars station, followed by Santa Monica/Avenue of the Stars, and trailed by Santa Monica/Century Park East.

3.0 WALK ACCESS ANALYSIS

The purpose of the supplemental evaluation of three potential station locations for the Westside Subway Extension in Century City was to better understand the potential ridership for employees and residents near the following three alternative station locations:

- Santa Monica Boulevard at Century Park East
- Constellation Boulevard at Avenue of the Stars
- Santa Monica Boulevard at Avenue of the Stars

This report considers potential pedestrian "walksheds" from the station portals using actual walking distances of:

- 0 to 600 feet
- 600 feet to 1/4 mile
- 1/4 mile to 1/2 mile

The analysis compared the number of existing and future jobs and residents within the three walksheds for each station. A literature review was conducted to understand the effect of distance, walking environment, and other factors on walking rates. This information was then used to identify what would be a reasonable expectation for walking trips to and from the three potential station locations. An evaluation of employee and resident population and likely walking rates yielded an estimated number of potential Westside Subway Extension riders for each of the three stations.

4.0 METHODOLOGY

The analysis methodology included the following steps, which are described in more detail below:

- Identify station walksheds
- Existing population
- Full development population
- Walking behavior—literature review
- Walk environment evaluation
- Ridership estimates

4.1 Identify Station Walksheds

The "walksheds" showing areas within the 600-foot, 1/4-mile, and 1/2-mile walking distances from the stations are shown in the figures below. The walking distances were calculated following existing sidewalk routes (see Figure 4-1 through Figure 4-3). Detailed maps and descriptions of the walksheds are provided in Appendix A.

4.2 Existing Population

The employment and residential population for the 600-foot, 1/4-mile, and 1/2-mile walksheds was estimated (Table 4-1) (Fehr & Peers, Appendix A). The total number of jobs and residents were similar across all three of the station locations within the 1/2-mile walking distance. However, for the 600-foot and 1/4-mile walking distances, the Constellation/Avenue of the Stars location had approximately twice the number of jobs and residents compared to the two station locations on Santa Monica Boulevard.

4.3 Full Development Population

A corresponding estimate of future employment and residential population was created, which assumed full development consistent with current plans and zoning. Using the three walkshed areas developed by Fehr & Peers, the potential number of jobs and residents were estimated. For the purpose of this calculation, it was assumed that: full development should be 85% of the maximum density allowed, a commercial occupancy rate of 90% is representative of normal economic conditions, and the average leasable floor area per employee should be 410 square feet. Similar to the existing population analysis, the population within 1/2 mile is comparable for all stations, but again, the Constellation/Avenue of the Stars location is anticipated to have more than twice the number of jobs and residents within 1/4 mile compared to the Santa Monica/Century Park East station location and nearly double the number for the Santa Monica/Avenue of the Stars station location as summarized in Table 4-2. Supporting maps showing generalized plan designations for the cities of Los Angeles and Beverly Hills are provided on the following pages.

Figure 4-1: Santa Monica/Century Park East Station Walksheds and General Plan Designations

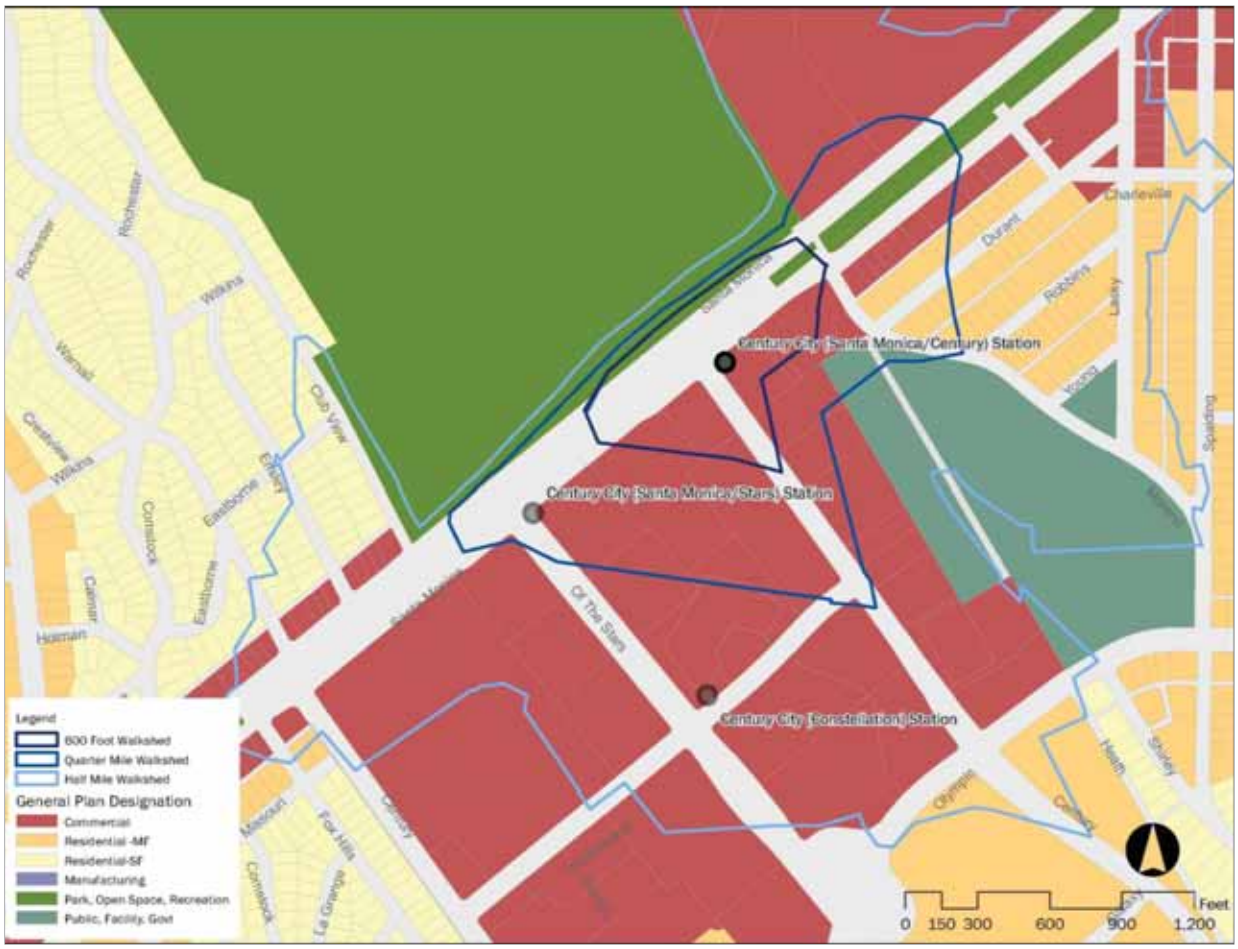


Figure 4-2: Constellation/Avenue of the Stars Station Walksheds and General Plan Designations

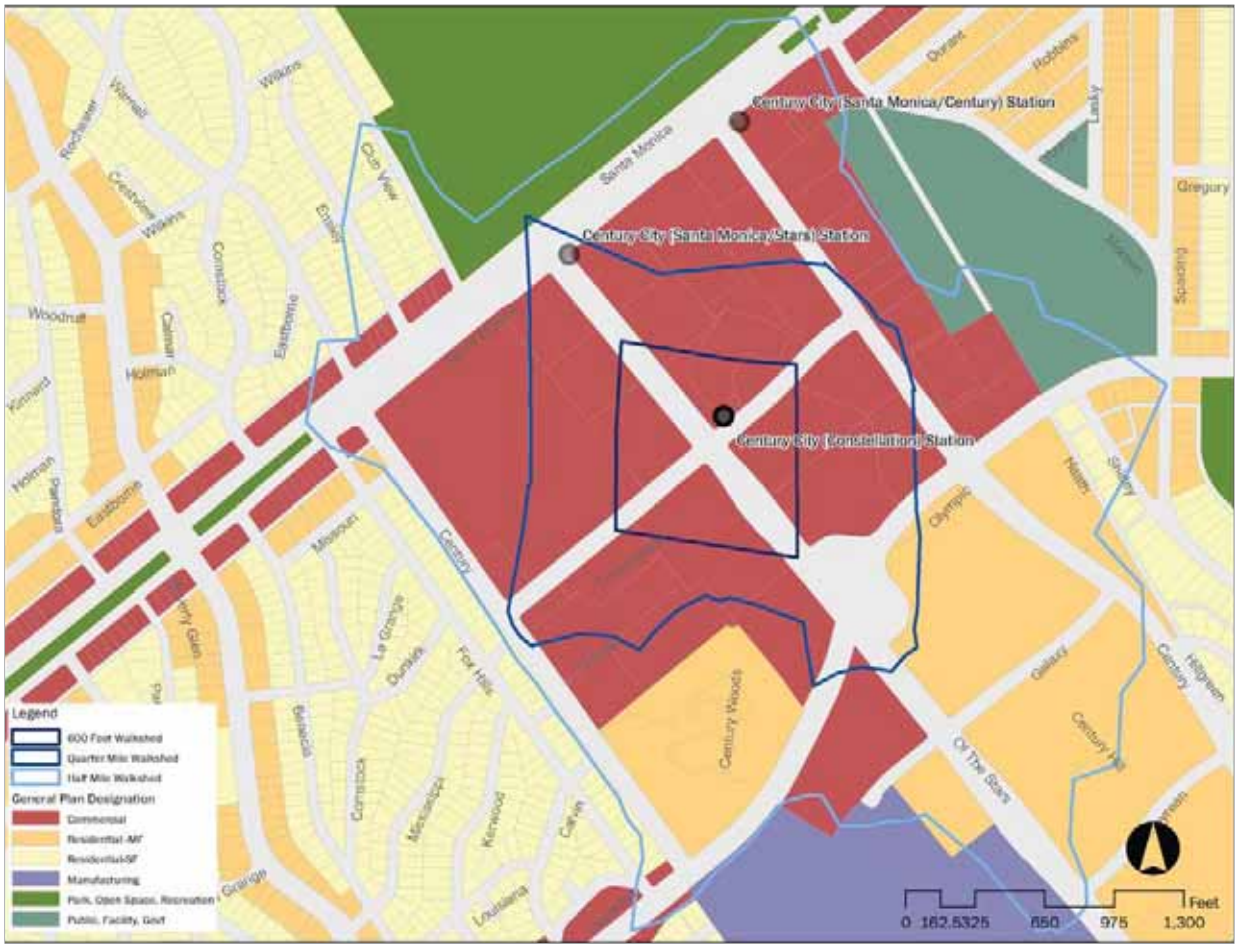


Figure 4-3: Santa Monica/Avenue of the Stars Station Walksheds and General Plan Designations

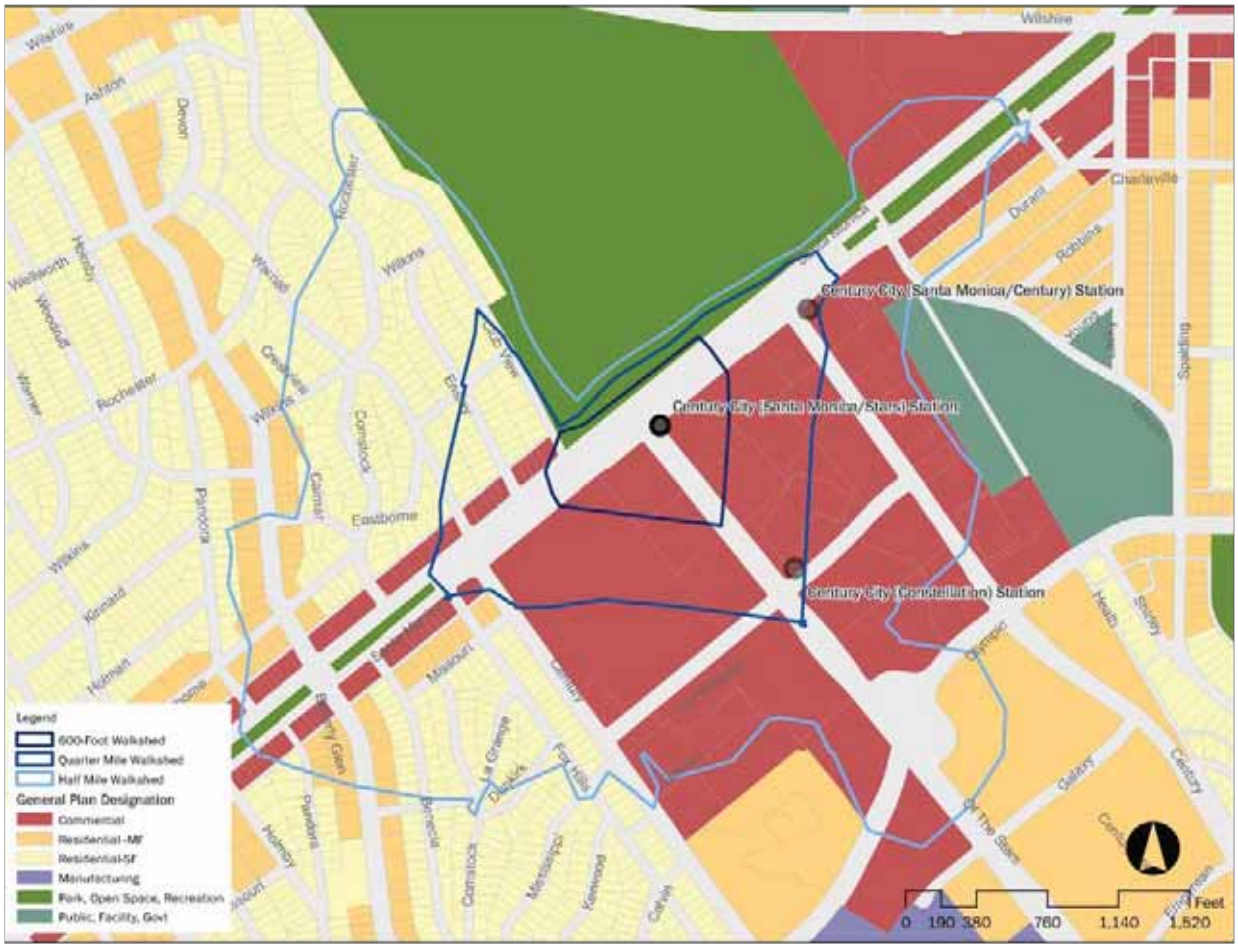


Table 4-1: Walkshed Population and Jobs—Existing Development

Walkshed	Santa Monica/ Century Park East Station		Constellation/ Avenue of the Stars Station		Santa Monica/ Avenue of the Stars Station	
	Population	Total Jobs	Population	Total Jobs	Population	Total Jobs
0 to 600 feet	0	4,820	0	10,260	0	5,900
600 feet to 1/4 Mile	180	5,490	210	9,910	110	6,150
1/4 to 1/2 Mile	1,720	16,980	1,800	10,870	1,830	16,820
Total	1,900	27,290	2,010	31,040	1,940	28,870

Source: Fehr & Peers, 2011; 2000 US Census; 2010 US Census Estimates; Grubb & Ellis/Costar, 2011

Table 4-2: Walkshed Population and Jobs—Full Development

Walkshed	Santa Monica/ Century Park East Station		Constellation/ Avenue of the Stars Station		Santa Monica/ Avenue of the Stars Station	
	Population	Total Jobs	Population	Total Jobs	Population	Total Jobs
0 to 600 feet	0	8,070	0	13,670	0	6,840
600 feet to 1/4 mile	180	5,490*	820	23,140	120	13,960
1/4 to 1/2 mile	2,310	32,640	7,190	13,160	2,420	29,520
Total	2,490	46,200	8,010	49,970	2,540	50,320

Sources: City of Los Angeles ZIMAS zoning information, 2011; Century City North Specific Plan, 1981; Century City South Specific Plan, 1993; and City of Beverly Hills General Plan, 2010
* The available data led to a forecast decline in employment in this walkshed. For the purpose of this report, existing employment (see Table 4-1) was assumed to remain constant into the future.

4.4 Walking Behavior—Literature Review

The findings from the literature review conducted by Anne Moudon (Appendix B) are presented below relating to distance, walk environment, and other factors that affect walking.

4.4.1 Walking Distance to Transit

Physical distance is the primary determinant of walking as the choice means of travel. In general, people select to walk to transit and other destinations only if they need to travel short distances. Median distances to rail transit range from a fifth to a half mile. These short distances are due to a strong distance decay effect on both (1) transit commute mode share and (2) walking as the access mode to transit. This strong inverse relationship exists at both the employment and the residential sides of the trip, although the effect in employment areas is generally stronger than the effect in residential areas. Overall, the proportion of transit riders walking to transit is greatest within 1/4 network miles or less of a station, typically declining by half between 1/4 and 1/2 miles, and becoming very small beyond 1/2 mile.

4.4.2 Walk Environment

The walk environment can greatly influence the decision to walk and the willingness to walk longer distances. Characteristics of the walk environment, which have this effect, can be structured into a hierarchy of needs that people consider when walking. If fulfilled, these needs will alter either the actual distances people walk or their perception of time and therefore distance, and their attitude toward and eventual decision to walk. These needs are: accessibility, usefulness, safety, comfort, sensory pleasure, and sense of belonging. The needs are described in the walk environment evaluation and in Appendix B. While this hierarchy was developed for walking in general, research on walking to transit confirms that people do in fact consider these features in their choice to walk to transit.

4.4.3 Other Walking Factors

Travel mode choice is dependent on other factors in addition to the built environment. These factors must be considered in conjunction with an assessment of the walk environment because they provide insight into who may be more likely to walk to transit. Those more likely to use transit tend to be women, people who do not own cars, people with less income, people that live in multifamily

dwellings, people with positive attitudes toward health and the environment, and employees at workplaces with transit-supportive policies.

4.5 Walk Environment Evaluation

4.5.1 Evaluation Framework and Summary Results

The framework used to evaluate the ability for each of the proposed station sites to support walk trips is based on pedestrian needs noted in Section 4.4.2 above. This needs framework consists of six levels necessary for a completely supportive walk environment: accessibility, usefulness, safety, comfort, sensory pleasure, and sense of belonging. For each of the levels, urban design theory and findings from research on walking to transit were used to develop criteria on which to grade each of the three transit stations. Stations sites were evaluated using a letter grade. The station grades are summarized in Table 4-3.

4.5.2 Santa Monica/Century Park East Station

The Santa Monica/Century Park East Station site received the lowest grades because it is least accessible to Century City jobs and the concentration of useful destinations at the Westfield Mall. It is only accessible via one thru-block pedestrian path and is adjacent to the poor pedestrian street environment along Santa Monica Boulevard characterized by heavy traffic volumes and a golf course on the north side. It benefited from its location on Century Park East, a street that, near the north end, offers a moderate level of safety, comfort, and sensory pleasure.

4.5.3 Santa Monica/Avenue of the Stars Station

The Santa Monica/Avenue of the Stars Station received slightly better grades compared to Century Park East. Although it is accessible by high-quality thru-block pedestrian paths and provides convenient access to utilitarian destinations in the Westfield Mall, it is not in a central location to Century City jobs. The pedestrian environment along Santa Monica Boulevard is essentially the same as the Santa Monica/Century Park East Station. Additionally, its street-level environment would leave pedestrians feeling exposed to traffic and criminal danger. Constellation/Avenue of the Stars Station

The Constellation/Avenue of the Stars Station site received the highest grades. It is more accessible to more workers and residents, especially those most likely to use transit. It is also located next to many utilitarian destinations that would facilitate trip chaining. The Constellation/Avenue of the Stars site also benefits from its location away from Santa Monica Boulevard, a major barrier that contributes to traffic exposure and offers little in the way of safety or sensory pleasure. While neither Constellation nor Avenue of the Stars are great pedestrian streets, they do provide a sufficiently safe and comfortable walk environment. Additionally, this site benefits from easy access to a high-quality mid-block green space and social space. Its location at the center of the neighborhood puts it in a unique position to provide equal access from the surrounding worksites and neighborhoods and to contribute to a sense of equal belonging to transit riders. Future development of the vacant lot on the northeast corner of the intersection is also a unique opportunity to bring in a greater sense of place and to anchor the station at the heart of the Century City neighborhood.

Table 4-3: Quarter-mile Walkshed Evaluation Criteria and Grades Table

Hierarchy Level	Domain	Criteria	Santa Monica/ Century Park East	Constel-lation/ Avenue of the Stars	Santa Monica/ Avenue of the Stars
Accessibility	Work	Jobs within 1/4 mile Likely number of low-wage jobs	C	A	B-
	Home	Population within 1/2 mile, Ratio of MF to SF housing	B	A	B
	Route Directness	Sidewalks continuity along streets Pedestrian paths, formal + informal Pedestrian network length and route choices Access to buildings, universal access	C+	A	B+
Usefulness	Utilitarian destinations Trip chaining potential	Proximity to retail Proximity to food, drink, entertainment Proximity to present transit boardings	C	A	A-
Safety	Safety from Traffic	Crosswalks at street intersections Crosswalks timing + crosswalk lengths Mid-block Crosswalks Few curb cuts and driveway interruptions Low traffic volume + Low traffic speed	B-	B	C
	Safety from Crime	Live security presence Lack of potential offenders Lighting, street Lighting, pedestrian path Prospect-refuge, streets, path	A	A	B
Comfort		Level topography, lack of stairs Sufficient sidewalk width Shade and shelter, Street trees Landscaping, green spaces	B+	B	B-
Sensory Pleasure		Noticeable differences, physical + social (people and events)	B	A-	A-
Sense of Belonging		Proximity to neighborhood center and community gathering spaces	B	A	B

Condensed from Table 5.1 in full report—Appendix B

4.6 Ridership Estimates

Ridership estimates were calculated based upon the walkshed population estimates and the major findings coming from the literature review. The three station locations are expected to perform differently with respect to the number of employees and residents who will walk to and from transit. The ridership estimates were calculated using the recommended walking rates based on the Moudon literature review and the observed walking rates from the WMATA *2005 Development Related Ridership Survey*, which are described above in Section 2.5.1. The walking rates (e.g., Moudon 600 feet—20%, 1/4-mile—10%, and 1/2-mile—5%) were applied to the walkshed employee and/or resident population to estimate the potential number of Westside Subway Extension riders walking to and from the station. For example, if there is a population of 1,000 employees and residents within the 600-foot walkshed, 200 would be expected to use the Westside Subway Extension by walking

between their job and/or home location and the station (1,000 x 20% = 200). An important distinction between the WMATA and Moudon methodologies is that WMATA uses both employees and residents and Moudon only considers employees. Anticipated ridership with existing and full development using both techniques is presented in Table 4-4 and Table 4-5. In addition, the Metro travel forecasts for Santa Monica/Century Park East and Constellation/Avenue of the Stars are noted in Table 4-5.

Table 4-4: Estimate of Ridership—Existing Development

	Santa Monica/ Century Park East Station		Constellation/ Avenue of the Stars Station		Santa Monica/ Avenue of the Stars Station	
Walkshed	WMATA	Moudon	WMATA	Moudon	WMATA	Moudon
0 to 600 feet	1,687	964	3,591	2,052	2,065	1,180
600 feet to 1/4 mile	1,340	549	2,370	991	1,462	615
1/4 to 1/2 mile	2,231	849	1,645	544	2,249	841
Total	5,258	2,362	7,606	3,587	5,776	2,636

Table 4-5: Estimate of Ridership—Full Development

	Santa Monica/ Century Park East Station			Constellation/ Avenue of the Stars Station			Santa Monica/ Avenue of the Stars Station		
Walkshed	Pop.	WMATA	Moudon	Pop.	WMATA	Moudon	Pop.	WMATA	Moudon
0 to 600 feet	8,070	2,825	1,614	13,670	4,785	2,734	6,840	2,394	1,368
600 feet to 1/4 mile	5,670	1,340	549	23,960	5,675	2,314	14,080	3,262	1,396
1/4 to 1/2 mile	34,950	3,980	1,632	20,350	3,545	658	31,940	3,702	1,476
Total	48,690	8,145	3,795	57,980	14,005	5,706	52,860	9,359	4,240
Metro Forecast		5,492			8,566			No Forecast	

Applying the ridership rates calibrated by distance provides the most reasonable approximation illustration 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.

Comparing the WMATA ridership numbers from the close in and most distant walkshed zones with the highest total population helps explain why Constellation outperforms the other station locations. There is a full development population of 13,670 within 600 feet of the Constellation Station compared to 8,070 for the Santa Monica/Century Park East station (Table 4-6). While the total number of jobs and residents within a 1/2-mile walking distance of the Constellation/Avenue of the Stars station is somewhat larger than Santa Monica/Century Park East (57,980 for Constellation and 48,690 for Century Park East), Constellation produces significantly more riders (14,005) than the Santa Monica/Century Park East station with 8,145 riders. The Santa Monica/Avenue of the Stars station has a comparable number of jobs and residents (52,860) with a distribution of people living and working near the station, yielding a ridership estimate of 9,359.

The literature review and experience from other transit systems shows the importance of considering distance in evaluating station locations. To make a point made many times in this paper, where the people are can matter more than how many people there are in total. To help illustrate Century City development intensity 3D graphics were prepared comparing the average population of the 600-foot, 1/4-mile and 1/2-mile walksheds for each station. For each walkshed, the number of acres was calculated and divided by the total population to calculate people per acre.

Table 4-6: Development Intensity by Walkshed—Existing Development

	Santa Monica/ Century Park East Station			Constellation/ Avenue of the Stars Station			Santa Monica/ Avenue of the Stars Station		
Walkshed	Acres	People	People per Acre	Acres	People	People per Acre	Acres	People	People per Acre
0 to 600 feet	12.0	4,820	402	17.0	10,260	604	15.0	5,900	393
600 feet to 1/4 mile	36.5	5,670	155	54.6	10,120	185	49.1	6,260	128
1/4 to 1/2 mile	155.1	18,700	121	161.5	12,670	78	182.9	18,650	102
Total	203.6	29,190		233.1	33,050		247.0	30,810	

People = Population + Total Jobs from Table 4-1

People per acre is useful because it provides a common measure to look at the relative intensity of jobs and residents based on existing conditions and the plans and policies guiding future development in Century City. Table 4-6, Table 4-7, and Figure 4-4 through Figure 4-9 show the comparative densities within the three station walksheds for both existing and full development.

Table 4-7: Development Intensity by Walkshed—Full Development

	Santa Monica/ Century Park East Station			Constellation/ Avenue of the Stars Station			Santa Monica/ Avenue of the Stars Station		
Walkshed	Acres	People	People per Acre	Acres	People	People per Acre	Acre	People	People per Acre
0 to 600 feet	12.0	8,070	673	17.0	13,670	804	15.0	6,840	456
600 feet to 1/4 mile	36.5	5,670	155	54.6	23,960	439	49.1	14,080	287
1/4 to 1/2 mile	155.1	34,950	225	161.5	20,350	126	182.9	31,940	175
Total	203.6	48,690		233.1	57,980		247.0	52,860	

People = Population + Total Jobs from Table 4-2

Figure 4-4: Santa Monica/Century Park East Station Existing Development Intensity by Walkshed

In the critical 600-foot and 1/4-mile walksheds the Santa Monica/Century Park East Station has a combined total of approximately 10,490 people, the lowest of the three stations. It ranks in the middle for the intensity of people within the 600-foot walkshed (402 people per acre) and highest in the 1/2-mile walkshed (121 people per acre).

Figure 4-5: Constellation/Avenue of the Stars Station Existing Development Intensity by Walkshed

In the critical 600-foot and 1/4-mile walksheds the Constellation/Avenue of the Stars Station has a combined total of approximately 20,380 people, by far the highest of the three stations. It ranks at the top for the intensity of people within the 600-foot walkshed (604 people per acre) and its density is lowest in the 1/2-mile walkshed (78 people per acre).

Figure 4-6: Santa Monica/Avenue of the Stars Station Existing Development Intensity by Walkshed

In the critical 600-foot and 1/4-mile walksheds the Santa Monica/Avenue of the Stars Station has a combined total of approximately 12,160 people, placing it in the middle of the three stations. It ranks at the bottom for the intensity of people within the 600-foot walkshed (393 people per acre) and in the middle for the 1/2-mile walkshed (102 people per acre).

Figure 4-7: Santa Monica/Century Park East Station Full Development Intensity by Walkshed

In the critical 600-foot and 1/4-mile walksheds the Santa Monica/Century Park East Station has a combined total of approximately 13,740 people, the lowest of the three stations. It ranks in the middle for the intensity of people within the 600-foot walkshed (673 people per acre) and highest in the 1/2-mile walkshed (225 people per acre).

Figure 4-8: Constellation/Avenue of the Stars Station Full Development Intensity by Walkshed

In the critical 600-foot and 1/4-mile walksheds the Constellation/Avenue of the Stars Station has a combined total of approximately 37,630 people, by far the highest of the three stations. It ranks at the top for the intensity of people within the 600-foot walkshed (804 people per acre) and the lowest in the 1/2-mile walkshed (126 people per acre).

Figure 4-9: Santa Monica/Avenue of the Stars Station Full Development Intensity by Walkshed

In the critical 600-foot and 1/4-mile walksheds the Santa Monica/Avenue of the Stars Station has a combined total of approximately 20,920 people, placing it in the middle of the three stations. It ranks at the bottom for the intensity of people within the 600-foot walkshed (456 people per acre) and in the middle for the 1/2-mile walkshed (175 people per acre).

4.7 Comparison to Metro Forecast Results

As noted in Section 1.1, the Metro travel forecasts were developed for two of the three potential Century City station locations. Model runs were conducted to refine and compare Century City station options in the Final EIS/EIR. The Century City Constellation Station (referred to as Constellation Boulevard/Avenue of the Stars Station in this report) Alternative and the Century City Santa Monica Station (referred to as the Santa Monica Boulevard/Century Park East Alternative Station in this report) were evaluated. The purpose of this analysis is to support the Final EIS/EIR work.

The ridership estimates presented in this report are intended to compare the three alternative station locations in Century City, and they are not designed to supersede the Metro travel forecasts developed for the Final EIS/EIR. The Metro travel forecast analysis estimates approximately 8,600 station boardings at the Constellation Boulevard/Avenue of the Stars location and 3,000 fewer boardings at the Santa Monica Boulevard/Century Park East location (see Table 4-5). This result is consistent with the ridership estimates discussed and calculated above.

5.0 CONCLUSION

This analysis shows the Constellation/Avenue of the Stars Station is, and will continue to be, in the most advantageous location for attracting the most Westside Subway Extension riders compared to the two station locations along Santa Monica Boulevard. The Constellation Station outperformed the Santa Monica/Century Park East and the Santa Monica/Avenue of the Stars Stations based all of the key indicators examined in this analysis. It has the best pedestrian environment, can be 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 on the Westside Subway Extension expansion.

The conclusion supporting the Constellation/Avenue of the Stars Station as the best relative location is supported by a number of factors. The literature review shows the location of jobs and housing within the station walkshed has a bigger impact on ridership than the absolute total number of jobs and housing. This is because as distance increases from the station walking rates decline significantly. Importantly for a major employment center like Century City this "distance decay" effect is more pronounced for work to transit trips than for home to transit trips.

The Constellation station received the highest grades in a site analysis by Professor Anne Moudon of the pedestrian environment. It is more accessible to more workers and residents, especially those most likely to use transit. It is also located next to many utilitarian destinations that would facilitate trip chaining. The Constellation site also benefits from its location away from Santa Monica Boulevard, a major barrier that contributes to traffic exposure and offers little in the way of safety or sensory pleasure.

A station at Constellation also outperformed the two Santa Monica station locations when considering the future growth and development of Century City. A detailed station-by-station analysis was undertaken to quantify the number of jobs and residents for each walkshed assuming 85% build out of Century City consistent with existing plans, policies and development approvals.

This relationship between density and walking distance to the station is a significant differentiator for the three alternative station locations. As summarized in Table 5-1, the future aggregated employee/resident populations at 1/2 mile are comparable for Constellation/Avenue of the Stars (57,980), Santa Monica/Century Park East (48,690), and Santa Monica/Avenue of the Stars (52,860). However, as described in this report and the supporting appendices, analyzing the distribution of density within the 1/2-mile walksheds reveals significant differences as to how each of the station locations will perform.

Table 5-1: Ridership Estimate and Sensitivity Analysis—Full Development

	Santa Monica/ Century Park East Station			Constellation/ Avenue of the Stars Station			Santa Monica/ Avenue of the Stars Station		
Walkshed	Pop.	WMATA	Moudon	Pop.	WMATA	Moudon	Pop.	WMATA	Moudon
0 to 600 feet	8,070	2,825	1,614	13,670	4,785	2,734	6,840	2,394	1,368
600 feet to 1/4 mile	5,670	1,340	549	23,960	5,675	2,314	14,080	3,262	1,396
1/4 to 1/2 mile	34,950	3,980	1,632	20,350	3,545	658	31,940	3,702	1,476
Total	48,690	8,145	3,795	57,980	14,005	5,706	52,860	9,359	4,240
Metro Forecast		5,492			8,566			No Forecast	

Pop. = employees plus residents. Table WMATA estimates are based upon total population, and the Moudon estimates are based only on employment.

Overall, the distribution of development surrounding the Constellation Station is much better suited for transit. The location of jobs and residents around the Constellation Station is expected to have by far the highest concentration within the critical 600-foot and 1/4-mile walksheds. As a consequence, the estimated 14,005 riders in the sensitivity analysis for the Constellation Station is approximately 72% greater than the Santa Monica/Century Park East Station and about 50% greater than the Santa Monica/Avenue of the Stars Station, which are expected to have approximately 8,145 and 9,359 riders respectively.

6.0 REFERENCES

Century City Station Options Updated Jobs & Population Inventory Memorandum, Fehr & Peers, May 24, 2011 (Appendix A).

Walking to Transit Literature Review and Evaluation, Anne Vernez Moudon, May 26, 2011 (Appendix B).

Century City North Specific Plan, November 24, 1981, City of Los Angeles.

Century City South Specific Plan, amended August 10, 1993, City of Los Angeles.

West Los Angeles Transportation Improvement and Mitigation Specific Plan, March 8, 1997, City of Los Angeles.

City of Los Angeles ZIMAS zoning information, http://zimas.lacity.org/ .

City of Beverly Hills General Plan, April 30, 2010, City of Beverly Hills, http://www.beverlyhills.org/services/planning_division/general_plan/default.asp.

Appendix A CENTURY CITY STATION OPTIONS UPDATED JOBS AND POPULATION INVENTORY MEMORANDUM

CENTURY CITY STATION SANTA MONICA BL/CENTURY PARK EAST

Distance from Portal	Address	Generalized Land Use	Gross Leasable Area/RBA/ Hotel Rooms	# Jobs
0.25	1800 Avenue of the Stars - Gateway East Bldg.	Office	286,000	735
0.25	1801 Avenue of the Stars	Office	284,717	732
0.25	2010 Century Park E	Office	43,066	111
0.25 600'	1800 Century Park E - Northrop Grunman Plaza I	Office	255,525	657
0.25 600'	1801 Century Park E - Century Park Plaza	Office	373,900	961
0.25 600'	1840 Century Park E - Northrop Grunman Plaza II	Office	331,500	852
0.25	1875 Century Park E - North Tower	Office	450,000	1,157
0.25 600'	1880 Century Park E	Office	311,400	801
0.25	1888 Century Park E	Office	483,896	1,244
0.25	1925 Century Park E South Tower	Office	450,000	1,157
0.25	1940 Century Park E	Office	46,000	118
0.25	1950 Century Park E	Office	21,734	56
0.25	9935 Santa Monica Blvd	Office	5,000	13
0.25	9940-9944 Santa Monica Blvd	Office	20,000	51
0.25	9949 Santa Monica Blvd	Office	1,758	5
0.25	9950 Santa Monica Blvd	Office	2,820	7
0.25	9952 Santa Monica Blvd	Office	7,600	20
0.25	9975 Santa Monica Blvd - The Gateway Building	Office	12,000	31
0.25	9990 Santa Monica Blvd	Office	10,598	27
0.25	9915 S Santa Monica Blvd	Office	2,940	8
0.25 600'	10100 Santa Monica Blvd	Office	600,000	1,543
0.25	9919-9925 Santa Monica Blvd	Retail	2,920	4
0.25	9953 Santa Monica Blvd	Retail	2,304	3
0.25	9956-9960 Santa Monica Blvd	Retail	4,097	6
0.25	9970 Santa Monica Blvd	Retail	4,900	7
0.25 600'	9923 S Santa Monica Blvd	Retail	750	1
0.50	10250 Santa Monica Blvd - Westfield Century City	Food Services	70,520	141
0.50	Beverly Hilton	Hotel	570	285
0.50	Century Plaza Hotel	Hotel	726	363
0.50	1900 Avenue of the Stars	Office	605,942	1,558
0.50	1901 Avenue of the Stars	Office	492,139	1,266
0.50	1950 Avenue of the Stars	Office	14,742	38
0.50	1999 Avenue of the Stars - Sun America Center	Office	824,106	2,119
0.50	2000 Avenue of the Stars	Office	787,323	2,025
0.50	2040 Avenue of the Stars	Office	6,863	18
0.50	2029 Century Park E North Tower	Office	1,124,719	2,892
0.50	2049 Century Park E South Tower	Office	1,124,719	2,892
0.50	2080 Century Park E - Century City Medical Bldg	Office	199,534	513
0.50	1801 Century Park W - Century Park West	Office	49,855	128
0.50	124 Lasky Dr	Office	8,360	21
0.50	132 Lasky Dr	Office	5,483	14
0.50	132-B Lasky Dr	Office	2,113	5
0.50	138 S Lasky Dr	Office	1,502	4
0.50	152-160 S Lasky Dr	Office	15,000	39
0.50	153 S Lasky Dr	Office	8,060	21
0.50	201 S Lasky Dr	Office	7,288	19
0.50	9916 Santa Monica Blvd	Office	11,000	28
0.50	10203 Santa Monica Blvd - The Samuel Goldwyn	Office	24,886	64
0.50	10215 Santa Monica Blvd - New Century (former)	Office	3,096	8
0.50	10231 Santa Monica Blvd	Office	8,000	21
0.50	10300 Santa Monica Blvd - The Barn	Office	3,729	10
0.50	10323 Santa Monica Blvd	Office	8,178	21
0.50	10327-10329 Santa Monica Blvd	Office	4,808	12
0.50	10340 Santa Monica Blvd	Office	9,552	25
0.50	9915 S Santa Monica Blvd	Office	2,940	8
0.50	9800 Wilshire Bl	Office	40,000	103
0.50	9830 Wilshire Bl - Creative Artists Bldg	Office	65,000	167
0.50	9859-9867 Santa Monica Bl	Retail	3,675	6
0.50	9869-9877 Santa Monica Bl	Retail	5,850	9
0.50	9879-9883 Santa Monica Bl	Retail	3,200	5
0.50	9885 Santa Monica Bl	Retail	6,546	10
0.50	9885-9887 Santa Monica Bl	Retail	2,800	4
0.50	9889-9899 Santa Monica Bl	Retail	5,696	9
0.50	9900 Santa Monica Bl	Retail	18,945	28
0.50	9901-9905 Santa Monica Blvd	Retail	2,661	4
0.50	9907-9909 Santa Monica Blvd	Retail	3,315	5
0.50	9908 Santa Monica Blvd	Retail	3,939	6
0.50	10250 Santa Monica Blvd - Westfield Century City	Retail	1,339,873	2,010
0.50	10257 Santa Monica Blvd	Retail	10,200	15

CENTURY CITY STATION SANTA MONICA BL/CENTURY PARK EAST

Distance from Portal	Address	Generalized Land Use	Gross Leasable Area/RBA/ Hotel Rooms	# Jobs
0.50	10301 Santa Monica Blvd	Retail	3,581	5
0.50	10305 Santa Monica Blvd	Retail	3,450	5
0.50	10309 Santa Monica Blvd	Retail	8,372	13
0.50	9775-9777 S Santa Monica Bl	Retail	1,700	3
0.50	9849 S Santa Monica Bl	Retail	2,468	4
0.50	9815 Wilshire Bl	Retail	923	1
0.50	9844 Wilshire / 9811 S Santa Monica Bl	Retail	4,184	6
0.50	9988 Wilshire Bl	Retail	1,089	2

CENTURY CITY STATION CONSTELLATION bl

Distance from Portal	Address	Generalized Land Use	Gross Leasable Area/RBA/ Hotel Rooms	# Jobs
0.25	10250 Santa Monica Blvd - Westfield Century City	Food Services	70,520	141
0.25	1800 Avenue of the Stars - Gateway East Bldg.	Office	286,000	735
0.25	1801 Avenue of the Stars	Office	284,717	732
0.25 600'	1900 Avenue of the Stars	Office	605,942	1,558
0.25 600'	1901 Avenue of the Stars	Office	492,139	1,266
0.25 600'	1950 Avenue of the Stars	Office	14,742	38
0.25 600'	1999 Avenue of the Stars - Sun America Center	Office	824,106	2,119
0.25 600'	2000 Avenue of the Stars	Office	787,323	2,025
0.25	2040 Avenue of the Stars	Office	6,863	18
0.25	2010 Century Park E	Office	43,066	111
0.25	1875 Century Park E - North Tower	Office	450,000	1,157
0.25	1888 Century Park E	Office	483,896	1,244
0.25	1925 Century Park E South Tower	Office	450,000	1,157
0.25	1940 Century Park E	Office	46,000	118
0.25	1950 Century Park E	Office	21,734	56
0.25 600'	2029 Century Park E North Tower	Office	1,124,719	2,892
0.25	1930 Century Park W	Office	56,300	145
0.25	10250 Constellation Blvd - MGM Tower	Office	775,037	1,993
0.25	10250 Santa Monica Blvd	Retail	1,410,393	2,116
0.25 600'	Century Plaza Hotel	Hotel	726	363
0.25	Intercontinental	Hotel	364	182
0.5	2121 Avenue of the Stars - Fox Plaza	Office	730,510	1,878
0.5	1800 Century Park E - Northrop Grunman Plaza I	Office	255,525	657
0.5	1801 Century Park E - Century Park Plaza	Office	373,900	961
0.5	1840 Century Park E - Northrop Grunman Plaza II	Office	331,500	852
0.5	1880 Century Park E	Office	311,400	801
0.5	2049 Century Park E South Tower	Office	1,124,719	2,892
0.5	2080 Century Park E Century City Medical Bldg	Office	199,534	513
0.5	1801 Century Park W - Century Park West	Office	49,855	128
0.5	Olympic Blvd and Century @ Olympic Blvd - Crescent Century City I	Office	24,000	62
0.5	10100 Santa Monica Blvd	Office	600,000	1,543
0.5	10203 Santa Monica Blvd - The Samuel Goldwyn	Office	24,886	64
0.5	10215 Santa Monica Blvd - New Century (former)	Office	3,096	8
0.5	10231 Santa Monica Blvd	Office	8,000	21
0.5	10309 Santa Monica Blvd	Office	8,372	22
0.5	10323 Santa Monica Blvd	Office	8,178	21
0.5	Fox Studios	Office		416
0.5	10257 Santa Monica Blvd	Retail	10,200	15
0.5	10300 Santa Monica Blvd - The Barn	Office	3,729	10
0.5	10301 Santa Monica Blvd	Retail	3,581	5

CENTURY CITY STATION SANTA MONICA BL/AVENUE OF THE STARS

Distance from Portal	Address	Generalized Land Use	Gross Leasable Area/RBA/ Hotel Rooms	Jobs
0.25	10250 Santa Monica Blvd - Westfield Century City	Food Services	70,520	141
0.25 600'	1800 Avenue of the Stars - Gateway East Bldg.	Office	286,000	735
0.25 600'	1801 Avenue of the Stars	Office	284,717	732
0.25 600'	1900 Avenue of the Stars	Office	605,942	1,558
0.25 600'	1901 Avenue of the Stars	Office	492,139	1,266
0.25	1950 Avenue of the Stars	Office	14,742	38
0.25	1999 Avenue of the Stars - Sun America Center	Office	824,106	2,119
0.25	1800 Century Park E - Northrop Grunman Plaza I	Office	255,525	657
0.25	1801 Century Park E - Century Park Plaza	Office	373,900	961
0.25	1801 Century Park W - Century Park West	Office	49,855	128
0.25 600'	10100 Santa Monica Blvd	Office	600,000	1,543
0.25 600'	10203 Santa Monica Blvd - The Samuel Goldwyn	Office	24,886	64
0.25	10215 Santa Monica Blvd - New Century (former)	Office	3,096	8
0.25	10231 Santa Monica Blvd	Office	8,000	21
0.25	10309 Santa Monica Blvd	Office	8,372	22
0.25	10323 Santa Monica Blvd	Office	8,178	21
0.25	10250 Santa Monica Blvd - Westfield Century City	Retail	1,339,873	2,010
0.25	10257 Santa Monica Blvd	Retail	10,200	15
0.25	10301 Santa Monica Blvd	Retail	3,581	5
0.25	10305 Santa Monica Blvd	Retail	3,450	5
0.5	Beverly Hilton	Hotel	570	285
0.5	Century Plaza Hotel	Hotel	726	363
0.5	Intercontinental	Hotel	364	728
0.50	2000 Avenue of the Stars	Office	787,323	2,025
0.50	2040 Avenue of the Stars	Office	6,863	18
0.50	2010 Century Park E	Office	43,066	111
0.50	1840 Century Park E - Northrop Grunman Plaza II	Office	331,500	852
0.50	1875 Century Park E - North Tower	Office	450,000	1,157
0.50	1880 Century Park E	Office	311,400	801
0.50	1888 Century Park E	Office	483,896	1,244
0.50	1925 Century Park E South Tower	Office	450,000	1,157
0.50	1940 Century Park E	Office	46,000	118
0.50	1950 Century Park E	Office	21,734	56
0.50	2029 Century Park E North Tower	Office	1,124,719	2,892
0.50	1930 Century Park W	Office	56,300	145
0.50	10250 Constellation Blvd - MGM Tower	Office	775,037	1,993
0.50	Olympic Blvd and Century @ Olympic Blvd - Crescent Century City II	Office	24,000	62
0.50	9916 Santa Monica Blvd	Office	11,000	28
0.50	9935 Santa Monica Blvd	Office	5,000	13
0.50	9940-9944 Santa Monica Blvd	Office	20,000	51
0.50	9949 Santa Monica Blvd	Office	1,758	5
0.50	9950 Santa Monica Blvd	Office	2,820	7
0.50	9975 Santa Monica Blvd - The Gateway Building	Office	12,000	31
0.50	9990 Santa Monica Blvd	Office	10,598	27
0.50	10300 Santa Monica Blvd - The Barn	Office	3,729	10
0.50	10327-10329 Santa Monica Blvd	Office	4,808	12
0.50	10333 Santa Monica Blvd	Office	3,355	9
0.50	10340 Santa Monica Blvd	Office	9,552	25
0.50	10350 Santa Monica Blvd	Office	42,292	109
0.50	10351 Santa Monica Blvd - Santa Monica Comstock Plaza	Office	101,495	261
0.50	10390 Santa Monica Blvd - Royal Beverly Glen Building	Office	78,463	202
0.50	10436 Santa Monica Blvd	Office	15,950	41
0.50	9915 S Santa Monica Blvd	Office	2,940	8
0.5	2121 Avenue of the Stars - Fox Plaza	Office	730,510	1,878
0.50	9901-9905 Santa Monica Blvd	Retail	2,661	4
0.50	9907-9909 Santa Monica Blvd	Retail	3,315	5
0.50	9908 Santa Monica Blvd	Retail	3,939	6
0.50	9919-9923 Santa Monica Blvd	Retail	2,920	4
0.50	9952 Santa Monica Blvd	Retail	7,600	11
0.50	9953 Santa Monica Blvd	Retail	2,304	3
0.50	9956-9960 Santa Monica Blvd	Retail	4,097	6
0.50	9970 Santa Monica Blvd	Retail	4,900	7
0.50	10349 Santa Monica Blvd	Retail	7,319	11
0.50	10391 Santa Monica Blvd	Retail	2,337	4
0.50	10401 Santa Monica Blvd	Retail	3,132	5

CENTURY CITY STATION SANTA MONICA BL/AVENUE OF THE STARS

Distance from Portal	Address	Generalized Land Use	Gross Leasable Area/RBA/ Hotel Rooms	Jobs
0.50	10403 Santa Monica Blvd	Retail	11,520	17
0.50	10421-10423 Santa Monica Blvd	Retail	4,400	7
0.50	10425-10431 Santa Monica Blvd	Retail	6,000	9
0.50	9923 S Santa Monica Blvd	Retail	750	1

Appendix B WALKING TO TRANSIT LITERATURE REVIEW AND EVALUATION





WESTSIDE SUBWAY EXTENSION PROJECT

Contract No. PS-4350-2000

Walking to Transit Literature Review and Evaluation

Metro

July 29, 2011

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1.0 EXECUTIVE SUMMARY

This executive summary presents condensed results of our literature review and evaluation of the ability for each of the three proposed Century City Westside Subway Extension station sites to support walk trips. The literature review focuses on distance to transit, environments that support walking, and other factors related to walking to transit. For the evaluation, we develop criteria based on the literature and grade each of the proposed station sites using information collected during site visits and provided by Parsons Brinckerhoff. This system allows us to identify a preferred Century City station site to support walk trips to transit.

1.1 Findings from the literature

1.1.1 Distance

Physical distance is the primary determinant of walking as the choice means of travel. In general, people select to walk to transit and other destinations only if they need to travel short distances. Median distances to rail transit range from 1/5 to ½ miles (O'Sullivan and Morrall 1996; Ewing 1998; Besser and Dannenberg 2005; Dill 2006; Schlossberg, Agrawal et al. 2007; Guo 2009). These short distances are due to a strong distance decay effect on both (1) transit commute mode share and on (2) walking as the access mode to transit. This strong inverse relationship exists at both the employment and the residential sides of the trip, although the effect in employment areas is generally stronger than the effect in residential areas (Dill 2003; Cervero 2006; Kolko 2011). Overall, the proportion of transit riders walking to transit is greatest within ¼ network miles or less of a station, typically declining by half between ¼ and ½ miles, and becoming very small beyond ½ mile (Cervero 1994; O'Sullivan and Morrall 1996; Seskin, Cervero et al. 1996; Dill 2006; Brown and Werner 2009; Crowley, Shalaby et al. 2009; Kolko 2011). Based on these findings, we think an appropriate walkshed for capturing the majority of walk trips to and from a station would be up to ¼ network mile for employment sites (Dill 2003) and ½ network mile for primarily residential sites (Crowley, Shalaby et al. 2009; Kolko 2011).

1.1.2 Walk environment

The walk environment can intervene in the decision to walk and in the willingness to walk longer distances. Characteristics of the walk environment that have this effect can be structured into a hierarchy of needs that people consider when walking (Mehta 2008). If fulfilled, these needs will alter either the actual distances people must walk or their perception of time and therefore distance, and their attitude toward and eventual decision to walk. These needs are: accessibility, usefulness, safety, comfort, sensory pleasure, and sense of belonging. While this hierarchy was developed for walking in general, research on walking to transit confirms that people do in fact consider these features in their choice to walk to transit (Olszewski and Wibowo 2005; Guo 2009).

1.1.3 Other Factors Influencing Walking to Transit

Travel mode choice is dependent on numerous factors other than the built environment (Ewing and Cervero 2010). These factors must be considered in conjunction with an assessment of the walk environment because they provide insight into who may be more likely to walk to transit. Those more likely to use transit tend to be women, people who do not own cars, people with less income, people who live in multifamily dwellings, people with positive attitudes toward health and the

environment, and employees at workplaces with transit-supportive policies (Kitamura, Mokhtarian et al. 1997; Besser and Dannenberg 2005; Canepa 2007; Larco 2009).

1.2 Station Site Evaluation

The framework we used to evaluate the ability for each of the proposed station sites to support walk trips is based on Mehta's hierarchy for pedestrian needs. The framework consists of six levels necessary for a completely supportive walk environment: (1) accessibility, (2) usefulness, (3) safety, (4) comfort, (5) sensory pleasure, and (6) sense of belonging. For each of the levels, we used urban design theory and findings from research on walking to transit to develop criteria on which to grade each of the three transit stations. Stations sites are evaluated within a quarter mile walkshed (except for the assessment of the population residing in the Century City area, which is considered within the one half mile walkshed) and graded using a letter grade. The station grades are summarized in Table 1-1.

Table 1-1: Quarter-mile Walkshed Evaluation Criteria and Grades for the Three Proposed Station Sites (condensed from Table 4-1 in Technical Appendix B)

Hierarchy Level	Domain	Criteria	Santa Monica/ Century Park East	Constel-lation/ Avenue of the Stars	Santa Monica/ Avenue of the Stars
Accessibility	Work	Jobs within ¼ mile Likely number of low-wage jobs	C	A	B-
	Home	Population within ½ mile, Ratio of multifamily to single-family housing	B	A	B
	Route Directness	Sidewalks continuity along streets Pedestrian paths, formal + informal Pedestrian network length and route choices Access to buildings, universal access	C+	A	B+
Usefulness	Utilitarian destinations Trip chaining potential	Proximity to retail Proximity to food, drink, entertainment Proximity to present transit boardings	C	A	A-
Safety	Safety from Traffic	Crosswalks at street intersections Crosswalks timing + crosswalk lengths Mid-block Crosswalks Few curb cuts and driveway interruptions Low traffic volume + Low traffic speed	B-	B	C
	Safety from Crime	Live security presence Lack of potential offenders Lighting, street Lighting, pedestrian path Prospect-refuge, streets, path	A	A	B
Comfort		Level topography, lack of stairs Sufficient sidewalk width Shade and shelter, Street trees Landscaping, green spaces	B+	B	B-
Sensory pleasure		Noticeable differences, physical + social (people and events)	B	A-	A-
Sense of belonging		Proximity to neighborhood center and community gathering spaces	B	A	B

1.2.1 Santa Monica/Century Park East Station Site

The Santa Monica/Century Park East Station site received the lowest grades overall, not only because it has the lowest estimates of transit riders within all walksheds, but also because it is least accessible to jobs and the concentration of useful destinations at the Westfield Mall. It is only accessible via one thru-block pedestrian path and is adjacent to the poor pedestrian street environment – little protection or visual stimulation – along Santa Monica Blvd, which is characterized by heavy traffic travelling at relatively fast speeds. It benefits from its location on Century Park East, a street that, near the North end, offers a moderate level of safety, comfort, and sensory pleasure. The vacant lot at the Southeast corner of Santa Monica Blvd and Century Park East offers an opportunity to improve the street environment along Santa Monica Boulevard. This improvement, however, would only be marginal as the golf course bordering the north side of the street blocks pedestrian accessibility and provides little in the way of a pedestrian destination.

1.2.2 Santa Monica/Avenue of the Stars Station Site

The Santa Monica/Avenue of the Stars Station received slightly better grades. It had low to medium estimates of transit riders compared to the other stations locations. Although it is accessible by high-quality thru-block pedestrian paths and provides convenient access to utilitarian destinations in the Westfield Mall, it is not in a central location to Century City jobs. Additionally, we think its street-level environment of wide travel lanes, large building setbacks, and lack of quality street trees would leave pedestrians feeling exposed to traffic and criminal danger. Walking at street level would also seem like a burden due to little coverage from the elements and few interesting things to look at.

1.2.3 Constellation/Avenue of the Stars Station Site

The Constellation/Avenue of the Stars station site received the highest grades. It has by far the highest estimates of transit riders in all three walksheds. It is more accessible to more workers and residents, especially those most likely to use transit. It is also located next to many utilitarian destinations that would facilitate trip chaining. The Constellation/Avenue of the Stars site also benefits from its location away from Santa Monica Blvd, a major barrier that contributes to traffic exposure and offers little in the way of safety or sensory pleasure. While neither Constellation nor Avenue of the Stars are great pedestrian streets, they do provide a sufficiently safe and comfortable walk environment. Additionally, this site benefits from easy access to a high-quality mid-block green space and social space. Its location at the center of the neighborhood puts it in a unique position to provide equal access from the surrounding worksites and neighborhoods and to contribute to a sense of equal belonging to transit riders. Future development of the vacant lot on the Northeast corner of the intersection is also a unique opportunity to bring in a greater sense of place and to anchor the station at the heart of the Century City neighborhood.

1.3 Conclusion

Based on our analysis using site evaluation criteria developed from the literature, we think the Constellation/Avenue of the Stars station would support the most walk trips to and from transit. We think this location would benefit the most workers, residents, and others who wish to access Century City using the new Westside Subway Extension.

2.0 FULL REPORT

This report is divided into two main sections: a literature review and an evaluation of the three proposed Century City Westside Subway Extension station sites. The literature review covers walk distances to transit, features of the walk environment that support walking to transit, and other factors that are known to influence walking to transit. The site evaluation section applies findings from the literature to designate appropriate walksheds for the proposed station sites and analyze the walk environment within these areas. Each potential station site is graded using criteria developed from the literature. To conclude, we summarize the benefits and drawbacks of each station site for supporting walk trips to transit.

2.1 Findings from the literature

This review is divided into a section focusing on distances as the primary determinant of walking as a mode choice; a section on the characteristics of the walk environment which can influence the decision to walk and the perceived and actual distance that will be walked; and a brief section on individual and policy characteristics that are associated with more people walking longer distances (see Appendix A for a more detailed review of this literature).

2.1.1 Distance

2.1.1.1 Physical distance: walking as a choice travel mode

Physical distance is the primary determinant of walking as the choice means of travel. In general, people select to walk to transit and other destinations only if they need to travel short distances. Median distances to rail transit range from 1/5 to ½ miles (O'Sullivan and Morrall 1996; Ewing 1998; Besser and Dannenberg 2005; Dill 2006; Schlossberg, Agrawal et al. 2007; Guo 2009). Most people switch to motorized modes of travel for longer travel distances (> ½ mile) (O'Sullivan and Morrall 1996). The decision to walk even within short distances (< ½ mile) is determined by the choice of other alternative modes of travel and the perception of time walking.

2.1.1.2 Perceived distance and the perception of walking as an access mode to motorized modes

There is no choice in accessing any of the motorized means of travel: they all must be "walked to," whether it is getting to a car in one's garage (~one minute) or catching a bus a few blocks away (~five minutes). Importantly, these unavoidable short walks are rarely considered as a "walking trip." They are typically underreported and bundled with the "primary" motorized means of travel (U.S. Department of Transportation 2009). Hence for most people, a walk trip becomes a conscious travel mode choice if the trip is perceived as lasting longer than about five minutes. A five minute walk at three miles per hour corresponds to roughly a quarter mile, the median distance people walk to transit based on national data and the rule of thumb distance that transit planners have used as ridership walksheds (Ewing 1998).

People have been observed to walk up to two miles to or from transit (O'Sullivan and Morrall 1996; Dill 2006; Schlossberg, Agrawal et al. 2007; Guo 2009). But to compete with the private automobile among choice transit riders, transit access must be within "perceived walking distance" of a trip origin and destination. Ease of access to a transit station by walking contributes to increasing the transit commute mode share, and to reducing the share of motorized modes to access transit. Indeed

transit stations with the greatest transit ridership are those in Central Business Districts (CBDs), where most access is by foot. Also, the higher the ridership at a given station, the larger the proportion of riders accessing transit on foot.

2.1.1.3 Distance to station as a determinant of transit ridership levels and walking as a primary access mode

The transportation literature presents similar, yet sometimes conflicting advice on appropriate transit walksheds – or areas around transit stations from which most walk-to-transit trips will originate. Using nationwide data on access to all types of transit, Ewing and Cervero (2010) suggest a quarter-mile walkshed. Evidence shows that people are willing to walk further to rail than to rubber transit, typically because of the higher frequency and quality of rail transit (O'Sullivan and Morrall 1996; Crowley, Shalaby et al. 2009). Half-mile walksheds have been used as a standard Transit-Oriented Development radius along rail lines (Canepa 2007). Furthermore, people tend to walk further to access transit stations near residential concentrations than employment concentrations (O'Sullivan and Morrall 1996; Krygsman, Dijst et al. 2004). O'Sullivan and Morrall (1996) suggest a 1,312 ft (400m, about ¼ mile) radial distance pedestrian zone for stations near concentrations of office development and a 2,953 ft (900m, about ½ mile) zone for stations in residential areas. Some suggest that walk distances are shorter in CBDs because employment land uses are more concentrated than residential ones, and therefore distances between activities and transit stations are simply shorter in major employment locations (Canepa 2007).

Importantly, there is a distance decay effect on both commute mode share and on walking as the access mode to transit. Distance to and from a station is strongly and negatively related to (1) the number of people using transit (commute mode share); and (2) the number of transit riders walking to a station (access mode share). This strong inverse relationship exists at both the employment and the residential sides of the trip. Several studies provide metrics for the relationship between distances to stations and a declining proportion of riders (Dill 2003; Cervero 2006; Kolko 2011). Overall, the proportion of transit riders walking to transit is greatest within ¼ network miles or less of a station, typically declining by half between ¼ and ½ miles, and becoming very small beyond ½ mile (Cervero 1994; O'Sullivan and Morrall 1996; Seskin, Cervero et al. 1996; Dill 2006; Brown and Werner 2009; Crowley, Shalaby et al. 2009; Kolko 2011).

Based on these findings, we think an appropriate walkshed for capturing the majority of walk trips to and from a subway station would be up to ¼ network mile for primarily employment sites (Dill 2003) and ½ network mile for primarily residential sites (Crowley, Shalaby et al. 2009; Kolko 2011).

2.1.2 Walk environment

The walk environment can intervene in the decision to walk and in the willingness to walk longer distances. The ¼ mile and ½ mile walksheds correspond to a walk trip of about 5 to 10 minutes, which entail a small portion of not only the working day, but also of time allocated to daily travel. The 600 foot walkshed corresponds to a 2.5 minute walk, a span of time which people will hardly notice if they like where they are, but which may seem like "an eternity" if they feel bored or threatened. How time is perceived by individual travelers will vary by individual and by the environment in which they walk. Borrowing the structure from Maslow and the content from urban design theorists, Mehta (2008) offers a hierarchy of needs that people consider when walking. If fulfilled, these needs will alter people's perception of time and therefore distance, and their attitude toward and eventual decision to walk. Applied to station area characteristics, these needs are:

Accessibility, or the ability to "easily" get to the station. Physical distance (covered in the first section of the literature review) is the first measure of accessibility. A second measure is route directness or the "circuity" factor (O'Sullivan and Morrall 1996), measured as the ratio of airline (as the crow flies) distance between origin and destination and actual distance traveled. A route directness ratio of about 1.3 or less (corresponds to a block size of about 2.2 acres, or 300 by 300 feet) is deemed desirable, indicating that a walking route may be as much as 30% longer than the straight line distance between origin and destination (O'Sullivan and Morrall 1996; Ewing 1998; Hess, Moudon et al. 1999). Route directness is a measure of the efficiency of the network of walking routes. Conversely, it measures the "detour" that a pedestrian must make to reach an activity. Importantly, pedestrians walking for transportation seek to minimize the distance traveled. They take shortcuts whenever they can, sometimes even taking risks (Gehl 2006). A detour (both perceived and actual) is more onerous to the slow moving pedestrian than to the driver. A recent meta-analysis of the relationship between the built-environment and transit use showed that distance to the nearest transit stop and the percent of 4-way intersections had the highest weighted average elasticities for transit use (0.29), followed by intersection/street density (0.23) (Ewing and Cervero 2010).

Usefulness, or the ability to carry out different activities along the walk. Commuters note the need to attend to child care, to shop, to attend to personal business, and to eat and carry social and recreational activities on their way to and from work (Cervero 2006). Transit mode share is generally twice as high in CBDs than in otherwise dense suburban areas in part because the density of CBDs is associated with land use mix: CBDs contain utilitarian land uses that serve those who walk to and from transit (Douglas and Evans 1997; Dill 2003; Cervero 2006). The opportunity to trip chain as an influence on transit mode choice is also evidenced by research on walk routes selection to and from transit stations: transit riders in CBDs have been shown to select walk routes that passed by more retail parcels (Guo 2009) or to frequently walk to destinations near their work place (Lachapelle, Frank et al. 2011).

Safety, or the avoidance of danger from vehicular traffic or from crime. As they move through space unprotected, pedestrians are particularly vulnerable to car traffic. Indeed while walk trips constitute some 4 % of all commute trips, crashes involving pedestrians account for 11% of traffic fatalities (U.S. Department of Transportation 2010) As a result, pedestrians favor using sidewalks and other separated walkways; and they consider traffic speeds and protective traffic devices (crosswalks, medians, etc.) in selecting their walk route (Schlossberg, Agrawal et al. 2007). Safety from traffic has been rated as more important than attractive station design (Iseki and Taylor 2010). A model shows that a conflict with traffic is equivalent to adding 119 ft (36.3 m) to the walk trip (Olszewski and Wibowo 2005).

Also, because pedestrians are directly exposed to their immediate environment, they are sensitive to other people whom they may find threatening. The theory of "prospect-refuge" articulates people's evolutionary based need to have a protective environment, which at the same time enables them to look out for themselves—to see but not to be seen (Appleton 1975). According to this theory, pedestrian spaces that provide nearby shelter and edges with clear lines of sight into the surrounding area can increase perceived safety.

Comfort: people need places to sit and they prefer wide sidewalks. Steep hills and stairs act as barriers to walking and have been shown to add to the perceived length of a walk trip (Olszewski and Wibowo 2005; Guo 2009). Pedestrians traveling to or from transit will also seek out more

comfortable routes, such as those with wider sidewalks or which pass through a park, even if these routes add to their travel time (Guo 2009).

Sensory pleasure: having one's senses pleasantly stimulated by the walk environment shortens the distance perceived by replacing the effort demanded by walking with other pleasurable sensations. There is evidence that the sense of time is modified by what has been termed "noticeable differences" in the proximal environment (Rapoport 1990). Both physical (e.g., building facades and street trees) and social (e.g., other pedestrians or nearby cafes) features can contribute to noticeable differences and make for a more pleasurable walk trip (Whyte 1980).

Sense of belonging: while there is little research on this topic that is related to transit, the concept of "third place" or home away from home has been successful in the retail environment where creating a sense of place has been used to entice people to shop more. People choose to walk in main streets that they feel having a special connection with (Mehta 2008). This suggests that people may choose routes to transit that pass by third places, or that a properly positioned and designed transit station could become a catalyst for such third places in a neighborhood due to the pedestrian traffic generated.

2.1.3 Other factors influencing walking

It is well understood that travel mode choice is dependent on the traveler's socioeconomic characteristics as well as on the built environment. In fact, socioeconomic characteristics may be even more important than the built environment (Ewing and Cervero 2010). These factors must be considered in conjunction with an assessment of the walk environment because they provide insight into who may be more likely to walk to transit. These factors include:

Gender, in the U.S., women in the 16 to 24, 25 to 34, and 45 to 54 year age groups walk to transit at higher rates than their male counterparts (U.S. Department of Transportation 2009). Men are more likely to walk farther to transit and females are less likely to walk at night (O'Sullivan and Morrall 1996).

Car ownership, higher rates of auto ownership is consistently associated with lower transit ridership (Cervero 2006) and a reduced likelihood of walking to transit (Besser and Dannenberg 2005).

Socioeconomic factors, compared to the general U.S. population, those who walk to transit are more likely to earn <$15K, be aged 18-29, be less educated, be a minority, and be without access to a car (Besser and Dannenberg 2005).

Housing type, multifamily dwellers have fewer cars, travel shorter distances and ride transit at higher levels than their single-family counterparts ((Larco 2009)).

Attitudes, there is evidence that attitudes toward the environment, climate change, health, and transportation influence many to use transit and to walk more (Kitamura, Mokhtarian et al. 1997; Loutzenheiser 1997).

Employer policies, flex time programs or employer assistance with transit costs are associated with higher levels of commute trips by transit. Those with free worksite parking or employer assistance with car costs report much lower levels of commute trips by transit (Canepa 2007).

2.2 Walk Environment Evaluation

The framework we used to evaluate the ability for each of the proposed station sites to support walk trips is based on Mehta's (2008) hierarchy for pedestrian needs. The framework consists of six levels necessary for a completely supportive walk environment: accessibility, usefulness, safety, comfort, sensory pleasure, and sense of belonging. The framework accounts for neighborhood-level influences on walking that are well understood and documented, such as accessibility, but also considers microscale environmental factors that can influence the walk experience at the street-block scale. For each of the levels, we used urban design theory and findings from research on walking to transit to develop criteria on which to grade each of the three transit stations. Stations sites are evaluated within a quarter mile walkshed (except for the assessment of the population residing in the Century City area, which is considered with the one half mile walkshed) and graded using a letter grade. The station grades are summarized in Table 2-1 (see Appendix B for a detailed, criterion by criterion, evaluation of the station location options) and explained in the remainder of this section.

Table 2-1: Quarter-mile walkshed evaluation criteria and grades for the three proposed station sites (condensed from Table 4-1 in Technical Appendix B)

Hierarchy Level	Domain	Criteria	Santa Monica/ Century Park East	Constel-lation/ Avenue of the Stars	Santa Monica/ Avenue of the Stars
Accessibility	Work	Jobs within ¼ mile Likely number of low-wage jobs	C	A	B-
	Home	Population within ½ mile, Ratio of multifamily to single-family housing	B	A	B
	Route Directness	Sidewalks continuity along streets Pedestrian paths, formal + informal Pedestrian network length and route choices Access to buildings, universal access	C+	A	B+
Usefulness	Utilitarian destinations Trip chaining potential	Proximity to retail Proximity to food, drink, entertainment Proximity to present transit boardings	C	A	A-
Safety	Safety from Traffic	Crosswalks at street intersections Crosswalks timing + crosswalk lengths Mid-block Crosswalks Few curb cuts and driveway interruptions Low traffic volume + Low traffic speed	B-	B	C
	Safety from Crime	Live security presence Lack of potential offenders Lighting, street Lighting, pedestrian path Prospect-refuge, streets, path	A	A	B
Comfort		Level topography, lack of stairs Sufficient sidewalk width Shade and shelter, Street trees Landscaping, green spaces	B+	B	B-
Sensory pleasure		Noticeable differences, physical + social (people and events)	B	A-	A-
Sense of belonging		Proximity to neighborhood center and community gathering spaces	B	A	B

2.2.1 Accessibility

2.2.1.1 Work

The percentage of workers who commute by transit drops quickly as distances from transit station to work increase (Dill 2003; Cervero 2006). Median walk length to or from CBD's where most jobs are located, tend to be very short (O'Sullivan and Morrall 1996). Those with less income are more likely to walk to transit (Besser and Dannenberg 2005). Based on these research findings, the criteria we used to assess job accessibility were the number of jobs within a quarter mile of the station and the number of those that were likely to offer lower wages. Job estimates were provided by Parsons Brinckerhoff in a May 24, 2011, memorandum.

- Santa Monica/Century Park East Station: C
  - 10,310 jobs and mostly office buildings within a quarter mile.
- Constellation/Avenue of the Stars Station: A
  - 20,170 jobs and access to mall and hotel within a quarter mile.
- Santa Monica/Avenue of the Stars Station: B-
  - 12,050 jobs and access to mall within a quarter mile.

The station sites have a widely varying number of jobs up to a quarter mile away but a similar number of jobs located within a half mile network distance. Because of these variations, we explore the distance decay effect on the potential number of transit riders and on their likelihood of walking to the three station options. Using the Santa Monica/Century Park East Station as the reference, we compare the number of jobs likely to walk to transit weighted by the distance to the station (Table 2-2) within the three walksheds. We use 20% to estimate the number of riders or walkers in the 0 to 600 foot walkshed; 10% in the 600 ft to ¼ mile walkshed; and 5% in the ¼ to ½ mile walkshed.[1] Estimates derived from weighted numbers suggest that compared to Santa Monica/Century Park East, about twice as many workers will walk to the Constellation/Avenue of the Stars station and about 120 percent will walk to the Santa Monica/Avenue of the Stars station at distances up to a quarter mile. At distances of a half-mile, the Constellation/Avenue of the Stars station will still likely capture 152 percent of the walk trips at Santa Monica/Century Park East; and the Santa Monica/Avenue of the Stars station would capture 112 percent of the walk trips. Clearly, the distance decay effect favors job concentrations near stations, and in this case, the Constellation/Avenue of the Stars location.

[1] This exercise is based on a conservative assessment of two California studies. We use Cervero's finding that 19% of workers in 10 primarily suburban sites within ½ mile of a rail station used transit as their primary commute mode (Cervero 2006). We also interpret Dill's finding that within ¼ mile of a station, the share of transit commute was 20%, dropping to 4% between ¼ and 1/2 mile, and to 2.5% beyond ½ mile (Dill 2003). Other references include Cervero 1994, and Seskin, Cervero et al. 1996.

Table 2-2: Comparing Percent of Jobs Weighted with Santa Monica/Century Park E as Reference (100%)

Walkshed	Santa Monica/ Century Park East Station		Constellation Avenue of the Stars Station		Santa Monica/ Avenue of the Stars Station	
	Percent	Total weighted jobs	Percent	Total weighted jobs	Percent	Total weighted jobs
0' to 600'[1]	100	964	213	2,052	122	1,180
0' to ¼ Mile [2]	100	1,513	201	3,043	119	1,795
0' to ½ Mile [3]	100	2,362	152	3,587	112	2,636

[1]20% jobs within 0' – 600'.
[2]20% jobs within 0' – 600'; plus 10% jobs within 600' - ¼ mile.
[3]20% jobs within 0' – 600'; plus 10% jobs within 600' - ¼ mile; plus 5% jobs within ¼ - ½ mile 5%.

2.2.1.2 Home

To evaluate home accessibility, we measured the number of residences within a half mile, the median distance walked from home to transit in some North American Cities (Schlossberg, Agrawal et al. 2007). Furthermore, since people who live in more compact multi-family residences are more likely to use transit than their counterparts who live in single-family detached housing (Larco 2009), we evaluated the ratio of multi-family to single-family housing within the half-mile residential walkshed. Population estimates were provided by Parsons Brinckerhoff in a May 24, 2011, memorandum.

- Santa Monica/Century Park East Station: B
  - 1,900 people and primarily mid-density townhomes within a half mile.
- Constellation/Avenue of the Stars Station: A
  - 2,010 people and primarily higher density condominiums within a half mile.
- Santa Monica/Avenue of the Stars Station: B
  - 1,940 people and a mix of single-family detached housing and apartments within a half mile.

2.2.1.3 Route Directness

Route Directness measures the ease for pedestrians to access destinations via actual walk routes. Pedestrians prefer direct routes (Moudon, Hess et al. 1997) and may be discouraged from walking to transit if the station requires a circuitous route (Canepa 2007). We considered the sidewalk coverage along streets, the presence of pedestrian paths, as well as the length and number of routes that make up the complete pedestrian network. We also considered the accessibility of buildings from the pedestrian network, both for those with complete and limited mobility. Across all three station walksheds we observed consistent and sufficient sidewalk coverage along vehicular streets and building access points.

- Santa Monica/Century Park East Station: C+
  - Four pedestrian routes in quarter-mile walkshed, station directly accessible via one formal thru-block pedestrian path

- Constellation/Avenue of the Stars Station: A
  - Seven pedestrian routes in quarter-mile walkshed, station directly accessible via one formal thru-block path and near the thru-block pedestrian network in the Westfield Mall.
- Santa Monica/Avenue of the Stars Station: B+
  - Five pedestrian routes in quarter-mile walkshed, station directly accessible via two formal thru-block paths to the East and West.

2.2.2 Usefulness

2.2.2.1 Utilitarian destinations and trip chaining potential

Walking is a means of reaching destinations that fulfill basic day-to-day needs for shopping, eating, entertainment, and other activities. A station located closer to stores, restaurants and other facilities that fulfill these needs would allow workers and neighborhood residents to easily link trips to these utilitarian destinations with transit-based trips to or from work or other destinations. To measure each station's trip chaining potential, we examined the proximity to retail, food and drink establishments, and entertainment venues. We also looked at the proximity to the bulk of present transit boardings within Century City, both as a measure of the relative attractiveness of destinations within the area and as a measure of proximity to transit stop that subway riders may wish to use for transfers.

- Santa Monica/Century Park East Station: C
  - Farthest from the retail shops, food, and entertainment at Westfield Mall and the concentration of present transit boardings. Some food and drink sources along Century Park East that facilitate trip chaining.
- Constellation/Avenue of the Stars Station: A
  - Close to the South mall entrance. Close to movie theater, grocery store, and food court at South end of mall, as well as several smaller food and drink outlets near Avenue of the Stars and Constellation Blvd intersection. Closest to the concentration of present transit boardings.
- Santa Monica/Avenue of the Stars Station: A-
  - Close to the Northeast mall entrance and the food and drink sources at north end of the mall. Within reasonable distance of food sources along Century Park East and the movie theater, grocery store, and food court at the South end of the mall. Also a reasonable distance (1.5 street-blocks) from concentration of present transit boardings.

2.2.3 Safety

2.2.3.1 Traffic

People walking to transit prefer routes that offer real or perceived protection from exposure to traffic and potential collisions (Olszewski and Wibowo 2005; Schlossberg, Agrawal et al. 2007). We assessed the presence of environmental features that would reduce exposure to traffic. These included marked and signalized crosswalks at street intersections, mid-block crosswalks and long crosswalk timings. We also assessed features of the street that contribute to a sense of exposure to traffic: higher traffic speeds and volumes along streets and curb cuts and driveways that interrupt sidewalks. Because traffic exposure only occurs along streets that carry traffic, our assessment focused only on the street

environment (as opposed to the mid-block areas) within the quarter-mile walkshed. Across all three walksheds we found sufficient crosswalk signalization, but insufficient walk times at intersections. Curb cuts and driveways were also consistent and ubiquitous.

- Santa Monica/Century Park East Station: B-
  - Santa Monica Blvd is a very wide (9 lanes + median) street that carries heavy traffic at relatively fast speeds. It presents a major barrier to cross and contributes to a sense of exposure to traffic danger. Century Park East is less wide (6 lanes). It presents only a minor barrier to cross, especially due to the mid-block pedestrian crossing near the intersection with Santa Monica Blvd, and does not contribute to a sense of unsafe exposure to traffic.
- Constellation/Avenue of the Stars Station: B
  - Avenue of the Stars is a very wide street (8 lanes + median) and presents a major barrier to cross. It appears to carry a relatively small number of cars in relation to its capacity. Constellation Blvd is less wide (6 lanes) and less of a burden to cross. A mid-block crosswalk near the South entrance to the Westfield Mall makes it safer and easier to cross. Traffic volume on Constellation Blvd appears low and cars tend to travel at reasonable speeds.
- Santa Monica/Avenue of the Stars Station: C
  - Avenue of the Stars and Santa Monica Blvd are both very wide streets (8 lanes + median) and present a major barrier to cross and contribute to exposure to traffic.

2.2.3.2 Crime

An environment that contributes to a sense of safety from assault, theft, or other crimes is preferred by pedestrians accessing transit (Kim, Ulfarsson et al. 2007; Iseki and Taylor 2010). According to routine activity theory, three elements are necessary for a crime to occur: a target, an offender, and the absence of a capable guardian (Foster, Giles-Corti et al. 2010). Social environment characteristics that can contribute to a sense of safety from crime are an absence of potential offenders and the presence of capable guardians. Physical environmental characteristics that can contribute to a sense of safety from crime are sufficient lighting and an environment that allows for pedestrians to remain relatively hidden from others (i.e., potential offenders) yet enables them to observe others. This evolutionary based need is called prospect-refuge (Appleton 1975). Overall, Century City has a strong live security presence and few people that may be considered potential offenders. Ample lighting exists along the streets and pedestrian paths. Prospect-refuge along streets was the only characteristic with significant differences from station site to site. Santa Monica Blvd and Avenue of the Stars have large building setbacks and several lanes, contributing to a sense of exposure for pedestrians walking along its sidewalks. Constellation Blvd and Century Park East have better prospect-refuge due to shorter setbacks, fewer auto lanes, shorter block lengths (only for Constellation Blvd) and street trees between the sidewalk and auto lanes (only for Century Park East).

- Santa Monica/Century Park East Station: A
  - Generally a safe environment. Santa Monica Blvd has poor prospect-refuge, Century Park East is better.
- Constellation/Avenue of the Stars Station: A
  - Generally a safe environment. Avenue of the Stars has poor prospect-refuge, Constellation Blvd is better.

- Santa Monica/Avenue of the Stars Station: B
  - Generally a safe environment. Santa Monica Blvd and Avenue of the Stars both have poor prospect-refuge.

2.2.4 Comfort

Walking is a physical activity that leaves the participant exposed to weather and requires navigating space. Pedestrians walking to transit tend to choose paths that minimize discomfort from physical exertion, weather, or the burden of avoiding obstacles (Olszewski and Wibowo 2005; Guo 2009). We measured comfort of the pedestrian environment around the three stations by observing features that would make walking easier, such as flat topography and the lack of elevation changes that require the use of stairs. We also compared the presence of shade and shelter, street trees, landscaping, and green spaces that help regulate the microclimate. Throughout Century City, we generally found ample sidewalk widths and a lack of obstacles that would make navigating the sidewalks difficult.

- Santa Monica/Century Park East Station: B+
  - Relatively flat, some stairs in nearby thru-block pedestrian pathways. High quality street trees along the North end of Century Park East and green space and landscaping nearby.
- Constellation/Avenue of the Stars Station: B
  - Slope along Avenue of the Stars. Some stairs in nearby thru-block pedestrian pathways. Street trees present, but small and do not provide a buffer from traffic. Most accessible to the high-quality green space/plaza to the Southeast of the intersection of Constellation Blvd and Avenue of the Stars.
- Santa Monica/Avenue of the Stars Station: B-
  - Slope along Avenue of the Stars. Some stairs in nearby thru-block pedestrian pathways. Street trees present, but small and on the building side of the nearby streets. Green space and landscaping nearby.

2.2.5 Sensory Pleasure

A moderate variety of facades, shop window displays, awnings, trees, planters, and other physical objects can provide sensory stimulus to pedestrians that contributes to a seemingly shorter walk (Rapoport 1991). A variety of people and human activities and events can also contribute to the sensory stimulus that makes pedestrian travel more pleasant and seemingly quicker (Whyte 1980).

- Santa Monica/Century Park East Station: B
  - A high level of physical noticeable differences along the nearby pedestrian path and along Century Park East. Few noticeable physical or social differences along Santa Monica Blvd. Moderate human activity in pedestrian pathway and along Century Park East.
- Constellation/Avenue of the Stars Station: A-
  - A high level of physical noticeable differences in the nearby pedestrian pathways and plazas. The slight curve along the East block of Constellation Blvd contributes to noticeable physical differences. Avenue of the Stars has few noticeable physical or human differences. In close

proximity to human activity at the mall as well as to a variety of other social spaces, particularly the green space/plaza to the Southeast.

- Santa Monica/Avenue of the Stars Station: A-
  - A high level of physical noticeable differences in the nearby pedestrian pathways and plazas. Few physical noticeable differences along Santa Monica Blvd and Avenue of the Stars. Near social activity at mall and within the pedestrian pathways.

2.2.6 Sense of belonging

The highest degree of walking enjoyment is achieved in a place where pedestrians feel that they are part of a community (Mehta 2008). To facilitate this experience for people walking to transit, access routes should pass community gathering spaces. It appears that there are numerous potential spaces for community gathering throughout Century City. However, a station located at the center of the four primary blocks that comprise "downtown" Century City, the intersection of Constellation Blvd and Avenue of the Stars, would enable transit riders from all parts of Century City to travel through these community spaces walking to or from transit. Being located at the heart of Century City, this transit station could become a "third place" that is shared equally among Century City workers and residents. In contrast, the two other station locations near Santa Monica Boulevard favor some office buildings and adjacent neighborhoods at the expense of employees or residents in the southern part of Century City who would have poorer access.

- Santa Monica/Century Park East Station: B
  - Spaces for community gathering nearby, such as the retail space along Century Park East and the mid-block plazas to the Southwest, but does not offer equitable access to those located in the southern section of Century City.
- Constellation/Avenue of the Stars Station: A
  - Central location contributes to equity in access and facilitates walk travel through the most community-gathering spaces, including the large plaza with retail to the Southeast, the Starbucks immediately to the Northwest, and the retail and restaurants in the Westfield Mall.
- Santa Monica/Avenue of the Stars Station: B
  - Spaces for community gathering nearby, such as the mid-block plazas on either side of Avenue of the Stars and the retail and restaurants in Westfield Mall, but does not offer equitable access to those located in the southern section of Century City.

2.3 Conclusion

To assess the potential for each of the three proposed Century City stations to attract walk trips, we reviewed the literature on walking to transit. We found that shorter distances from work, home, or other activity places to transit are essential for supporting walk trips to transit, but microscale features of the environment are also important. We structured the literature findings and site evaluation using Mehta's hierarchy of pedestrian needs, which identifies six environmental levels that support walking: accessibility, usefulness, safety, comfort, sensory pleasure, and sense of belonging. Using research findings and urban design theory, we developed criteria for each of these levels and graded each station site based on our observations and data provided by PB.

The Santa Monica/Century Park East Station site received the lowest grades overall, not only because it has the lowest estimates of transit riders within all walksheds, but also because it is least accessible to jobs and the concentration of useful destinations at the Westfield Mall. It is only accessible via one thru-block pedestrian path and is adjacent to the poor pedestrian street environment along Santa Monica Blvd. It benefits from its location on Century Park East, a street that, near the North end, offers a moderate level of safety, comfort, and sensory pleasure.

The Santa Monica/Avenue of the Stars Station received slightly better grades. It had low to medium estimates of transit riders compared to the other stations locations. Although it is accessible by high-quality thru-block pedestrian paths and provides convenient access to utilitarian destinations in the Westfield Mall, it is not in a central location to Century City jobs. Additionally, we think its street-level environment would leave pedestrians feeling exposed to traffic and criminal danger. Walking at street level would also seem like a burden due to little coverage from the elements and few interesting things to look at.

The Constellation/Avenue of the Stars station site received the highest grades. It has by far the highest estimates of transit riders in all three walksheds. It is more accessible to more workers and residents, especially those most likely to use transit. It is also located next to many utilitarian destinations that would facilitate trip chaining. The Constellation/Avenue of the Stars site also benefits from its location away from Santa Monica Blvd, a major barrier that contributes to traffic exposure and offers little in the way of safety or sensory pleasure. While neither Constellation nor Avenue of the Stars are great pedestrian streets, they do provide a sufficiently safe and comfortable walk environment. Additionally, this site benefits from easy access to a high-quality mid-block green space and social space. Its location at the center of the neighborhood puts it in a unique position to provide equal access from the surrounding worksites and neighborhoods and to contribute to a sense of equal belonging to transit riders. Future development of the vacant lot on the Northeast corner of the intersection is also a unique opportunity to bring in a greater sense of place and to anchor the station at the heart of the Century City neighborhood.

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3.0 TECHNICAL APPENDIX A: DETAILED LITERATURE REVIEW

3.1 Walking distance to transit

3.1.1 Distance to transit and transit use

There is a strong negative relationship between distance to/from transit stations and transit use. Distance to the closest transit station is a consistent predictor of mode choice in travel-demand forecasting models, which assume that people will minimize travel time and cost. Many models suggest that a minute of walk time to or from transit service is two to three times more onerous than a minute of in-vehicle travel time (Crowley, Shalaby et al. 2009). A meta-analysis of studies on the relationship between the built environment and transit use showed that distance to the nearest transit stop had one of the highest weighted average elasticity for transit use (0.29) (Ewing and Cervero 2010). Transit commuters consistently report a higher level of ease of access to transit than non-transit commuters (Lachapelle, Frank et al. 2011). And distance to the nearest transit stop is even more important for those who have a choice between riding transit or driving (Beimborn, Greenwald et al. 2003). The negative relationship between distance to transit stations and transit use holds true for trip origins and destinations. For commuters, these are home and work.

3.1.1.1 Home to station

A Toronto Area study found that walk to subway mode share for those living within a 656 ft (200 m) airline distance of the nearest subway station was 36%; for those living 657 – 1,312 ft (201 – 400 m) it was 32%. Walk to subway mode share dropped substantially to 17% for those living 1,313 – 2,624 ft (401 – 800 m) from the nearest station and was only 3% for those farther than 2,625 ft (801 m) from a station (Crowley, Shalaby et al. 2009). Similar trends were seen in a California study using aggregate data (Kolko 2011). An average of 6.7% of residents in census block groups less than a half mile from a fixed-line transit station commuted by transit whereas only 1.1% of residents in census block groups farther than a half-mile but in the same county commuted by transit.

Decreasing distances between home and transit can lead to increases in transit use. A case study of 48 Salt Lake City residents in a neighborhood that experienced light rail station development, 11 residents began using light rail transit (LRT) after the station opened (Brown and Werner 2009). New LRT users had previously lived an average of 2,417 ft (737 m) from the closest station and now lived an average of 964 ft (294 m) from the new station. None of the new transit riders were previously bus riders.

3.1.1.2 Work to station

Research examining the relationship between work proximity to transit and use suggests that thresholds of distance between transit and the workplace are even more restrictive than those of distance from the home to transit. Kolko's (2011) California study of proximity to transit using census block groups found a pronounced drop in work transit mode share for distances above one half mile – from 7.2% at distances shorter than a half mile to 0.5% for distances longer than one half mile. In a survey of Transit Oriented Development (TOD), residents who lived within a half mile of Portland, OR, area light rail stations, there was no difference in average actual walk distances from home to transit stations for transit commuters and non-transit commuters. However, distance perceptions differed between transit and non-transit users: transit commuters estimated that it took an average of 9.6 minutes to walk from a LRT station to work or school, while non-transit commuters

estimated that it would take an average of 15.5 minutes. In the same study, a major drop in transit commuting appeared when the work or school location was more than 15 minutes (about 0.75 miles) from the LRT station and almost no one commuted by transit if the walking time was 30 minutes (1.5 miles) or more (Dill 2006).

Shares of employees commuting via transit at worksites also offer insight into the relationship between worksite distance from transit and transit use. In a 2003 survey of 887 workers at 10 predominantly suburban office buildings located within ½ mile of a rail station in five California metropolitan areas, Cervero (2006) found that 18.8% used transit as their primary commute mode – nearly three times the weighted average of 6.3% in the counties in which the offices were located. Even within these 10 worksites, distance had a relatively steep nonlinear negative relationship with transit ridership. That is, the percentage of workers commuting by transit declined sharply as distance increased only slightly (Figure 3-1). This effect is known as distance decay. A similar relationship was found in an analysis of travel surveys including 251,835 employees from 1,153 worksites in the San Francisco Bay area. Worksites within one quarter mile of rail stations had a 19.8% share of commute trips by transit; those located between 0.25 to 0.5 miles from a transit station had 4.0% transit commute share, and those more than ½ mile had 2.5% commute trips by transit (Dill 2003).

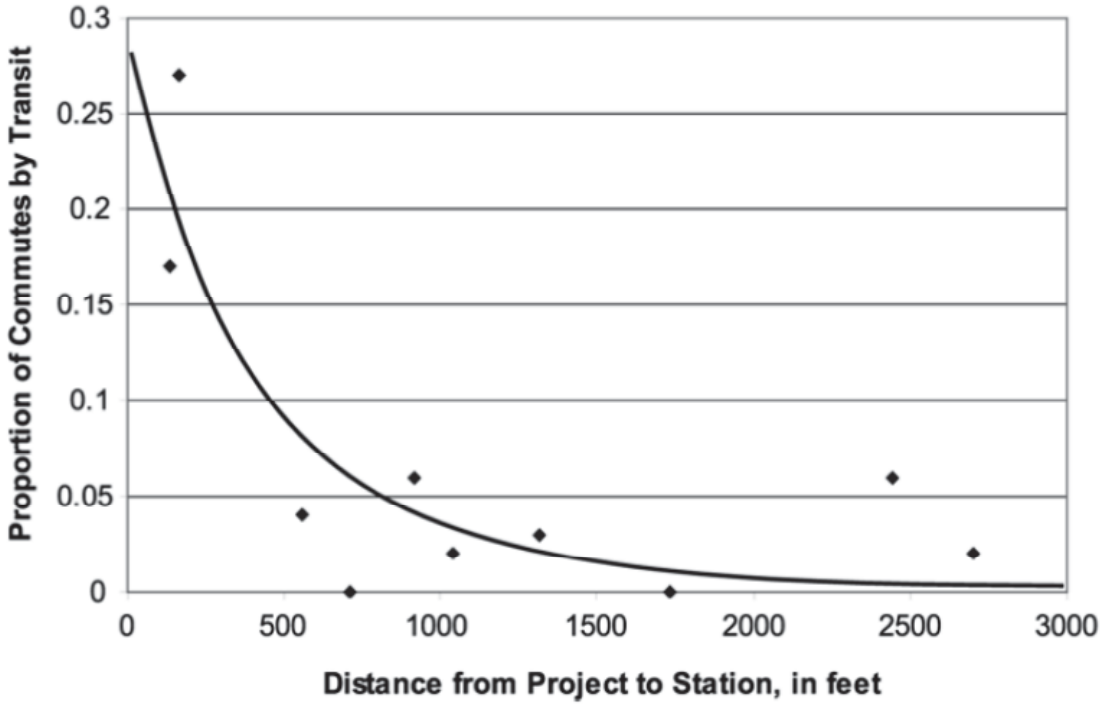


Figure 3-1: An example of the distance decay effect of walking to transit from 10 California office projects (Cervero 2006).

Two California studies quantified the relationship between distance to rail transit and worksite rail transit commute share. Cervero (1994) found an elasticity of −0.8, where a 10% increase in walking distance was associated with about an 8% decline in rail modal split. Dill (Dill 2003) found an elasticity of -1.0, where every 10% increase in walking distance resulted in about a 10% decline in transit use. A federal Transit Cooperative Research Programs (TCRP) report estimated that the share of workers commuting by rail dropped by about 1.5% for every 100 ft away from a rail station, up to one mile (Seskin, Cervero et al. 1996).

Survey responses confirm that longer distances from transit are a disincentive for transit use. In a survey of 1,027 office workers at Shady Grove, an employment site outside the Washington D.C. Beltway, located 1-3 miles from the suburban terminus of the Metrorail Red Line, the 980 workers who commuted by auto and carpool cited the distance from a transit stop as the primary deterrent for them using transit (Douglas and Evans 1997).

3.1.2 Distance to transit and access mode choice

Distance is also a major factor for those who do choose to travel via transit because it affects how they access a transit station (Kim, Ulfarsson et al. 2007). In a study of home-based origin trips based on a 1992 BART rider survey, only 24% of the riders walked from their home to a BART station, most others drove or took the bus. However, more than 76% egressed their destination station on foot. Distance was the most significant factor in the choice to walk from home to a BART station (Loutzenheiser 1997).

In Singapore, a survey of passengers waiting for MRT (Mass Rail Transit) between 8 AM and noon found that 60% walked to the station instead of taking feeder buses or LRT. A sub-modal split model showed that the difference in distance between walking directly to an MRT station and walking to a feeder mode was the most significant factor affecting the probability of walking (Olszewski and Wibowo 2005).

Analyses of access modes to San Francisco Bay Area Rapid Transit (BART) stations and LRT stations in Edmonton, Canada, found that that walking accounted for more than 50% of the access mode for distances up to approximately 2,952 ft (900 m), after which the bus became the dominant access mode (O'Sullivan and Morrall 1996).

3.1.3 Walk distances to/from transit

Given the strong negative relationship between distance and transit use as well as distance and walking to transit, it should come as no surprise that distances walked to transit are relatively short. Median walk distances to or from LRT range from about a fifth- to a half mile (O'Sullivan and Morrall 1996; Ewing 1998; Besser and Dannenberg 2005; Dill 2006; Schlossberg, Agrawal et al. 2007). Average walk distances tend to be slightly higher (O'Sullivan and Morrall 1996; Besser and Dannenberg 2005). The 75th percentile of walk distances is roughly one half to two-thirds of a mile (Besser and Dannenberg 2005; Olszewski and Wibowo 2005; Schlossberg, Agrawal et al. 2007). As shown in Table 3-1, the maximum walk distance to LRT appears to be about a little less than two miles (O'Sullivan and Morrall 1996; Dill 2006; Schlossberg, Agrawal et al. 2007; Guo 2009).

Table 3-1: Observed walk distances to/from transit

Study information							Distances (miles)		
Reference	Location	Date	Data source	Transit type	Trip type	N*	Mean	Median	Max
Besser and Dannenberg (2005)	U.S.	2001	Travel diary	All	All	11,940		0.4	72% <0.5
Dill (2006)	Portland, OR	2005	Survey of TOD residents (<0.5 miles from LRT station)	LRT	Home-station	NR		0.33	
					Station-work or school	NR		0.48	~1.5
Guo (2009)	Boston, MA	1994	Rider survey	Subway	Station-CBD destination	2,748	0.5		1.98
Olszewski and Wibowo (2005)	Singapore	2002-3	Rider survey	MRT	Origin-station	1,430	0.38		77% <0.5
O'Sullivan and Morrall (1996)	Calgary, Canada	1993-4	Rider survey	LRT	All	NR	0.26	0.20	2.30
					All to/from CBD station	NR	0.20	0.17	1.59
					All to/from suburban Station	NR	0.40	0.34	2.30
Schlossberg, Agrawal et al. (2007)	Portland, OR, and San Francisco, CA	2006	Rider survey	LRT	Origin-station	328	0.52	0.47	1.88 (75% < 0.68)
Ewing (1998)	U.S.	1990	Travel diary	All	All	NR		0.25	
Krygsman, Dijst et al. (2004)	Amsterdam, The Netherlands	2000	Travel diary	Train	Home-station (for work trips)	287	0.43		
					Station-work	287	0.47		
				Bus/Tram/ Metro	Home-station (for work trips)	125	0.30		
					Station-work	125	0.30		
Kim, Ulfarsson et al. (2007)	St. Louis, Missouri	2002	Rider survey	LRT	Trips to or from home		0.47 (0.28 st. dev)		
Townsend and Zacharias (2010)	Bangkok, Thailand	2006	Observation	MassRT	Station-destination	778	0.20 (0.14 st. dev.)		

Note: Studies that reported travel times instead of distances were converted using a walk speed of three mph.* NR = Not Reported

The evidence shows that people are willing to walk further to access rail transit compared to bus (O'Sullivan and Morrall 1996; Crowley, Shalaby et al. 2009). This appears to be a function of differences in service attributes (e.g., travel time, reliability, information, comfort, safety, etc.) between bus and rail, since bus and rail lines with similar service attributes typically attract the same levels of ridership (Ben-Akiva and Morikawa 2002).

Some people will simply walk long distances to transit. Maximum observed walking distance are around two miles, both in CBDs and suburbs (O'Sullivan and Morrall 1996; Dill 2006; Schlossberg, Agrawal et al. 2007; Guo 2009). Mean and median distances to and from transit, however, are usually shorter in CBDs than suburbs (O'Sullivan and Morrall 1996; Krygsman, Dijst et al. 2004). For this reason, it has been suggested that short walking distances to transit are more of a reflection of higher densities of origins and destinations around transit stations than actual willingness to walk. Canepa (2007) suggests that the per-capita portion of transit riders who walk to access transit may be similar up to 1.25 miles (2 km) from a transit station. Shorter mean and median walk distances to transit are observed simply because a greater absolute number of residents and employees are located at shorter distances.

The preponderance of evidence, however, points to the conclusion that distance is a major factor in capturing walk-on/walk-off transit trips. In addition to distance, numerous other environmental factors are taken into consideration by those choosing to access/egress transit on foot. These are explored in the next section.

3.2 Walk Environment

Walking to transit can be made more pleasant and less burdensome if the route passes through a high-quality pedestrian environment. Defining a high quality pedestrian environment is difficult because less tangible concepts such as comfort and aesthetics inevitably come into play. Urban design theory does, however, provide a workable framework for deconstructing a quality pedestrian environment. Building on previous urban design theories (and borrowing a structure from Maslow) Mehta (2008) proposed a seven-level hierarchy of needs in the decision-making process leading to walking: (1) feasibility, (2) accessibility, (3) usefulness, (4) safety, (5) comfort, (6) sensory pleasure, and (7) sense of belonging. Mehta's hierarchy provides a useful framework not only for defining what constitutes a quality walk environment, but also for identifying which factors are more important than others in making the decision to walk. Cross-referencing Mehta's hierarchy with definitions of walkability from the fields of urban planning, transportation, urban design, and public health (Lo 2009) enables us to develop a robust framework in which to assess the walk route environment Table 3-2.

Table 3-2: Hierarchy of walking needs and facilitators.

Hierarchy Level	Need	Facilitators
1	Feasibility	Mobility, time
2	Accessibility	Reasonable distances Presence of continuous and well-maintained sidewalk path directness and street network connectivity universal access designs
3	Usefulness	Destinations that fulfill basic needs Land-use density Land-use diversity or mix
4	Safety	No threat of traffic collisions No threat of crime
5	Comfort	Street trees and landscaping Generous sidewalk widths Shade and shelter Lack of obstacles Flat topography
6	Sensory pleasure	Moderate level of variety and novelty as well as order and coherence Street definition (fenestration, signage, etc.) Stimulating, but not chaotic
7	Sense of belonging	Defined by local conditions Familiarity, acceptance "Third places" with collective ownership

Source: Adapted from (Mehta 2008)

Mehta's framework was developed for walking in general. Walking for transit and recreation are different behaviors and associated with different environmental characteristics (Lee and Moudon 2006). Nevertheless, many basic walking needs have been associated with walking to or from transit. For example, neighborhood walkability, calculated using net residential density (the need for "usefulness" noted in the framework), intersection density (accessibility), retail floor area ratio and land use mix (usefulness), have been associated with both regular and infrequent transit commuting among individuals (Lachapelle, Frank et al. 2011), as well as with increased ridership at transit stops (Ryan and Frank 2009). In a study of the relationship between site design, travel demand management strategies and commute mode choice at a variety of workplaces in Southern California (Cambridge Systematics 1994), the greatest factor associated with transit use was the presence of an "aesthetic" urban setting, which was defined as an environment that possessed abundant street trees and sidewalks (comfort), and was free of graffiti (safety). Factors more specific to each of the needs listed in the framework have also been associated with walking to transit.

3.2.1 Feasibility

In the hierarchy of walking needs, feasibility is a primarily individual factor: a pedestrian trip is feasible if a person is mobile and has the time for it. Since we are concerned with exploring environmental characteristics that contribute to walkability, this need is not examined in great depth. However, in the third section of this review, we discuss the extent to which amounts of walking and distances walked are influenced by the demographic and socioeconomic characteristics of the population.

3.2.2 Accessibility

The concept of accessibility focuses on travel time and combines measures of proximity, convenience, and comfort (Lee 2005). As described in the first section, physical distance is one of the most influential factors in explaining the decision to walk to transit. For those who chose to walk to rail stations in Portland and the Bay Area, the first consideration for route choice was its directness (affecting how quickly one could get to and from the station) (Schlossberg, Agrawal et al. 2007). However, pedestrians may choose not only the quickest routes but also the "best" ones. Pedestrians traveling from subway stations to destinations in downtown Boston were more likely to choose paths that had more intersections; wider sidewalks; and traveled through the Boston Common, a large park in the city's central core (Guo 2009). These are all characteristics of direct and accessible routes. Conversely, larger block sizes have been associated with lower transit ridership. A recent meta-analysis of the relationship between the built environment and transit use showed that the percent of 4-way intersections and intersection/street density were among the variables with the highest weighted average elasticities for transit use (0.29 and 0.23, respectively) (Ewing and Cervero 2010).

To support walkability, Ewing (1998) targets block length of 300 feet up to 500 feet. He recommends mid-block crosswalks and pass-throughs for block lengths of 600 feet or longer. O'Sullivan and Morrall (1996) called the directness of pedestrian access to LRT stations a "circuity" factor, which is measured as the walk route distance divided by the airline distance. He thought the factor shouldn't be more than 1.4 and recommended a value closer to 1.2. A low route directness ratio is particularly important to consider for pedestrian travel, which has been documented to favor shortcuts, and which can in turn generate informal paths away from formal walkways (e.g., through parking lots, vacant lands, off-areas in parks, etc.) (Moudon, Hess et al. 1997). The prevalence of jaywalking is another indication that pedestrians favor direct routes and are often willing to sacrifice safety for time (Hess, Moudon et al. 1999). A low route directness ratio is also important to assess for the small walksheds to transit stations: short distances to and from a station mean that potential pedestrians can easily and fairly accurately gauge the length of the straight line distance to and from their transit station and can therefore be discouraged to walk if the actual path to the station is perceived as a significant "detour."

While pedestrian travel and walkability generally refers to people travelling on foot, it also includes mobility-impaired persons travelling by wheelchair. While laws and policies are in place to ensure universal access, wheeled access to buildings and along sidewalks is sometimes still limited and can present a major barrier to wheeled pedestrian travel. A "walkable" environment includes universal access (Lo 2009).

3.2.3 Usefulness

For walking as for other modes of travel, "usefulness" means that there must be places one needs to go to or and activities one want to perform within an acceptable travel time duration. For walking, the more places or activities are within a short distance of each other, the higher the likelihood that many people will choose to walk. Transit use at CBD stations is expectedly higher than at stations in suburban areas because there are simply more places to go to in the former setting than in the latter. One study found that almost half of those working in offices within 1,000 feet of downtown Washington D.C. Metrorail stations commuted by rail, but in offices that were within comparable distances from the more suburban Crystal City and Silver Spring stations, rail commute shares were 16 to 19% (Cervero 2006). Similar trends were seen in California. The percent of commute trips by transit for worksites up to a ¼ mile from BART stations in Alameda, San Mateo, and Santa Clara

Counties were relatively high at 33.6%. However, the share of transit dropped to 6.2% when downtown Oakland and Berkeley stations were excluded. Oakland and Berkeley are higher in density, have a greater mix of land uses, and are more likely to have paid or limited parking than the other station areas in more suburban Richmond, San Leandro, and Fremont (Dill 2003).

Density, land use mix, and higher costs of car travel (including parking availability and costs) seem to be the factors that give CBD stations the competitive edge over suburban stations. Suburban stations with higher rates of transit ridership have characteristics which are similar to those of downtown environments: within an area of 500 ft of less from the station, the density of workers is high, the land uses are mixed, and market-rate parking prices are high ($100 per month) (Cervero 2006).

Density can contribute to a useful walking environment by locating such origins and destinations as home, work, and transit stations, within close proximity to one another. In order to support walking, however, the destinations must enable people to carry out daily life, which is more than working, dwelling, and commuting. The need to make intermediate stops on the way to or from work is a factor believed to reduce transit commuting, especially at suburban work sites where few non-work or residential land uses exist. Of people working at suburban California offices located within a half mile of transit stations, those who commuted by private cars were far more likely to chain trips than transit commuters. The main reason for the intermediate stops was to pick up or drop off children (27% of trip chains), followed by shopping (21%), personal business (21%), eating (13%), and social-recreation (8%) (Cervero 2006). Workers in a suburban Washington D.C. office park where distances from offices to the nearest rail transit station ranged from one to three miles, and which had no land use mix and a poor pedestrian environment, often cited the need for transportation during work hours as a deterrent to rail commuting (Douglas and Evans 1997).

In places where multiple destinations are accessible from transit stations, transit users appear to take advantage of them. Subway riders accessing destinations in downtown Boston were more likely to choose paths that passed by more retail parcels. In a model that assumed pedestrians would take the quickest route between transit and their destination, routes that passed one additional retail parcel per 328 ft (100 m) had the equivalent effect of deducting 0.5 minutes from the trip (Guo 2009). In a Bangkok study that observed people exiting MRT stations, most trips that did not end in the pedestrian boarding another motorized vehicle (e.g., taxi or bus) were to retail, followed by residence/hotel, office, services (bank), then eating/drinking (Townsend and Zacharias 2010). In Seattle and Baltimore, transit commuters walked more often to destinations around their work place than non-transit commuters (Lachapelle, Frank et al. 2011). Destinations included food stores, retail, banks, post offices, restaurants, gyms or recreational facilities, and parks.

These studies suggest that, given the opportunity, transit commuters will more readily walk to useful destinations within a transit station area than their non-transit counterparts. Also, even though transit commuters must be able to easily walk to the station from their workplace, they must also be able to walk from their work to restaurants, shopping, and services. Co-locating transit stations with other daily destinations, such as child-care centers and retail, enables workers to consolidate trips.

3.2.4 Safety

After route directness, safety was the second most important factor that people who walked to stations in the Portland Metro and San Francisco Bay Area cited as a reason for choosing their walk route. Specifically, more than 80% agreed or strongly agreed that traffic devices, slower traffic speeds, and sidewalks were important factors in route choice (Schlossberg, Agrawal et al. 2007).

An analysis of walk routes to Singapore MRT stations suggest that riders are more likely to walk to a station rather than take feeder buses or LRT if their walk path has fewer roads to cross or traffic conflicts (i.e., crossing an access road or car park). Each additional at-grade road crossing was estimated to add the equivalent of 182 ft (55.4 m) to the trip, and each traffic conflict added 119 ft (36.3 m) (Olszewski and Wibowo 2005).

In addition to frequent, reliable service, transit riders value an environment of personal safety. Los Angeles transit riders preferred safety over elaborate and attractive station design (Iseki and Taylor 2010). In St. Louis, walking between home and LRT stations was more likely to occur in the evening, except for females, who were more likely to get picked up or dropped off. Females were also more likely to get picked up or dropped off at stations with higher crime rates, suggesting that criminal activity, at or on the way to transit, can deter walk trips (Kim, Ulfarsson et al. 2007).

Conversely, in Bogota, Colombia, a low safety factor was counter-intuitively related to increased transit ridership (Estupinan and Rodriguez 2008). The safety factor included low researcher-perceived safety, high traffic control measures, a higher rate of violent deaths, and a higher rate of crashes and thefts. These results were explained by the authors as relating to the nature of the study area and the possibility that people with fewer resources must walk to transit under unsafe conditions in the developing world. This supports the placement of safety after accessibility and usefulness in the hierarchy of walk needs.

Appleton's (1975) prospect-refuge theory provides insight into the types of physical environments that can contribute to a sense of safety from crime. Appleton's theory states that the ability to survey one's surroundings (prospect) from a place where one cannot easily be seen (refuge) is basic to many biological needs that developed with evolution and survival. According to this theory, pedestrian spaces that provide nearby shelter and edges with clear lines of sight into the surrounding area can increase perceived safety.

3.2.5 Comfort

Pedestrian comfort describes the microclimate conditions such as sunlight, shade, wind, and protection from rain. Comfort can be reduced through minor obstacles or barriers in walk routes, or it can be increased through street furniture, lighting, etc. that support walking (Mehta 2008). Because pedestrians occupy space by being stationary as well as by moving through it, a comfortable pedestrian environment is one that allows for standing, sitting, and impromptu social interactions (Gehl 2006).

People walking from subway stations to destinations in downtown Boston were more likely to choose paths with wider sidewalks (Guo 2009). Transit riders were also more likely to choose a path through a major park. These choices could be made for any number of reasons including the presence of trees, landscaping, benches, and reduced traffic noise.

In Bogota, Colombia, an assessment of the micro-scale environment within 820 ft (250 m) of BRT stations found that several items associated with comfort loaded onto a factor termed "walking support," which was related to increased transit ridership (Estupinan and Rodriguez 2008). The walking support factor included sidewalk quality, amenities (e.g., benches, crossing aids, and public illumination), a positive safety environment, cleanliness, a pedestrian friendly environment, a bike friendly environment, overall positive perceptions of the station, bike paths, and sidewalk buffers. The same study also found that a low safety factor was related to increased transit ridership. This

could mean that safe and comfortable environments attract riders, but those that must use transit will brave less than ideal environments to access transit.

An incline is considered as a physical barrier to walking (Canepa 2007). Guo (2009) found that subway riders accessing destinations in downtown Boston had a disutility of 3.5 minutes if their path went through the hilly Beacon Hill neighborhood. In other words, walking through a hilly neighborhood was the equivalent of walking an additional 3.5 minutes to or from transit.

Steps and stairs also represent a disutility. MRT riders in Singapore were more likely to walk to stations than use other modes if their path helped them avoid stairs. Each additional step added the equivalent distance of 9.2 ft (2.8 m) to the walk trip (Olszewski and Wibowo 2005). Pedestrians crossing a street from a bus stop in Lund, Sweden, either jaywalked (10%) across a heavily trafficked street or walked an additional 160 ft to a crosswalk (87%) rather than using a pedestrian underpass (7%) (Gehl 2006).

3.2.6 Sensory pleasure

Transit riders always seek to minimize walk time to transit. While direct routes minimize travel time, they can be dull and unprotected from the weather, and as such, they are experienced as being longer (Gehl 2006). Rapoport wrote about the importance of "noticeable differences" along the walk route, which account for the sensory stimuli that people experience as they walk (Rapoport 1991). Noticeable differences can be sensed at different scales, including changes in the direction of the walk route, as well as number and frequency of such attributes as doors, trees, windows, etc. The presence of people along the walk route also adds to noticeable differences in the environment itself (Whyte 1980). More noticeable differences along the walk route alter the sense of time that pedestrians feel they spend walking. This has been documented in the case of shopping malls, where people walk longer times than they typically would in less "interesting" environments. Applied to transit station areas, the concept of noticeable differences suggests that transit users would be willing to walk longer distances in a more stimulating environment.

Isaacs (2001) documented the altered sense of time that people experience in walking through stimulating environment. He noted that people often focus on short stages within a walk rather than dwell on how long they are actually walking, and found that paths with smaller spatial dimensions — smaller cross-sectional areas perpendicular to the path and narrower building facades flanking the path, more variation in the spatial dimensions along the path, shorter block dimensions, more intersections, and more changes in direction – were actually perceived to take longer to walk through. Importantly, however, all the routes Isaacs studied were in downtown Dresden, Germany, with a highly stimulating environment. While this finding was attributed to humans perceiving time as the duration of a stimulus, with more stimuli along a route meaning the perception of a longer time, from the perspective of a walk to a transit station, it can be interpreted as people being willing to walk for a longer time if they are being appropriately stimulated by the surrounding environment.

The desire for an interesting, yet not too complex path highlights that sensory pleasure results from variety and novelty as well as order and coherence (Kaplan and Kaplan 1989; Nasar 1998). Numerous attributes of the environment can contribute to sensory pleasure, including:

- the characteristics of the edges of buildings that define the street, including fenestration, shop windows and the goods in them, canopies, awnings, and signage (Rapoport 1991),

- the street and sidewalk, including vehicles, street furniture, and all other physical artifacts on it;
- natural features, such as landscape elements and trees;
- and people and their activities, including movements, sounds, etc. (Whyte 1980).

3.2.7 Sense of belonging

The ideal setting for walking is a space that is welcoming, familiar, and comfortable. The sense of belonging implies a unique relationship between the space and the pedestrian. Places that facilitate a sense of belonging have common characteristics: they are accessible to the public, help shape community attitudes, provide continuity from past to present, cater to mundane but essential everyday functions, and help in establishing a community's identity. The sense of belonging is shared by neighbors, which helps achieve social value and meaning in a community (Lofland 1998). Places imparting a sense of belonging have been called "third places" (Oldenburg 1981), or places that are neither home nor work, yet sensed with similar personal closeness and perhaps even intimacy as home or work.

Intuitively, people may use transit to access "third places," so that planning such places near stations would be beneficial to increase transit use. With this in mind, the station should be located where it has the greatest potential to build a sense of community. Also, a transit station itself could conceivably be designed as a third place that is a publicly accessible, mundane, yet significant part of many "neighbors" lives.

3.3 Other factors known to modify transit use and walking distances to transit

3.3.1 Gender

In the U.S., Women in the 16 to 24, 25 to 34, and 45 to 54 year age groups walk to transit at higher rates than their male counterparts (U.S. Department of Transportation 2009). Men walked farther distances to access LRT in a Calgary, Canada, study (O'Sullivan and Morrall 1996), while in Amsterdam, The Netherlands, men were found to walk shorter distances from transit to work than women (Krygsman, Dijst et al. 2004). Of those walking to or from transit in the U.S., women reported longer walk times, suggesting they walked longer distances to and from transit than men (Besser and Dannenberg 2005).

3.3.2 Car ownership

An increasingly important single factor in explaining variations in transit use is auto availability (Crowley, Shalaby et al. 2009). Higher rates of auto ownership are consistently associated with lower transit ridership (Cervero 2006) and a reduced likelihood of walking to transit (Besser and Dannenberg 2005). Mode choice models that exclusively analyze choice transit users—those who live within a quarter mile of a transit station but have access to an automobile—show that walk time to the nearest transit station is one of the most important factors influencing the decision to use transit (Beimborn, Greenwald et al. 2003). In other words, walk time to transit is more onerous for households with more cars (Ben-Akiva and Morikawa 2002).

3.3.3 Socioeconomic factors and employment land uses

Compared to the general U.S. population, those who walk to transit are more likely to earn less than $15K, be aged 18-29, be less educated, be a minority, and be without access to a car (Besser and Dannenberg 2005). Of those who do walk to transit, those who earn less than $34,999/year, have a high school degree or less, are not non-Hispanic White, and do not own a car reported longer walk times to and from transit, suggesting they walk longer distances to access transit (Besser and Dannenberg 2005).

Because people of lower socioeconomic brackets are more likely to use transit, work sites that employ lower wage workers (and are located close to transit) are more likely to see their employees commute via transit. Of 1,153 worksites in the San Francisco Bay area (excluding San Francisco County) with more than 100 employers, the highest rates of transit use are among transportation-related industries and services, government agencies, retail stores, and hotels (Dill 2003). Stores, hotels, and recreational services employ large numbers of lower-wage employees. The average weekly salaries in California for the accommodation and food service industry are roughly one-fifth those of the finance and insurance industry (Table 3-3).

Table 3-3: 2009 California average annual wages for selected Industries

NAICS Code	Industry	2009 CA Average Annual Wage
72	Accommodation and food service	$ 18,616
44-45	Retail Trade	$ 30,160
56	Administrative and waste services (includes secretarial services, security, janitorial, and landscaping)	$ 35,464
54	Professional and technical services (includes law, accounting, architecture, advertising, and computer programming)	$ 85,020
52	Finance and insurance	$ 87,412
51	Information (media)	$ 92,872

Source: (Bureau of Labor Statistics 2009)

3.3.4 Housing type and transit use

Residential units in multifamily buildings (apartments or condominiums) are typically smaller than single-family houses, and they are more compactly developed, yielding higher population densities than single-family development. These types of housing units constitute a large portion of the housing stock in metropolitan areas and need to be taken into account in estimating transit ridership around stations. Evidence exist that multifamily dwellers have fewer cars, travel shorter distances and ride transit at higher levels than their single-family counterparts. Based on the 2005 American Housing Survey, Larco (2009) noted that the modal split between suburban multifamily and single-family dwellers was 6.6% versus 1.5%. The percentage of public transit users among suburban multifamily dwellers approached that of urban dwellers (9.4%). Income differences between these populations also explained the higher use of transit: while 46% of the households in single-family earned $58,000 or less, almost 80% of those in multifamily did so. This difference in income is in part explained by the smaller size of families living in multifamily housing and the higher number of older retired people who may have some wealth but little income.

3.3.5 Attitudes

There is evidence that attitudes toward the environment, climate change, and transportation influence many to use transit and to walk more. There is also evidence that concerns for health and specifically the negative effects of sedentary behavior motivate some people to use transit. BART riders who walk longer distances from their egress station are more likely to walk from their home to their access station. This suggests that people who undertake regular physical activity are more likely to walk in the first place and thus will walk longer distances from transit to destinations (Kitamura, Mokhtarian et al. 1997; Loutzenheiser 1997). As concerns for the environment increase, especially among the younger generations, transit ridership is likely to increase. While these considerations are not directly germane to this study, they should be included in the longer term planning of station area design and overall system planning as well.

3.3.6 Employer policies

Station-area residents or workers whose employers offer flex time programs or assistance with transit costs report higher levels of commute trips by transit. Those whose employers offer free parking or assistance with car costs report much lower levels of commute trips by transit (Canepa 2007). The probability of suburban California office workers commuting by transit fell as the supply of parking relative to workforce size increased. Employer assistance in covering the cost of transit travel, such as the provision of deeply discounted Eco-passes, significantly increased the odds of transit-commuting (Cervero 2006). In a survey of TOD residents who lived within a half mile of Portland, OR, area rail stations, workers and students who would have to pay to park at work were far more likely to use transit (Dill 2006).

4.0 TECHNICAL APPENDIX B: DETAILED STATION SITE EVALUATION

Based on the literature on walking to transit and walk environments, we developed a list of criteria to evaluate the three proposed Century City station sites. The criteria are organized using Mehta's (2008) hierarchy for pedestrian needs. Mehta's hierarchy allows us to order the criteria in descending order of importance for creating a completely walkable environment. Thus, criteria that meet basic walk needs are listed first and criteria that contribute to a pleasant walk environment are listed later. For simplicity, we rank each of the three proposed station sites using a letter grade similar to the Level of Service (LOS) grades used in traffic engineering. High rankings correspond to characteristics that are likely to result in more people walking to transit and/or a more pleasant walk trip to transit. Table 4-1 summarizes the results of the evaluation using a quarter-mile walkshed. Except when noted otherwise, a quarter-mile was used because the literature suggests that the majority of walk trips to transit originate within this distance. Reasoning for each of the rankings is described in the remainder of this appendix.

Table 4-1: Detailed station evaluation by individual criterion and rankings. Stations are evaluated using a quarter mile walkshed.

Hierarchy Level	Domain	Criteria	Santa Monica/ Century Park East	Constel-lation/ Avenue of the Stars	Santa Monica/ Avenue of the Stars
Accessibility	Work	Jobs within ¼ mile	C	A	B
		Likely number of low wage jobs	C	A	B
	Home	Population within ½ mile	B	B	B
		Population within ½ mile, Ratio of MF to SF housing	B	A	B
	Route directness	Sidewalks continuity along streets	A	A	A
		Universal access	B	B	B
		Thru-block pedestrian paths, formal	B	B	A
		Pedestrian paths, informal	N/A	N/A	N/A
		Access to buildings	A	A	A
		Pedestrian network length and route choices	C	A	C
Usefulness	Utilitarian destinations Trip chaining potential	Proximity to retail	C	A	A
		Proximity to food, drink, entertainment	C	A	B
		Proximity to present transit boardings	C	A	B
Safety	Traffic	Crosswalks at street intersections	A	A	A
		Crosswalks timing	C	C	C
		Shorter crosswalk lengths	B	B	C
		Mid-block Crosswalks	B	B	C
		Few curb cuts and driveway interruptions	C	C	C
		Low traffic volume	C	B	C
		Low traffic speed	C	B	B
	Crime	Live security presence	A	A	A
		Lack of potential offenders	A	A	A
		Lighting, street	B	B	B
		Lighting, pedestrian path	A	A	A
		Prospect-refuge, streets	B	B	C
		Prospect-refuge, path	A	A	A
Comfort		Level topography	A	B	B
		Lack of stairs	A	A	A
		Sufficient sidewalk width	B	B	B
		Shade and shelter	B	B	B
		Street trees	A	B	B
		Landscaping, green spaces	B	A	B
Sensory Pleasure		Noticeable differences, physical	B	B	B
		Noticeable differences, social (people and events)	B	A	A
Sense of belonging		Proximity to neighborhood center and community gathering spaces	B	A	B

4.1 Accessibility

4.1.1 Distances

Jobs within ¼ mile: The literature suggests that employees will walk short distances between transit and their place of work. Therefore we use a quarter mile as the employment walkshed. To evaluate workplace accessibility, we simply compare the number of jobs within a quarter mile of each proposed transit station. Job estimates were provided by Parsons Brinckerhoff in a May 24, 2011, memorandum.

- Santa Monica/Century Park East Station: C
  - 10,310 jobs within a quarter mile.
- Constellation/Avenue of the Stars Station: A
  - 20,170 jobs within a quarter mile.
- Santa Monica/Avenue of the Stars Station: B
  - 12,050 jobs within a quarter mile.

The station sites have a widely varying number of jobs up to a quarter mile away but a similar number of jobs located within a half mile network distance. Due to these variations, we explore the distance decay effect on the potential number of transit riders and on their likelihood of walking to the three station options. Using the Santa Monica/Century Park East Station as the reference, we compare the relative increase in the absolute number of jobs (Table 4-2) to the number of jobs weighted by the distance to the station (Table 4-3) within the three walksheds. We use 20% to estimate the number of riders or walkers in the 0 to 600 foot walkshed; 10% in the 600 ft to ¼ mile walkshed; and 5% in the ¼ to ½ mile walkshed.[2] Estimates derived from absolute and weighted numbers are similar within the ¼ mile walkshed: the Constellation station has twice the number of jobs or riders/walkers than the Century Park E station, and the Santa Monica/Avenue of the Stars station has not quite 20% more jobs or riders/walkers than the Century Park East station. Within the ½ walkshed, however, the Santa Monica/Avenue of the Stars has slightly more than 10% more jobs or riders/walkers than the Century Park E station, and Constellation has slightly more than 50% more jobs or riders/walkers than the Century Park E station. Clearly, the distance decay effect favors job concentrations near stations, and in this case, the Constellation/Avenue of the Stars location.

Table 4-2: Comparing percent of absolute number of jobs with Santa Monica/Century Park E as reference (100%)

Walkshed	Santa Monica/ Century Park East Station		Constellation Avenue of the Stars Station		Santa Monica/ Avenue of the Stars Station	
	Percent	Total jobs	Percent	Total jobs	Percent	Total jobs
0' to 600'	100	4,820	213	10,260	122	5,900
0' to ¼ Mile	100	10,310	196	20,170	117	12,050
0' to ½ Mile	100	27,290	114	31,040	106	28,870

[2] This exercise is based on a conservative assessment of two California studies. We use Cervero's finding that 19% of workers in 10 primarily suburban sites within ½ mile of a rail station used transit as their primary commute mode (Cervero 2006). We also interpret Dill's finding that within ¼ mile of a station, the share of transit commute was 20%, dropping to 4% between ¼ and 1/2 mile, and to 2.5% beyond ½ mile (Dill 2003). Other references include Cervero 1994, and Seskin, Cervero et al. 1996.

Table 4-3: Comparing percent of jobs weighted with Santa Monica/Century Park E as reference (100%)

Walkshed	Santa Monica/ Century Park East Station		Constellation Avenue Of The Stars Station		Santa Monica/ Avenue Of The Stars Station	
	Percent	Total weighted jobs	Percent	Total weighted jobs	Percent	Total weighted jobs
0' to 600'[1]	100	964	213	2,052	122	1,180
0' to ¼ Mile[2]	100	1,513	201	3,043	119	1,795
0' to ½ Mile[3]	100	2,362	152	3,587	112	2,636

[1]20% jobs within 0' – 600'.
[2]20% jobs within 0' – 600'; plus 10% jobs within 600' - ¼ mile.
[3]20% jobs within 0' – 600'; plus 10% jobs within 600' - ¼ mile; plus 5% jobs within ¼ - ½ mile 5%.

Likely number of low-wage jobs: The literature suggests that people with less income are more likely to use transit. A greater portion of low-wage jobs located within a quarter mile of the station will likely result in a greater number of employees using the station. Without fine-grained salary data for jobs in Century City, we assume that most low-wage jobs will be located in the retail and service industry at the Westfield Mall. Fewer lower wage jobs will be located in the Century Plaza Hotel. Higher wage jobs are assumed to be located in the office towers.

- Santa Monica/Century Park East Station: C
  - Quarter mile walkshed primarily contains offices.
- Constellation/Avenue of the Stars Station: A
  - Located within a quarter mile of the mall and hotel.
- Santa Monica/Avenue of the Stars Station: B
  - Located within a quarter mile of the mall.

Population within ½ mile: The literature suggests that people will walk further from their residences to transit than from work to transit. We use the residential population within ½ mile to assess the relative advantage of each station site attracting home-based transit trips. Population estimates were provided by Parsons Brinckerhoff in a May 24, 2011, memorandum.

- Santa Monica/Century Park East Station: B
  - 1,900 people within half-mile walkshed.
- Constellation/Avenue of the Stars Station: B
  - 2,010 people within half-mile walkshed.
- Santa Monica/Avenue of the Stars Station: B
  - 1,940 people within half-mile walkshed.

Ratio of multi-family to single-family housing: The literature suggests that people with less income and who live in denser, multi-family housing are more likely to take transit compared to people with higher income and who live in less dense, detached single family housing. Because the neighborhoods surrounding century city appear to have similar income profiles, we use the ratio of multi-family to single-family housing in the surrounding neighborhoods to estimate the relative portion of residents that would use transit.

- Santa Monica/Century Park East Station: B
  - Primarily mid-density townhomes.
- Constellation/Avenue of the Stars Station: A
  - Primarily higher density condominiums.
- Santa Monica/Avenue of the Stars Station: B
  - Mix of single-family detached housing and apartments.

4.1.2 Route Directness

Sidewalk continuity along street: Continuous sidewalk coverage along a street network enables pedestrians to traverse the entire extent of the street network. The streets in Century City have almost complete and continuous sidewalk. No station site is more advantageous than any other.

- Santa Monica/Century Park East Station: A
  - Continuous sidewalk coverage.
- Constellation/Avenue of the Stars Station: A
  - Continuous sidewalk coverage.
- Santa Monica/Avenue of the Stars Station: A
  - Continuous sidewalk coverage.

Universal access: The formal pedestrian paths in the Century City site are characterized by stairs and changes of levels, making it difficult, if not impossible for wheelchair bound pedestrians to traverse. The sidewalk coverage in the area is, however, complete and there is undoubtedly wheelchair access to all buildings in the site. Therefore no site had an advantage on this criteria.

- Santa Monica/Century Park East Station: B
  - Accessible streets and buildings.
- Constellation/Avenue of the Stars Station: B
  - Accessible streets and buildings.
- Santa Monica/Avenue of the Stars Station: B
  - Accessible streets and buildings.

Thru-block pedestrian paths, formal: Formal pedestrian paths allow more direct and often more comfortable access to places off the street grid. These are especially important in places like Century City, which are characterized by large blocks. We compared the accessibility of each site via formal thru-block pedestrian paths within a quarter mile.

- Santa Monica/Century Park East Station: B
  - Accessible via a formal pedestrian path running East-West between Avenue of the stars and Century Park East

- Constellation/Avenue of the Stars Station: B
  - Accessible via a formal pedestrian path (plaza) through the block on the Southeast corner of the intersection of Avenue of the stars and Constellation Blvd. Also near the networks of pedestrian paths accessible through the South entrance of Westfield Mall.
- Santa Monica/Avenue of the Stars Station: A
  - Accessible via formal pedestrian paths in each of the blocks on the East and West side of Avenue of the Stars.

Pedestrian Paths, informal: Informal pedestrian paths provide more direct routes where the street network or formal pathways are insufficient. We found no informal pedestrian paths in Century City.

- Santa Monica/Century Park East Station: N/A
  - None.
- Constellation/Avenue of the Stars Station: N/A
  - None.
- Santa Monica/Avenue of the Stars Station: N/A
  - None.

Access to buildings: building access in the Century City Plaza was consistently clear and straightforward. Pedestrian paths and plazas related well to the buildings they accessed. We found no buildings that would be confusing or difficult to access.

- Santa Monica/Century Park East Station: A
  - Nearby buildings appeared accessible.
- Constellation/Avenue of the Stars Station: A
  - Nearby buildings appeared accessible.
- Santa Monica/Avenue of the Stars Station: A
  - Nearby buildings appeared accessible.

Pedestrian network length and route choice: Good pedestrian network connectivity is characterized by blocks of 600 feet or less or thru-block pedestrian paths when blocks are longer than 600 feet. These distances between network nodes provide a variety of route choices and result in a longer pedestrian network. Century City is characterized by large block, but several thru-block access paths. The pedestrian network route choices and length within a quarter mile of each station site was reviewed on the basis of the number of pedestrian routes (sidewalk-lined street blocks and thru-block paths) within the quarter-mile walkshed.

- Santa Monica/Century Park East Station: C
  - Four routes: Santa Monica Blvd (East and West), Century Park East, and the thru-block pedestrian path between Century Park East and Avenue of the Stars.

- Constellation/Avenue of the Stars Station: A
  - Seven routes: Avenue of the Stars (North and South), Constellation Blvd (East and West), pedestrian path through the block to the Southeast, pedestrian paths accessible through the South entrance of Westfield Mall, Century Park East, and the thru-block pedestrian path between Century Park East and Avenue of the Stars.
- Santa Monica/Avenue of the Stars Station: C
  - Five routes: Avenue of the Stars (South), Santa Monica Blvd (East and West), pedestrian paths accessible through the North entrances of Westfield Mall, thru-block pedestrian path between Century Park East and Avenue of the Stars.

4.2 Usefulness

4.2.1 Utilitarian destinations trip chaining potential

Proximity to retail: To assess each site's potential to enable transit commuters to consolidate shopping trips with work trips, we assessed distances between retail (the Westfield Mall) and the station location:

- Santa Monica/Century Park East Station: C
  - Farthest from the Westfield Mall.
- Constellation/Avenue of the Stars Station: A
  - Close to the Northeast mall entrance.
- Santa Monica/Avenue of the Stars Station: A
  - Close to the South mall entrance.

Proximity to food, drink, and entertainment: To assess each site's potential to enable transit commuters to consolidate dining and entertainment trips with work trips, we assessed distances between food and entertainment destinations and the station location:

- Santa Monica/Century Park East Station: C
  - Some food and drink sources along Century Park East.
- Constellation/Avenue of the Stars Station: A
  - Close to Movie Theater, grocery store, and food court at South end of mall, as well as several smaller food and drink outlets near Avenue of the stars and Constellation Blvd intersection.
- Santa Monica/Avenue of the Stars Station: B
  - Close to food and drink sources at north and of mall and within reasonable distance of food sources along Century Park East and the Movie theater, grocery store, and food court at the south end of the mall.

Proximity to present transit boardings: An analysis of current transit boardings can shed light into the location that current transit riders choose to access transit. Boarding data for the Century City area show that many boardings are located at corner of Constellation Blvd and Garden Lane, near the South entrance to Westfield mall (Metro 2010). Distances from this location to the proposed station sites are compared.

- Santa Monica/Century Park East Station: C
  - 2.5 blocks from concentration of present transit boardings.
- Constellation/Avenue of the Stars Station: A
  - 0.5 blocks from concentration of present transit boardings.
- Santa Monica/Avenue of the Stars Station: B
  - 1.5 blocks from concentration of present transit boardings.

4.3 Safety

4.3.1 Safety from traffic

Crosswalks at street intersections: Crosswalks at intersections enable pedestrians to safely cross heavily trafficked streets. All major intersections in Century City had sufficient crosswalks with markings and pedestrian signalization.

- Santa Monica/Century Park East Station: A
  - All intersections within ¼ mile have sufficient crosswalks.
- Constellation/Avenue of the Stars Station: A
  - All intersections within ¼ mile have sufficient crosswalks.
- Santa Monica/Avenue of the Stars Station: A
  - All intersections within ¼ mile have sufficient crosswalks.

Longer Crosswalk timing: To support walking for those with varying levels of mobility, or attention span, crosswalk signalization timing must allow sufficient time to allow people with limited ability to safely cross the street. Crosswalks in Century City were generally timed to allow adults walking at a brisk pace barely enough time to cross the street. No major differences were found at various intersections. Crosswalk timing was too short across the area.

- Santa Monica/Century Park East Station: C
  - Crosswalk signalization allows too little time for people with limited mobility to cross the street.
- Constellation/Avenue of the Stars Station: C
  - Crosswalk signalization allows too little time for people with limited mobility to cross the street.
- Santa Monica/Avenue of the Stars Station: C
  - Crosswalk signalization allows too little time for people with limited mobility to cross the street.

Shorter Crosswalk lengths: Shorter crosswalk lengths present less of a barrier to pedestrians crossing the street. Crosswalk lengths were assessed at the street crossings adjacent to the proposed station sites to determine the difficulty pedestrians would have accessing the station from the opposite side of the street

- Santa Monica/Century Park East Station: B
  - Santa Monica Blvd is a very wide street and presents a major barrier. Century Park East is a less wide (6 lanes) and presents only a minor barrier to cross.
- Constellation/Avenue of the Stars Station: B
  - Avenue of the Stars is a very wide street (8 lanes + median) and presents a major barrier. Constellation Blvd is less wide (6 lanes) and less of a burden to cross.
- Santa Monica/Avenue of the Stars Station: C
  - Avenue of the Stars and Santa Monica Blvd are both very wide streets (8 lanes + median) and present a major barrier.

Mid-block crosswalks: at-grade mid-block crossings allow pedestrians to safely access both sides of a street much easier when blocks are long and intersections are far between. We counted the number of mid-block crossings within a quarter mile of each proposed station site to evaluate the safety of mid-block crossings.

- Santa Monica/Century Park East Station: B
  - One mid-block crossing along Century Park East.
- Constellation/Avenue of the Stars Station: B
  - One mid-block crossing near the South mall entrance.
- Santa Monica/Avenue of the Stars Station: C
  - No mid-block crossings within a quarter mile of the site.

Few curb cuts and driveway interruptions: Driveway access through sidewalks disrupts pedestrian travel and creates the potential for collisions between turning cars and pedestrians. Multiple driveways were found along every block face in Century City, contributing to a similar level of danger and discomfort across the site.

- Santa Monica/Century Park East Station: C
  - Driveways found across all block faces.
- Constellation/Avenue of the Stars Station: C
  - Driveways found across all block faces.
- Santa Monica/Avenue of the Stars Station: C
  - Driveways found across all block faces.

Low traffic volume: Streets that carry many cars can contribute to decreased sense of safety. Streets that carry fewer cars make for a better pedestrian environment.

- Santa Monica/Century Park East Station: C
  - Santa Monica Blvd carries a large number of cars. Century Park East carries relatively fewer cars.

- Constellation/Avenue of the Stars Station: B
  - Traffic volume on Constellation Blvd appears low. Avenue of the Stars appears to carry a relatively small number of cars in relation to its capacity.
- Santa Monica/Avenue of the Stars Station: C
  - Santa Monica Blvd carries a large number of cars Avenue of the Stars appears to carry a relatively small number of cars in relation to its capacity.

Low traffic speed: Cars travelling at high speeds contribute to s a decreased sense of safety and. The risk of serious injury or death for a pedestrian in a collision increases as auto speeds increase even moderately. Santa Monica Blvd appeared to have the highest speeds, while North-South streets such as Century Park East and Avenue of the Stars appeared to carry mostly traffic accessing buildings in Century City, and therefore traveling at more moderate speeds. Traffic on Constellation Blvd was very slow, likely due to its short length.

- Santa Monica/Century Park East Station: C
  - Speeds are high on Santa Monica Blvd and only somewhat slower on Century Park East.
- Constellation/Avenue of the Stars Station: B
  - Slower traffic on Constellation Blvd and moderate speeds on Avenue of the Stars.
- Santa Monica/Avenue of the Stars Station: B
  - Speeds are high on Santa Monica Blvd and only somewhat slower on Avenue of the Stars.

4.3.2 Safety from crime

Live security presence: People that appear trustworthy in a pedestrian environment can alleviate fears of crime. Criminals would be unlikely to strike when others are around to intervene or at least bear witness. It appears that the buildings in Century City have numerous plain-clothed and uniformed security personal, which provide a high level of security across the area.

- Santa Monica/Century Park East Station: A
  - Numerous security personnel throughout.
- Constellation/Avenue of the Stars Station: A
  - Numerous security personnel throughout.
- Santa Monica/Avenue of the Stars Station: A
  - Numerous security personnel throughout.

Lack of potential offender: Because a crime requires an offender, pedestrians avoid walking where they may encounter potential offenders, or even persons that may cause discomfort and be perceived as threatening (Mehta 2010). We saw no such people in Century City.

- Santa Monica/Century Park East Station: A
  - No potential offenders observed.
- Constellation/Avenue of the Stars Station: A
  - No potential offenders observed.

- Santa Monica/Avenue of the Stars Station: A
  - No potential offenders observed.

Lighting, street: Although street lighting was more oriented to facilitate auto travel, it was present across the entire site and contributed to the safety of walking at night.

- Santa Monica/Century Park East Station: B
  - Street lighting throughout.
- Constellation/Avenue of the Stars Station: B
  - Street lighting throughout.
- Santa Monica/Avenue of the Stars Station: B
  - Street lighting throughout.

Lighting, pedestrian path: The pedestrian paths all appeared to have sufficient lighting to contribute to safe pedestrian travel at night.

- Santa Monica/Century Park East Station: A
  - Path lighting throughout.
- Constellation/Avenue of the Stars Station: A
  - Path lighting throughout.
- Santa Monica/Avenue of the Stars Station: A
  - Path lighting throughout.

Prospect-refuge, streets: People traveling on foot are made to feel safer if they can easily see others, but have the option of not being seen by others. Open, vacant areas can compromise a pedestrian's sense of safety. Santa Monica Blvd and Avenue of the Stars have large building setbacks and several lanes, contributing to a sense of exposure for pedestrians walking along its sidewalks. Constellation Blvd and Century Park East have better prospect-refuge due to shorter setbacks, fewer auto lanes, shorter block lengths (Constellation Blvd) and street trees between the sidewalk and auto lanes (Century Park East).

- Santa Monica/Century Park East Station: B
  - Santa Monica Blvd has poor prospect-refuge, Century Park East is better.
- Constellation/Avenue of the Stars Station: B
  - Avenue of the Stars has poor prospect-refuge, Constellation Blvd is better.
- Santa Monica/Avenue of the Stars Station: C
  - Santa Monica Blvd and Avenue of the Stars both have poor prospect-refuge.

Prospect-refuge, path: The pedestrian pathways generally had good prospect-refuge. Buildings were nearby, but allowed for good lines of sight.

- Santa Monica/Century Park East Station: A
  - Good prospect-refuge throughout all pedestrian paths.
- Constellation/Avenue of the Stars Station: A
  - Good prospect-refuge throughout all pedestrian paths.
- Santa Monica/Avenue of the Stars Station: A
  - Good prospect-refuge throughout all pedestrian paths.

4.4 Comfort

Level topography: even slight inclines can cause discomfort for those walking, especially those that have more difficulty walking. There is a noticeable upward slope on Avenue of the Stars from Santa Monica Blvd to Olympic Blvd. The remainder of the site was found to be generally flat.

- Santa Monica/Century Park East Station: A
  - Relatively flat.
- Constellation/Avenue of the Stars Station: B
  - Slope along Avenue of the Stars.
- Santa Monica/Avenue of the Stars Station: B
  - Slope along Avenue of the Stars.

Lack of stairs: Similar to slopes, stairs require more effort to cover the same distance. Routes with stairs can deter pedestrian travel. The only stairs in the site were in the pedestrian pathways and were more or less evenly distributed amongst the pathways.

- Santa Monica/Century Park East Station: A
  - Some stairs in the pedestrian pathways.
- Constellation/Avenue of the Stars Station: A
  - Some stairs in the pedestrian pathways.
- Santa Monica/Avenue of the Stars Station: A
  - Some stairs in the pedestrian pathways.

Sufficient sidewalk width: Wider sidewalks enable a greater number of pedestrians to travel without getting in one another's way. The sidewalks in century city were wide enough to support a high volume of pedestrian traffic in comfort.

- Santa Monica/Century Park East Station: B
  - Sufficient sidewalk width throughout.
- Constellation/Avenue of the Stars Station: B
  - Sufficient sidewalk width throughout.

- Santa Monica/Avenue of the Stars Station: B
  - Sufficient sidewalk width throughout.

Shade and shelter: Pedestrians are exposed to the elements when travelling and therefore prefer paths with the option for shelter from sun and rain. We found little shelter along the sidewalks, but sufficient shelter along the pedestrian pathways.

- Santa Monica/Century Park East Station: B
  - Poor along sidewalks, good in pedestrian pathways.
- Constellation/Avenue of the Stars Station: B
  - Poor along sidewalks, good in pedestrian pathways.
- Santa Monica/Avenue of the Stars Station: B
  - Poor along sidewalks, good in pedestrian pathways.

Street trees: Street trees contribute to shade in the summer, offer a buffer from traffic, and create softer edges in hard urban environments. To fulfill these roles, street trees need to be of a sufficient size and located in-between the sidewalk and street. We found street trees throughout the area, but they were only large and located on the street side of the sidewalk along the north end of Century Park East.

- Santa Monica/Century Park East Station: A
  - High quality street trees along North end of Century Park East.
- Constellation/Avenue of the Stars Station: B
  - Street trees present, but small and on the building side of the nearby streets.
- Santa Monica/Avenue of the Stars Station: B
  - Street trees present, but small and on the building side of the nearby streets.

Landscaping and green spaces: Landscaping and green spaces can bring relative calm and quite to what can seem like a hard, noisy environment. We found plenty of landscaping and green spaces throughout the area, particularly in the pedestrian pathways. The highest quality green space, however was in the block to the Southeast of the intersection of Constellation Blvd and Avenue of the Stars.

- Santa Monica/Century Park East Station: B
  - Green space and landscaping nearby.
- Constellation/Avenue of the Stars Station: A
  - Most accessible to the high-quality green space to the Southeast of the intersection of Constellation Blvd and Avenue of the Stars.
- Santa Monica/Avenue of the Stars Station: B
  - Green space and landscaping nearby.

4.5 Sensory Pleasure

Noticeable differences, physical: A moderate variety of facades, shop window displays, awnings, trees, planters, and other physical objects can provide sensory stimulus to pedestrians that contributes to a seemingly shorter walk. A station located near routes with such physical noticeable differences could attract more riders from further away.

- Santa Monica/Century Park East Station: B
  - A high level of physical noticeable differences along the nearby pedestrian path and along Century Park East. Few noticeable differences along Santa Monica Blvd.
- Constellation/Avenue of the Stars Station: B
  - A high level of physical noticeable differences in the nearby pedestrian pathways and plazas. Few physical noticeable differences along Constellation Blvd and Avenue of the Stars.
- Santa Monica/Avenue of the Stars Station: B
  - A high level of physical noticeable differences in the nearby pedestrian pathways and plazas. Few physical noticeable differences along Santa Monica Blvd and Avenue of the Stars.

Noticeable differences, social: A variety of people and human activities and events can also contribute to sensory stimulus that makes pedestrian travel go by quicker. A station located near routes with a higher amount of human activity could attract more riders from further away. We found plenty of human activity and events throughout the area. The epicenter of activity, however, was located around the Westfield mall, particularly the grocery store, food court, and the theater – particularly in the evening.

- Santa Monica/Century Park East Station: B
  - Activity in pedestrian pathways and along Century Park East.
- Constellation/Avenue of the Stars Station: A
  - Near mall activity and a variety of other social spaces particularly the plaza to the Southeast.
- Santa Monica/Avenue of the Stars Station: A
  - Near mall activity and activity within other pedestrian pathways.

4.6 Sense of belonging

Proximity to community gathering spaces: The highest degree of walking enjoyment is achieved in a place where a pedestrian feels that they are part of a community. To facilitate this experience for people walking to transit, the route should pass community gathering spaces. It appears that there are numerous potential spaces for community gathering throughout century city. However, a station located at the center of the four primary blocks that comprise Century City (the intersection of Constellation Blvd and Avenue of the Stars) would enable the most people to traverse these community gathering spaces on their way to or from light rail.

- Santa Monica/Century Park East Station: B
  - Spaces for community gathering nearby.

- Constellation/Avenue of the Stars Station: A
  - Central location contributes to the most pedestrian travel through community gathering spaces on the way transit.
- Santa Monica/Avenue of the Stars Station: B
  - Spaces for community gathering nearby.

4.7 Long-range considerations

Our assessment took into account what is likely to happen over the next decade or so. We considered that the extension of the Purple Line would add greatly to the rail system as a whole because it serves lands that are already densely occupied. Also, the extension runs through areas with a relatively wealthy and educated population, and where a good portion of the population is likely not only to support transit as a "sustainable" means of transport, but also to actually use the rail system.

It would also be advisable to consider the functionality of the subway over a longer period of time, taking into account not only population growth, but also likely changes in travel behavior. Thirty or 50 years from now, the new generation of Los Angelinos will be able to access a rail network that covers a large proportion of the metropolitan region and that links major nodes of concentrated employment and residential areas. Because the network will then be more complete, Angelenos will be able to reach many destinations by rail faster than they will by using their individual cars on congested highways. Taking the train will also be cheaper as parking will inevitably become less readily available (and more expensive). Faster and cheaper travel by transit will lead to higher levels of ridership.

What do these trends suggest about the relative feasibility of the three station locations being considered? Thirty years from now, ridership at Century City will be even higher. Even if mode share does not change, there will be more people using the system because of population growth and because the system will provide access to a large part of the region. Changes in mode share, with more trips taken by transit are also likely, however, for the reasons stated above.

To reduce distances within a station area and to maximize the population having access to the station, a station location should always be located at the 100% corner of the "neighborhood" it serves (the 100% corner is a term that real estate professionals like to use to define the center of activity, and hence the most expensive and revenue-generating location). Having a station at a 100% corner means that the station entries will be at a street intersection serving four fully developed city blocks. In this regard, the station location at Constellation and Avenue of the Stars is the only option offering a 100% corner condition. The two other station location options along Santa Monica Blvd (at either Avenue of the Stars or Century Park East) are less desirable because they are adjacent to a 50% corner. Unless the golf course north of Santa Monica Blvd is developed, a station along Santa Monica Boulevard will always be serving an area that is smaller and has less development (or development potential) than the area served by a 100% corner location. As well, a 50% corner location will always increase average walking distances to and from the transit station.

Appendix C CENTURY CITY STATIONS—JOBS AND POPULATION CALCULATIONS—FULL DEVELOPMENT

Appendix C - Century City Stations - Jobs and Population Calculations - Full Development

Santa Monica/Century Park East Station

A	B	C	D	E	F	G	H	I	
Walkshed/Plan Designation	**Acreage**	**Maximum Development Potential** (units or floor area)	**85% Buildout** (units or floor area)	**90% Commercial Occupancy** (floor area)	**Employees** (410 sq. ft. floor area per employee)	**Residents** (1.9 people per unit)	**Total Employees & Residents**	**Rounded Numbers Used in the Report**	
0-600 feet	12.0								
Residential Single Family (dwelling units)		0				0	8,073	0	Residents
Residential Multi-family (dwelling units)		0				0		8,070	Jobs
Commercial Employment (sq. ft. blg. floor area)		4,326,572	3,677,586	3,309,828	8,073			**8,070**	Total
600 feet to 1/4 mile	36.5								
Residential Single Family (dwelling units)		0				0	3,999	180	Residents
Residential Multi-family (dwelling units)		112	95			180		5,490	Jobs
Commercial Employment (sq. ft. blg. floor area)		2,046,867	1,739,837	1,565,854	3,819			**5,670**	Total
1/4 mile to 1/2 mile	155.1								
Residential Single Family (dwelling units)		28	24			45	34,948	2,310	Residents
Residential Multi-family (dwelling units)		1,402	1,192			2,264		32,640	Jobs
Commercial Employment (sq. ft. blg. floor area)		17,492,972	14,869,026	13,382,124	32,639			**34,950**	Total

Explanation

Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

Column A. The general or specific plan designations for the cities of Los Angeles and Beverly Hills were mapped on a parcel base map (see Figures C-1 through C-3). The walksheds prepared by Fehr & Peers for walking distances of 0 to 600 feet, 600 feet to ¼ mile, and ¼ mile to ½ mile were applied to the base map to identify the parcels and plan designations within the three walkshed areas for each of the three alternative station locations (Figures C-1 through C-3).

Column B. The land area for the plan designations within the 0-600 feet, 600 feet-1/4 mile, and ¼ mile-1/2 mile walksheds (created by Fehr & Peers) was calculated.

Column C. The maximum development potential for the plan designations within the walksheds was calculated based upon the land area within each walkshed multiplied by the maximum density allowed by the respective plan designations within the walksheds. For commercial uses, the Floor Area Ratio (FAR) in the plan documents was used to calculate the maximum development potential expressed in square feet of building floor area. The maximum density for single and multiple family development, expressed as the maximum number of units per acre, was used to derive the maximum amount of residential development potential.

Column D. The maximum (100%) figures in Column C were reduced to 85% for commercial and residential development to be more consistent with a likely full development outcome.

Column E. Commercial development is rarely 100% occupied, and a 90% occupancy rate is assumed (consistent with the Fehr & Peers analysis of existing conditions in Appendix A) The maximum development floor area in column C was reduced by 10% ([full development potential X 0.85] X 0.90 = occupied floor area at full development) to give a more realistic estimate floor area actually occupied by employees.

Column F. The estimated number of employees was calculated by applying an average floor area per employee of 410 square feet to the floor area derived in Column E. This average was based on the current employee/floor area figures supplied by Fehr & Peers for different commercial uses (office - 350 sq. ft., retail - 600 sq. ft., food service - 450 sq. ft., and hotel - 2 rooms) and the planned dominance of office employment in Century City.

Column G. The estimated number of residents was calculated by multiplying the number of units in Column D with an average of 1.9 persons per household.

Column H. The estimated total of employees and residents is presented.

Column I. The estimates in Column H were rounded for presentation in the report as shown. Forecast results showed a decline in jobs in the 600-foot to 1/4 mile walkshed (3,820 future v. 5,490 existing). Existing employment was assumed to remain constant in the future at 5,490.

Appendix C - Century City Stations - Jobs and Population Calculations - Full Development

Santa Monica/Century Park East Employment

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)
600 FOOT	B3	4319001001	Regional Center Commercial	Commercial	6	562,230	477,896	430,106	1,049
600 FOOT	B3	4319001002	Regional Center Commercial	Commercial	6	64,108	54,492	49,043	120
600 FOOT	B3	4319001005	Regional Center Commercial	Commercial	6	359,574	305,638	275,074	671
600 FOOT	B3	4319001903	Regional Center Commercial	Commercial	6	355,205	301,924	271,732	663
600 FOOT	B3	4319001904	Regional Center Commercial	Commercial	6	399,857	339,878	305,891	746
600 FOOT	B2	4319002045	Regional Center Commercial	Commercial	6	310,974	264,328	237,895	580
600 FOOT	B2	4319002057	Regional Center Commercial	Commercial	6	1,141,506	970,280	873,252	2,130
600 FOOT	B3	4319002060	Regional Center Commercial	Commercial	6	1,133,118	963,150	866,835	2,114
				600 FOOT SUBTOTAL		**4,326,572**	**3,677,586**	**3,309,828**	**8,073**
QUARTER MILE	B3	4319001006	Regional Center Commercial	Commercial	6	561,012	476,860	429,174	1,047
QUARTER MILE	B3	4319001007	Regional Center Commercial	Commercial	6	180,100	153,085	137,777	336
QUARTER MILE	B3	4319001008	Regional Center Commercial	Commercial	6	179,156	152,283	137,054	334
QUARTER MILE	B2	4319002046	Regional Center Commercial	Commercial	6	648,054	550,846	495,761	1,209
QUARTER MILE	B2	4319002059	Regional Center Commercial	Commercial	6	328,232	278,998	251,098	612
QUARTER MILE	A3	4328002001	Low Density General Commercial	Commercial	2	18,335	15,584	14,026	34
QUARTER MILE	A3	4328002002	Low Density General Commercial	Commercial	2	11,995	10,196	9,176	22
QUARTER MILE	A3	4328002003	Low Density General Commercial	Commercial	2	11,991	10,193	9,173	22
QUARTER MILE	A3	4328002004	Low Density General Commercial	Commercial	2	11,996	10,196	9,177	22
QUARTER MILE	A3	4328002005	Low Density General Commercial	Commercial	2	11,989	10,190	9,171	22
QUARTER MILE	A3	4328002006	Low Density General Commercial	Commercial	2	11,998	10,199	9,179	22
QUARTER MILE	A3	4328002009	Low Density General Commercial	Commercial	2	48,006	40,805	36,725	90
QUARTER MILE	A3	4328002036	Low Density General Commercial	Commercial	2	24,003	20,403	18,363	45
				QUARTER MILE SUBTOTAL		**2,046,867**	**1,739,837**	**1,565,854**	**3,819**

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)
HALF MILE	C3	4319001009	Regional Center Commercial	Commercial	6	108,198	91,968	82,771	202
HALF MILE	C3	4319001010	Regional Center Commercial	Commercial	6	360,006	306,005	275,405	672
HALF MILE	C3	4319001013	Regional Center Commercial	Commercial	6	429,220	364,837	328,353	801
HALF MILE	C3	4319001014	Regional Center Commercial	Commercial	6	482,768	410,353	369,318	901
HALF MILE	B3	4319001803	Regional Center Commercial	Commercial	6	343,308	291,812	262,631	641
HALF MILE	B2	4319002053	Regional Center Commercial	Commercial	6	674,616	573,424	516,081	1,259
HALF MILE	C3	4319002054	Regional Center Commercial	Commercial	6	195,737	166,377	149,739	365
HALF MILE	C2	4319002055	Regional Center Commercial	Commercial	6	256,441	217,975	196,177	478
HALF MILE	B2	4319002056	Regional Center Commercial	Commercial	6	652,254	554,416	498,974	1,217
HALF MILE	C2	4319003055	Regional Center Commercial	Commercial	6	577,828	491,154	442,039	1,078
HALF MILE	B2	4319003061	Regional Center Commercial	Commercial	6	629,268	534,878	481,390	1,174
HALF MILE	C2	4319003063	Regional Center Commercial	Commercial	6	196,976	167,430	150,687	368
HALF MILE	C2	4319003064	Regional Center Commercial	Commercial	6	4,888,818	4,155,495	3,739,946	9,122
HALF MILE	C2	4319003065	Regional Center Commercial	Commercial	6	723,282	614,790	553,311	1,350
HALF MILE	C2	4319004109	Regional Center Commercial	Commercial	6	1,512,972	1,286,026	1,157,424	2,823
HALF MILE	C2	4319009030	General Commercial	Commercial	1.5	8,038	6,832	6,149	15
HALF MILE	C2	4319009031	General Commercial	Commercial	1.5	7,579	6,442	5,798	14
HALF MILE	C2	4319009050	General Commercial	Commercial	1.5	20,700	17,595	15,836	39
HALF MILE	C3	4319016029	Regional Center Commercial	Commercial	6	602,790	512,372	461,134	1,125
HALF MILE	C3	4319016030	Regional Center Commercial	Commercial	6	625,704	531,848	478,664	1,167
HALF MILE	C3	4319016031	Regional Center Commercial	Commercial	6	1,144,044	972,437	875,194	2,135
HALF MILE	C3	4319016032	Regional Center Commercial	Commercial	6	985,194	837,415	753,673	1,838
HALF MILE	C2	4327017015	General Commercial	Commercial	1.5	14,069	11,959	10,763	26
HALF MILE	C2	4327017016	General Commercial	Commercial	1.5	7,030	5,975	5,378	13
HALF MILE	C2	4327017017	General Commercial	Commercial	1.5	7,026	5,972	5,375	13
HALF MILE	C2	4327017018	General Commercial	Commercial	1.5	7,022	5,969	5,372	13
HALF MILE	B2	4327017019	General Commercial	Commercial	1.5	8,903	7,568	6,811	17
HALF MILE	B2	4327018010	General Commercial	Commercial	1.5	8,053	6,845	6,161	15
HALF MILE	B2	4327018011	General Commercial	Commercial	1.5	14,130	12,010	10,809	26
HALF MILE	B2	4327018012	General Commercial	Commercial	1.5	7,064	6,004	5,404	13
HALF MILE	B2	4327018013	General Commercial	Commercial	1.5	7,066	6,006	5,405	13
HALF MILE	B2	4327018014	General Commercial	Commercial	1.5	8,174	6,948	6,253	15
HALF MILE	B2	4327019010	General Commercial	Commercial	1.5	8,042	6,836	6,152	15
HALF MILE	B2	4327019011	General Commercial	Commercial	1.5	7,064	6,005	5,404	13
HALF MILE	B2	4327019012	General Commercial	Commercial	1.5	7,062	6,003	5,402	13
HALF MILE	B2	4327019013	General Commercial	Commercial	1.5	7,064	6,005	5,404	13

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)
HALF MILE	B2	4327019023	General Commercial	Commercial	1.5	15,240	12,954	11,659	28
HALF MILE	A3	4327028001	Low Density General Commercial	Commercial	2	773,438	657,422	591,680	1,443
HALF MILE	A3	4327028002	Low Density General Commercial	Commercial	2	664,054	564,446	508,001	1,239
HALF MILE	A2	4327028003	Low Density General Commercial	Commercial	2	46,669	39,669	35,702	87
HALF MILE	A3	4328002010	Low Density General Commercial	Commercial	2	12,002	10,202	9,181	22
HALF MILE	A3	4328002011	Low Density General Commercial	Commercial	2	12,006	10,205	9,184	22
HALF MILE	A3	4328002012	Low Density General Commercial	Commercial	2	11,999	10,199	9,180	22
HALF MILE	A3	4328002013	Low Density General Commercial	Commercial	2	11,996	10,197	9,177	22
HALF MILE	A3	4328002034	Low Density General Commercial	Commercial	2	23,991	20,393	18,353	45
HALF MILE	A3	4328003001	Low Density General Commercial	Commercial	2	11,991	10,193	9,173	22
HALF MILE	A3	4328003015	Low Density General Commercial	Commercial	2	11,785	10,017	9,016	22
HALF MILE	A3	4328003025	Low Density General Commercial	Commercial	2	184,735	157,024	141,322	345
HALF MILE	A3	4328004017	Low Density General Commercial	Commercial	2	17,407	14,796	13,317	32
HALF MILE	A3	4328008010	Low Density General Commercial	Commercial	2	17,991	15,292	13,763	34
HALF MILE	A3	4328008011	Low Density General Commercial	Commercial	2	12,239	10,403	9,363	23
HALF MILE	A3	4328008012	Low Density General Commercial	Commercial	2	12,253	10,415	9,373	23
HALF MILE	A3	4328008013	Low Density General Commercial	Commercial	2	12,239	10,403	9,363	23
HALF MILE	A3	4328008014	Low Density General Commercial	Commercial	2	12,245	10,408	9,368	23
HALF MILE	A3	4328008015	Low Density General Commercial	Commercial	2	12,250	10,413	9,372	23
HALF MILE	A3	4328008016	Low Density General Commercial	Commercial	2	12,258	10,419	9,377	23
HALF MILE	A3	4328008017	Low Density General Commercial	Commercial	2	12,246	10,409	9,368	23
HALF MILE	A3	4328008027	Low Density General Commercial	Commercial	2	48,425	41,161	37,045	90
				HALF MILE SUBTOTAL		**17,492,972**	**14,869,026**	**13,382,124**	**32,639**

Appendix C - Century City Stations - Jobs and Population Calculations - Full Development

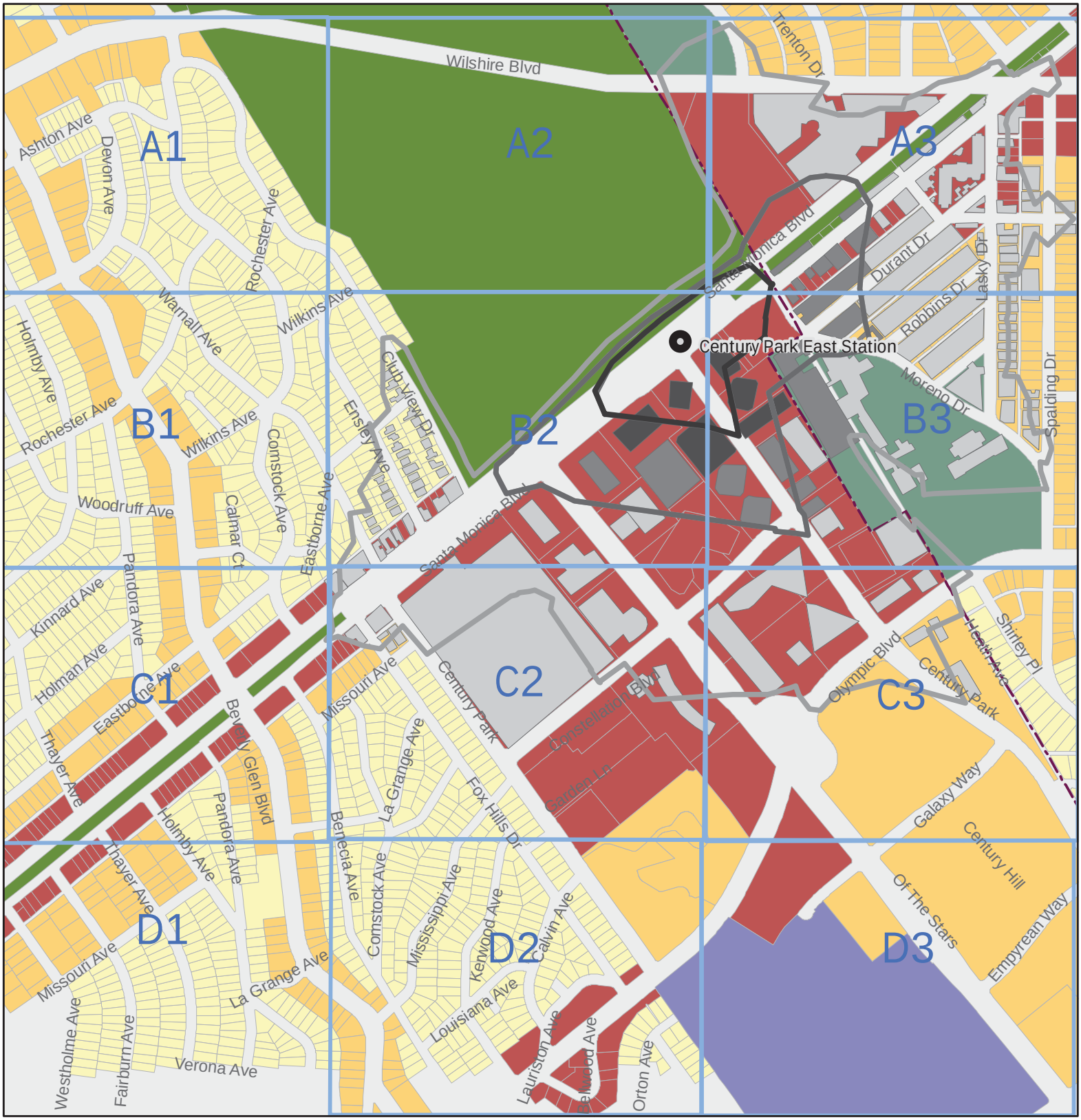
Santa Monica/Century Park East Resident Population

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population
600 FOOT								**0**
				600 FOOT SUBTOTAL				**0**
QUARTER MILE	A3	4328002024	High Density Multi-Family	Residential-MF	50.0	6	5	10
QUARTER MILE	A3	4328002025	High Density Multi-Family	Residential-MF	50.0	6	5	10
QUARTER MILE	A3	4328002026	High Density Multi-Family	Residential-MF	50.0	6	5	10
QUARTER MILE	B3	4328002028	High Density Multi-Family	Residential-MF	50.0	6	5	10
QUARTER MILE	B3	4328002029	High Density Multi-Family	Residential-MF	50.0	5	4	8
QUARTER MILE	B3	4328002030	High Density Multi-Family	Residential-MF	50.0	5	4	8
QUARTER MILE	B3	4328002031	High Density Multi-Family	Residential-MF	50.0	7	6	12
QUARTER MILE	B3	4328002035	High Density Multi-Family	Residential-MF	50.0	19	16	31
QUARTER MILE	B3	4328004001	High Density Multi-Family	Residential-MF	50.0	12	10	19
QUARTER MILE	B3	4328004002	High Density Multi-Family	Residential-MF	50.0	7	6	11
QUARTER MILE	B3	4328004003	High Density Multi-Family	Residential-MF	50.0	7	6	11
QUARTER MILE	B3	4328004004	High Density Multi-Family	Residential-MF	50.0	7	6	11
QUARTER MILE	B3	4328004033	High Density Multi-Family	Residential-MF	50.0	18	15	28
				QUARTER MILE SUBTOTAL		**112**	**95**	**180**
HALF MILE	C2	4319009051	Medium Residential	Residential-MF	54.5	11	9	17
HALF MILE	C2	4319009052	Medium Residential	Residential-MF	54.5	11	9	17
HALF MILE	A3	4328002016	High Density Multi-Family	Residential-MF	50.0	13	11	20
HALF MILE	A3	4328002017	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328002018	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328002019	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328002021	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328002022	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328002023	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328002040	High Density Multi-Family	Residential-MF	50.0	6	5	10
HALF MILE	A3	4328004008	High Density Multi-Family	Residential-MF	50.0	14	12	22
HALF MILE	A3	4328004009	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004010	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004011	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004012	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004013	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004014	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004015	High Density Multi-Family	Residential-MF	50.0	14	12	22
HALF MILE	A3	4328004016	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328004018	High Density Multi-Family	Residential-MF	50.0	13	11	21
HALF MILE	A3	4328004019	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004020	High Density Multi-Family	Residential-MF	50.0	8	7	13

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population
HALF MILE	A3	4328004021	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004022	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004023	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004024	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004025	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004026	High Density Multi-Family	Residential-MF	50.0	16	14	26
HALF MILE	A3	4328004027	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004028	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004029	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004030	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004031	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	A3	4328004032	High Density Multi-Family	Residential-MF	50.0	2	1	3
HALF MILE	A3	4328004085	High Density Multi-Family	Residential-MF	50.0	21	18	33
HALF MILE	B3	4328005001	High Density Multi-Family	Residential-MF	50.0	15	13	24
HALF MILE	B3	4328005002	High Density Multi-Family	Residential-MF	50.0	3	3	5
HALF MILE	B3	4328005003	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	B3	4328005004	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005005	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005006	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005007	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005008	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005009	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005010	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005011	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005012	High Density Multi-Family	Residential-MF	50.0	8	6	12
HALF MILE	B3	4328005014	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005015	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005016	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005017	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005018	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005019	High Density Multi-Family	Residential-MF	50.0	8	7	13
HALF MILE	B3	4328005020	High Density Multi-Family	Residential-MF	50.0	12	10	20
HALF MILE	B3	4328005022	High Density Multi-Family	Residential-MF	50.0	10	9	17
HALF MILE	B3	4328006008	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328006009	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328006018	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328006019	High Density Multi-Family	Residential-MF	50.0	8	7	12

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population
HALF MILE	B3	4328006020	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328006021	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328006022	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328006026	High Density Multi-Family	Residential-MF	50.0	21	18	34
HALF MILE	B3	4328006046	High Density Multi-Family	Residential-MF	50.0	14	12	22
HALF MILE	B3	4328006052	High Density Multi-Family	Residential-MF	50.0	23	19	37
HALF MILE	B3	4328006066	High Density Multi-Family	Residential-MF	50.0	15	13	25
HALF MILE	B3	4328007011	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328007012	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328007013	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	B3	4328007014	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	A3	4328007015	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	A3	4328007016	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	A3	4328007017	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	A3	4328007018	High Density Multi-Family	Residential-MF	50.0	8	7	12
HALF MILE	A3	4328007019	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328007020	High Density Multi-Family	Residential-MF	50.0	9	8	15
HALF MILE	A3	4328007034	High Density Multi-Family	Residential-MF	50.0	63	54	102
HALF MILE	A3	4328008008	High Density Multi-Family	Residential-MF	50.0	7	6	11
HALF MILE	A3	4328008009	High Density Multi-Family	Residential-MF	50.0	10	9	17
HALF MILE	A3	4328008042	High Density Multi-Family	Residential-MF	50.0	21	18	33
HALF MILE	A3	4328009011	High Density Multi-Family	Residential-MF	50.0	10	9	17
HALF MILE	A3	4328010034	Low Medium Density Multi-Family	Residential-MF	40.0	8	6	12
HALF MILE	C3	4329001063	High Medium Residential	Residential-MF	108.9	558	474	900
HALF MILE	C3	4329009001	High Medium Residential	Residential-MF	108.9	51	44	83
				MULTI-FAMILY RESIDENTIAL		1,402	1,192	2,264
HALF MILE	B2	Various	Low Residential	Residential-SF	8.7	28	24	45
				HALF MILE SUBTOTAL		**1,430**	**1,215**	**2,309**

Century Park East Station



Station

600 Ft Walkshed

1/4 Mile Walkshed

1/2 Mile Walkshed

Building Distance from CPE Portal

600 Ft

1/4 Mile

1/2 Mile

General Plan Designation

Commercial

Residential -MF

Residential-SF

Manufacturing

Park, Open Space, Recreation

Public, Facility, Govt

350 Feet

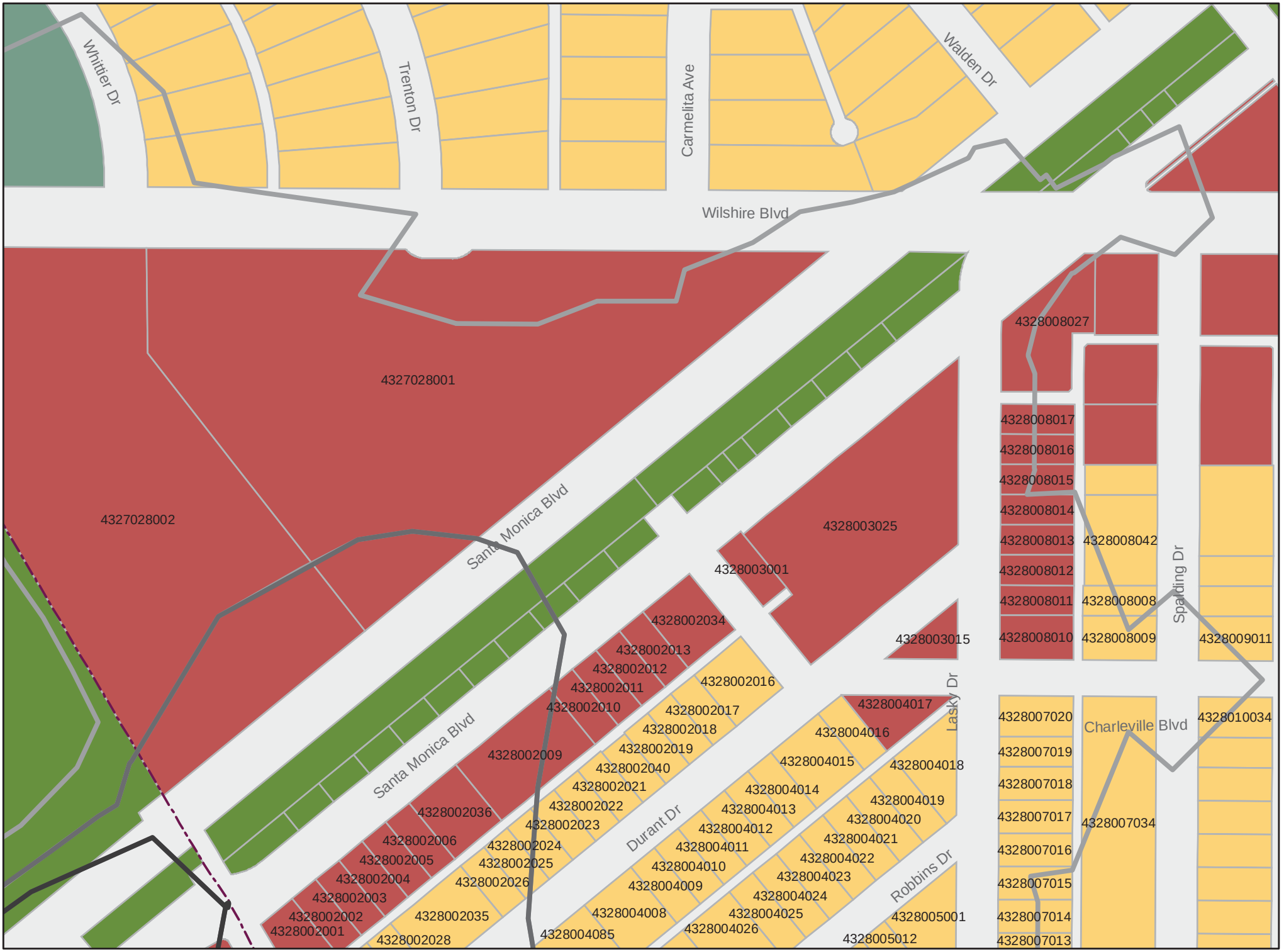
Updated October 5, 2011

Century Park East Station - A2

Updated October 5, 2011

100 Feet

Century Park East Station - A3



Updated October 5, 2011

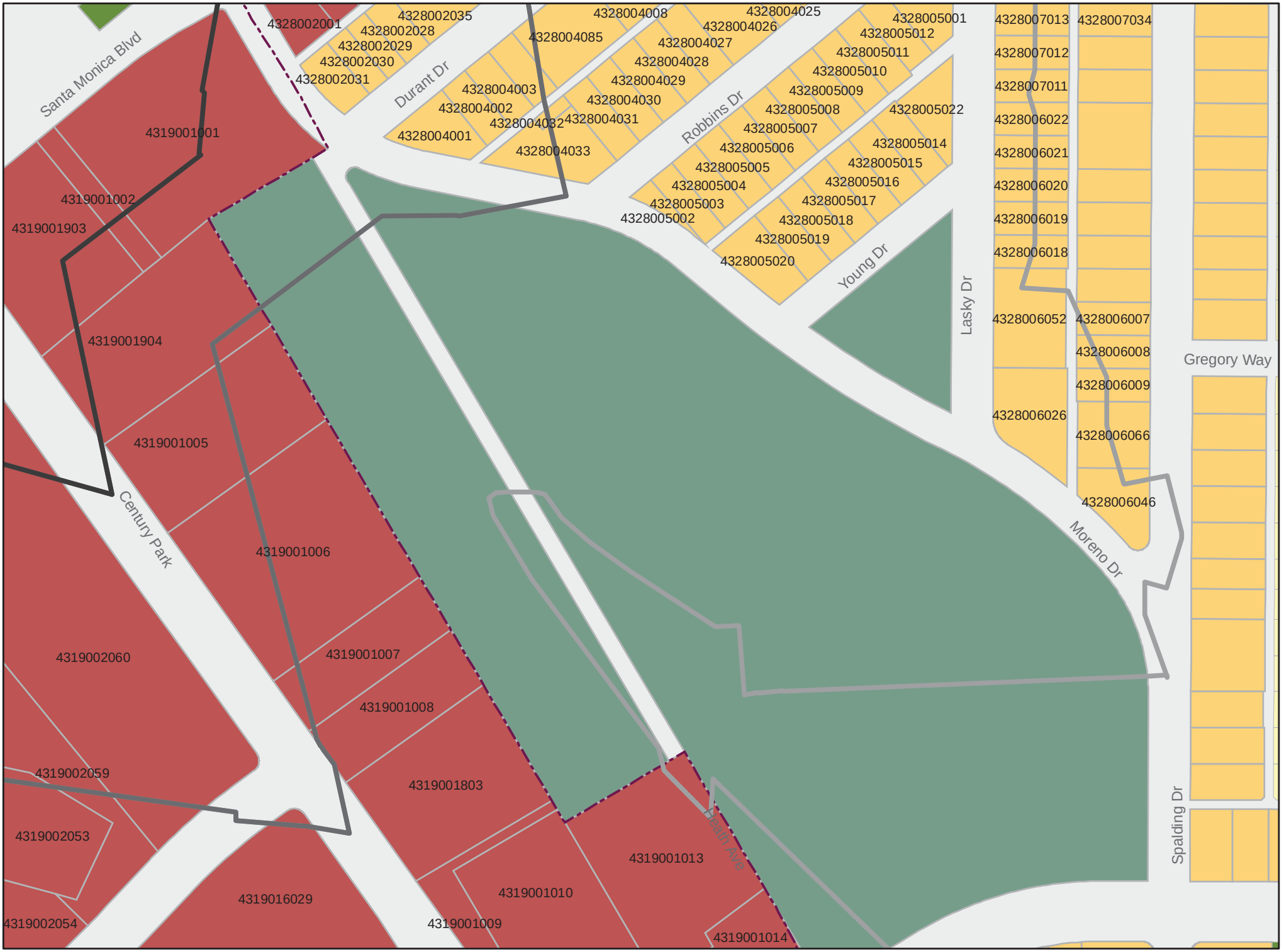
100 Feet

Century Park East Station - B2

Updated October 5, 2011

100 Feet

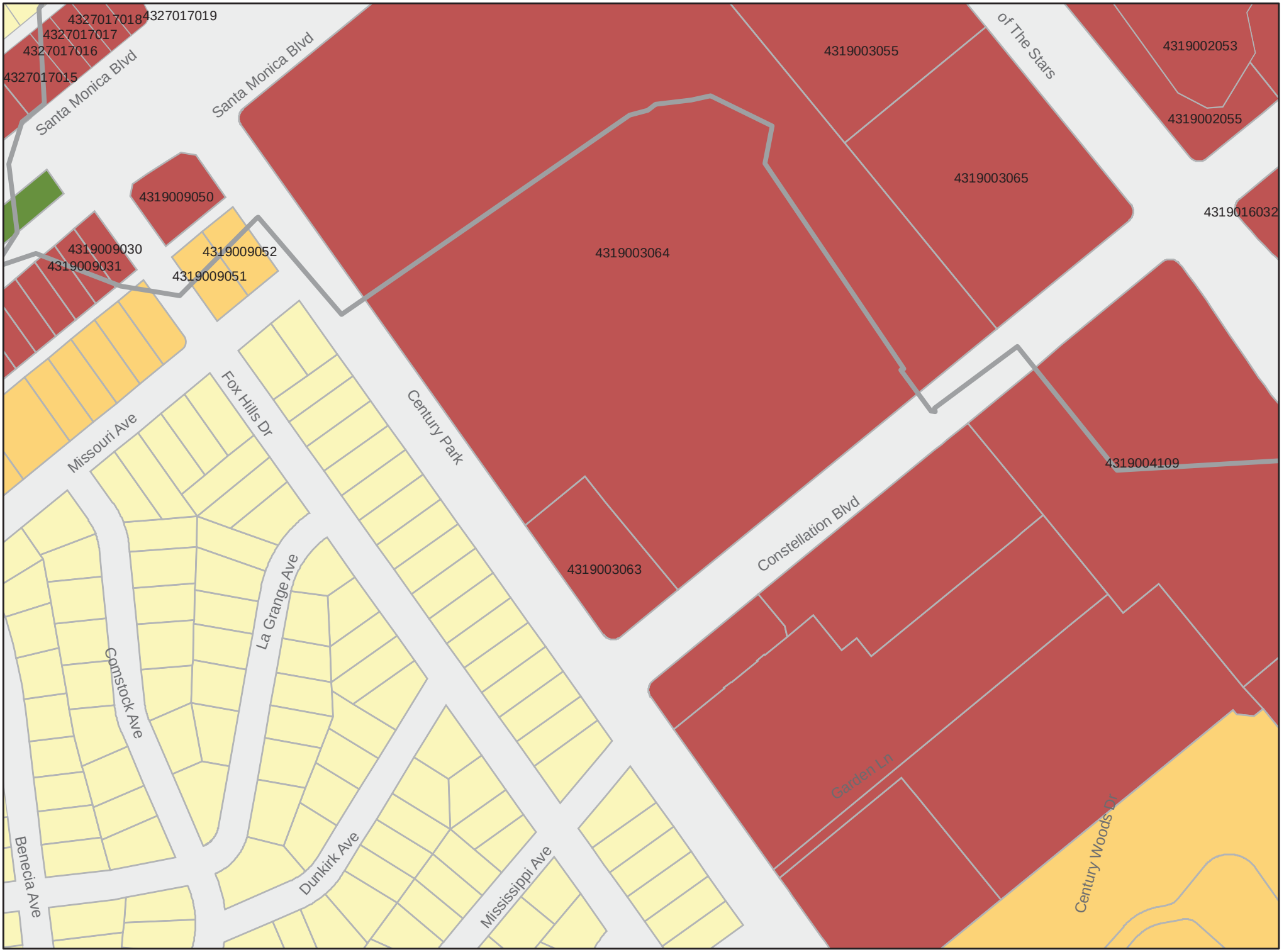
Century Park East Station - B3



Updated October 5, 2011

100 Feet

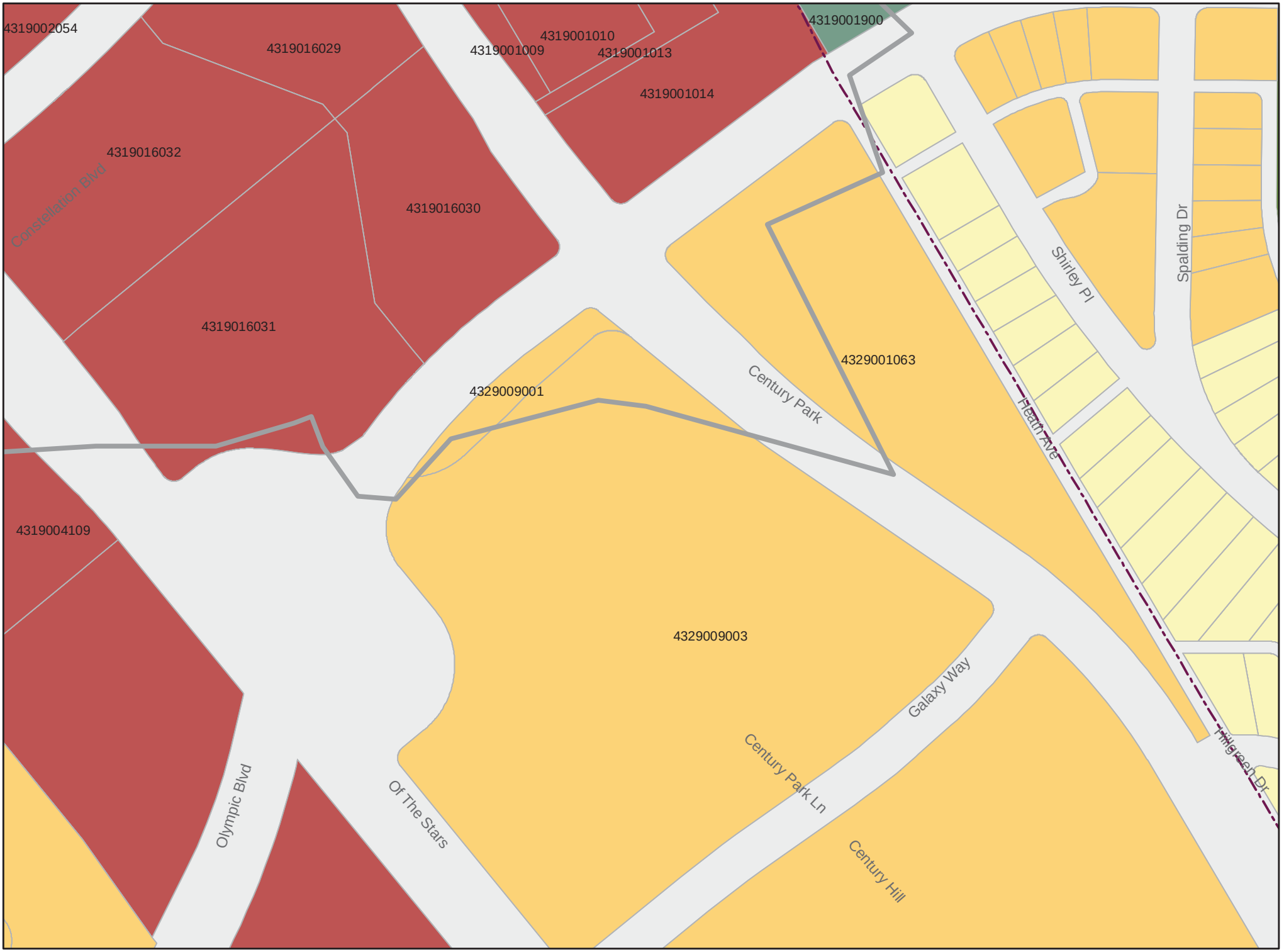
Century Park East Station - C2



Updated October 5, 2011

100 Feet

Century Park East Station - C3



Updated October 5, 2011

100 Feet

Appendix C - Century City Stations - Jobs and Population Calculations - Full Development

Constellation/Avenue of the Stars Station

A	B	C	D	E	F	G	H	I	
Walkshed/Plan Designation	**Acreage**	**Maximum Development Potential** (units or floor area)	**85% Buildout** (units or floor area)	**90% Commercial Occupancy** (floor area)	**Employees** (410 sq. ft. floor area per employee)	**Residents** (1.9 people per unit)	**Total Employees & Residents**	**Rounded Numbers Used in the Report**	
0-600 feet	17.0								
Residential Single Family (dwelling units)		0				0	13,668	0	Residents
Residential Multi-family (dwelling units)		0				0		13,670	Jobs
Commercial Employment (sq. ft. blg. floor area)		7,325,158	6,226,384	5,603,746	13,668			**13,670**	Total
600 feet to 1/4 mile	54.6								
Residential Single Family (dwelling units)		0				0	23,962	820	Residents
Residential Multi-family (dwelling units)		508	432			821		23,140	Jobs
Commercial Employment (sq. ft. blg. floor area)		12,402,565	10,542,180	9,487,962	23,141			**23,960**	Total
1/4 mile to 1/2 mile	161.5								
Residential Single Family (dwelling units)		31	26			50	20,352	7,190	Residents
Residential Multi-family (dwelling units)		4,422	3,758			7,141		13,160	Jobs
Commercial Employment (sq. ft. blg. floor area)		6,830,452	5,805,884	5,225,296	13,161			**20,350**	Total

Explanation

Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

Column A. The general or specific plan designations for the cities of Los Angeles and Beverly Hills were mapped on a parcel base map (see Figures C-1 through C-3). The walksheds prepared by Fehr & Peers for walking distances of 0 to 600 feet, 600 feet to ¼ mile, and ¼ mile to ½ mile were applied to the base map to identify the parcels and plan designations within the three walkshed areas for each of the three alternative station locations (Figures C-1 through C-3).

Column B. The land area for the plan designations within the 0-600 feet, 600 feet-1/4 mile, and ¼ mile-1/2 mile walksheds (created by Fehr & Peers) was calculated.

Column C. The maximum development potential for the plan designations within the walksheds was calculated based upon the land area within each walkshed multiplied by the maximum density allowed by the respective plan designations within the walksheds. For commercial uses, the Floor Area Ratio (FAR) in the plan documents was used to calculate the maximum development potential expressed in square feet of building floor area. The maximum density for single and multiple family development, expressed as the maximum number of units per acre, was used to derive the maximum amount of residential development potential.

Column D. The maximum (100%) figures in Column C were reduced to 85% for commercial and residential development to be more consistent with a likely full development outcome.

Column E. Commercial development is rarely 100% occupied, and a 90% occupancy rate is assumed (consistent with the Fehr & Peers analysis of existing conditions in Appendix A). The maximum development floor area in column C was reduced by 10% ([full development potential X 0.85] X 0.90 = occupied floor area at full development) to give a more realistic estimate floor area actually occupied by employees.

Column F. The estimated number of employees was calculated by applying an average floor area per employee of 410 square feet to the floor area derived in Column E. This average was based on the current employee/floor area figures supplied by Fehr & Peers for different commercial uses (office - 350 sq. ft., retail - 600 sq. ft., food service - 450 sq. ft., and hotel - 2 rooms) and the planned dominance of office employment in Century City. Fox Studios property is partially (16%) within the 1/4 mile to 1/2 mile walkshed. 16% of the current employment (416) was assumed for full development, and it is part of the total employment number (8,706 + 416 = 9,122).

Column G. The estimated number of residents was calculated by multiplying the number of units in Column D with an average of 1.9 persons per household.

Column H. The estimated total of employees and residents is presented.

Column I. The estimates in Column H were rounded for presentation in the report as shown.

Appendix C - Century City Stations - Jobs and Population Calculations - Parcel Level Inventory

Constellation/Avenue of the Stars Station Employment

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)	Notes
600 FOOT	B2	4319002053	Regional Center Commercial	Commercial	6	674,616	573,424	516,081	1,259	
600 FOOT	C2	4319002054	Regional Center Commercial	Commercial	6	195,737	166,377	149,739	365	
600 FOOT	C2	4319002055	Regional Center Commercial	Commercial	6	256,441	217,975	196,177	478	
600 FOOT	B2	4319002056	Regional Center Commercial	Commercial	6	652,254	554,416	498,974	1,217	
600 FOOT	B2	4319003055	Regional Center Commercial	Commercial	6	577,828	491,154	442,039	1,078	
600 FOOT	C2	4319003065	Regional Center Commercial	Commercial	6	723,282	614,790	553,311	1,350	
600 FOOT	C2	4319004109	Regional Center Commercial	Commercial	6	1,512,972	1,286,026	1,157,424	2,823	
600 FOOT	C3	4319016029	Regional Center Commercial	Commercial	6	602,790	512,372	461,134	1,125	
600 FOOT	C3	4319016031	Regional Center Commercial	Commercial	6	1,144,044	972,437	875,194	2,135	
600 FOOT	C3	4319016032	Regional Center Commercial	Commercial	6	985,194	837,415	753,673	1,838	
				600 FOOT SUBTOTAL		**7,325,158**	**6,226,384**	**5,603,746**	**13,668**	
QUARTER MILE	B3	4319001006	Regional Center Commercial	Commercial	6	140,253	119,215	107,293	262	
QUARTER MILE	B3	4319001007	Regional Center Commercial	Commercial	6	45,025	38,271	34,444	84	
QUARTER MILE	B3	4319001008	Regional Center Commercial	Commercial	6	134,367	114,212	102,791	251	
QUARTER MILE	B2	4319002046	Regional Center Commercial	Commercial	6	648,054	550,846	495,761	1,209	
QUARTER MILE	B2	4319002057	Regional Center Commercial	Commercial	6	1,141,506	970,280	873,252	2,130	
QUARTER MILE	B2	4319002059	Regional Center Commercial	Commercial	6	328,232	278,998	251,098	612	
QUARTER MILE	B3	4319002060	Regional Center Commercial	Commercial	6	1,133,118	963,150	866,835	2,114	
QUARTER MILE	B2	4319003061	Regional Center Commercial	Commercial	6	629,268	534,878	481,390	1,174	
QUARTER MILE	C2	4319003063	Regional Center Commercial	Commercial	6	196,976	167,430	150,687	368	
QUARTER MILE	B2	4319003064	Regional Center Commercial	Commercial	6	4,888,818	4,155,495	3,739,946	9,122	
QUARTER MILE	C2	4319004140	Regional Center Commercial	Commercial	6	491,839	418,063	376,257	918	
QUARTER MILE	C2	4319004141	Regional Center Commercial	Commercial	6	936,954	796,411	716,770	1,748	
QUARTER MILE	C2	4319004142	Regional Center Commercial	Commercial	6	93,555	79,522	71,570	175	
QUARTER MILE	C3	4319004144	Regional Center Commercial	Commercial	6	968,916	823,579	741,221	1,808	
QUARTER MILE	C3	4319016030	Regional Center Commercial	Commercial	6	625,704	531,848	478,664	1,167	
				QUARTER MILE SUBTOTAL		**12,402,585**	**10,542,197**	**9,487,978**	**23,141**	

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)	Notes
HALF MILE	D2	4315018057	Neighborhood Commercial	Commercial	1.5	51,793	44,024	39,622	97	
HALF MILE	D3	4315019005	Regional Center Commercial	Commercial	6	1,610,904	1,369,268	1,232,342	3,006	
HALF MILE	B3	4319001001	Regional Center Commercial	Commercial	6	562,230	477,896	430,106	1,049	
HALF MILE	B3	4319001002	Regional Center Commercial	Commercial	6	64,108	54,492	49,043	120	
HALF MILE	C3	4319001005	Regional Center Commercial	Commercial	6	359,574	305,638	275,074	671	
HALF MILE	C3	4319001009	Regional Center Commercial	Commercial	6	108,198	91,968	82,771	202	
HALF MILE	C3	4319001010	Regional Center Commercial	Commercial	6	360,006	306,005	275,405	672	
HALF MILE	B3	4319001013	Regional Center Commercial	Commercial	6	429,220	364,837	328,353	801	
HALF MILE	C3	4319001014	Regional Center Commercial	Commercial	6	482,768	410,353	369,318	901	
HALF MILE	B3	4319001803	Regional Center Commercial	Commercial	6	343,308	291,812	262,631	641	
HALF MILE	B3	4319001903	Regional Center Commercial	Commercial	6	355,205	301,924	271,732	663	
HALF MILE	B3	4319001904	Regional Center Commercial	Commercial	6	399,857	339,878	305,891	746	
HALF MILE	B2	4319002045	Regional Center Commercial	Commercial	6	310,974	264,328	237,895	580	
HALF MILE	C2	4319004138	Regional Center Commercial	Commercial	6	907,806	771,635	694,472	1,694	
HALF MILE	D2	4319004139	Regional Center Commercial	Commercial	6	318,457	270,688	243,620	594	
HALF MILE	D2	4319005070	Neighborhood Commercial	Commercial	1.5	12,333	10,483	9,435	23	
HALF MILE	C2	4319009050	General Commercial	Commercial	1.5	20,700	17,595	15,836	39	
HALF MILE	C2	4327017015	General Commercial	Commercial	1.5	14,069	11,959	10,763	26	
HALF MILE	C2	4327017016	General Commercial	Commercial	1.5	7,030	5,975	5,378	13	
HALF MILE	C2	4327017017	General Commercial	Commercial	1.5	7,026	5,972	5,375	13	
HALF MILE	C2	4327017018	General Commercial	Commercial	1.5	7,022	5,969	5,372	13	
HALF MILE	C2	4327017019	General Commercial	Commercial	1.5	8,903	7,568	6,811	17	
HALF MILE	B2	4327018010	General Commercial	Commercial	1.5	8,053	6,845	6,161	15	
HALF MILE	B2	4327018011	General Commercial	Commercial	1.5	14,130	12,010	10,809	26	
HALF MILE	B2	4327018012	General Commercial	Commercial	1.5	7,064	6,004	5,404	13	
HALF MILE	B2	4327018013	General Commercial	Commercial	1.5	7,066	6,006	5,405	13	
HALF MILE	B2	4327018014	General Commercial	Commercial	1.5	8,174	6,948	6,253	15	
HALF MILE	B2	4327019010	General Commercial	Commercial	1.5	8,042	6,836	6,152	15	
HALF MILE	B2	4327019011	General Commercial	Commercial	1.5	7,064	6,005	5,404	13	
HALF MILE	B2	4327019012	General Commercial	Commercial	1.5	7,062	6,003	5,402	13	
HALF MILE	B2	4327019013	General Commercial	Commercial	1.5	7,064	6,005	5,404	13	
HALF MILE	B2	4327019023	General Commercial	Commercial	1.5	15,240	12,954	11,659	28	
HALF MILE	D3	4315019013	Limited Industrial	Industrial	-	-	-	-	416	(1)
				HALF MILE SUBTOTAL		**6,830,452**	**5,805,884**	**5,225,296**	**13,161**	

Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

(1) Fox Studios lot expected to maintain current employee levels in the future

Appendix C - Century City Stations - Jobs and Population Calculations - Parcel Level Inventory

Constellation/Avenue of the Stars Station Resident Population

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population	Notes
				600 FOOT SUBTOTAL		**0**	**0**	**0**	
QUARTER MILE	C3	4329009001	High Medium Residential	Residential - MF	108.9	51	44	83	
QUARTER MILE	C3	4329009003	High Medium Residential	Residential - MF	108.9	457	388	738	(1)
				QUARTER MILE SUBTOTAL		**508**	**432**	**821**	
HALF MILE	D3	4315019006	High Medium Residential	Residential - MF	108.9	296	251	477	
HALF MILE	D2	4319004059	High Medium Residential	Residential - MF	108.9	644	548	1,041	
HALF MILE	D2, D3	4319004134	High Medium Residential	Residential - MF	108.9	776	660	1,253	
HALF MILE	C2	4319009051	Medium Residential	Residential - MF	54.5	11	9	17	
HALF MILE	C2	4319009052	Medium Residential	Residential - MF	54.5	11	9	17	
HALF MILE	C3	4329001063	High Medium Residential	Residential - MF	108.9	558	474	900	
HALF MILE	C3, D3	4329008083	High Medium Residential	Residential - MF	108.9	1,022	869	1,651	(2)
HALF MILE	C3	4329009003	High Medium Residential	Residential - MF	108.9	988	840	1,596	(3)
HALF MILE	C3	4330001001	High Density Multi-Family	Residential - MF	50	16	13	26	
HALF MILE	C3	4330001002	High Density Multi-Family	Residential - MF	50	7	6	11	
HALF MILE	C3	4330001003	High Density Multi-Family	Residential - MF	50	7	6	11	
HALF MILE	C3	4330001004	High Density Multi-Family	Residential - MF	50	7	6	11	
HALF MILE	C3	4330001005	High Density Multi-Family	Residential - MF	50	9	7	14	
HALF MILE	C3	4330001018	High Density Multi-Family	Residential - MF	50	17	15	28	
HALF MILE	C3	4330001020	High Density Multi-Family	Residential - MF	50	18	15	29	
HALF MILE	C3	4330001040	High Density Multi-Family	Residential - MF	50	37	32	60	
				MULTI-FAMILY SUBTOTAL		**4,422**	**3,759**	**7,141**	
HALF MILE	B2, C3	various	Low Residential	Residential - SF	8.7	31	26	50	
				HALF MILE SUBTOTAL		**4,453**	**3,785**	**7,191**	

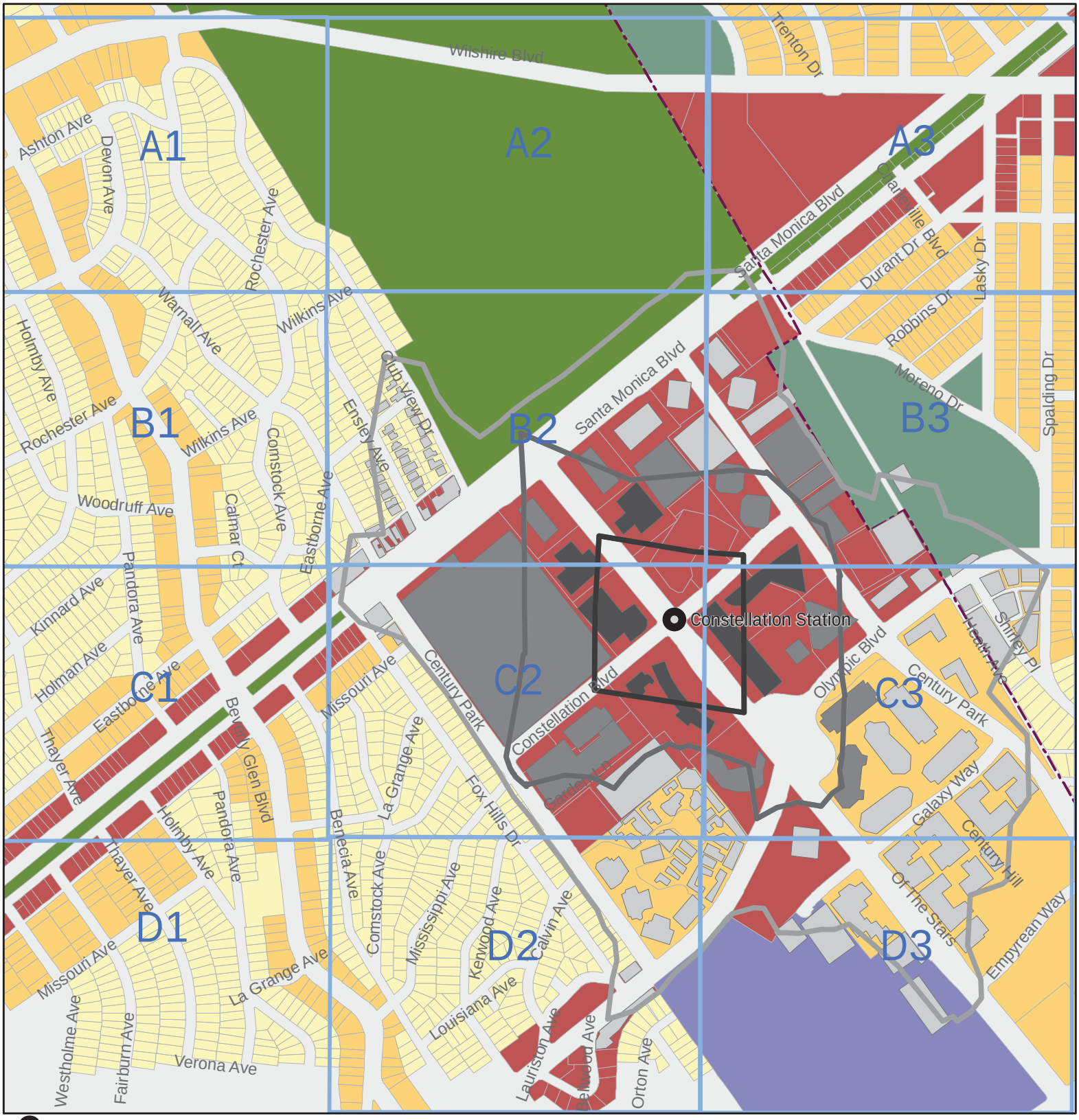
Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

(1) Took 33% of total for parcel, as 33% of property is within the walkshed

(2) Took 50% of total for parcel, as 50% of property is within the walkshed

(3) Took 66% of total for parcel, as 66% of property is within the walkshed

Constellation Station



Station

600 Ft Walkshed

1/4 Mile Walkshed

1/2 Mile Walkshed

Building Distance from Portal

600 Ft

1/4 Mile

1/2 Mile

General Plan Designation

Commercial

Residential -MF

Residential-SF

Manufacturing

Park, Open Space, Recreation

Public, Facility, Govt

350 Feet

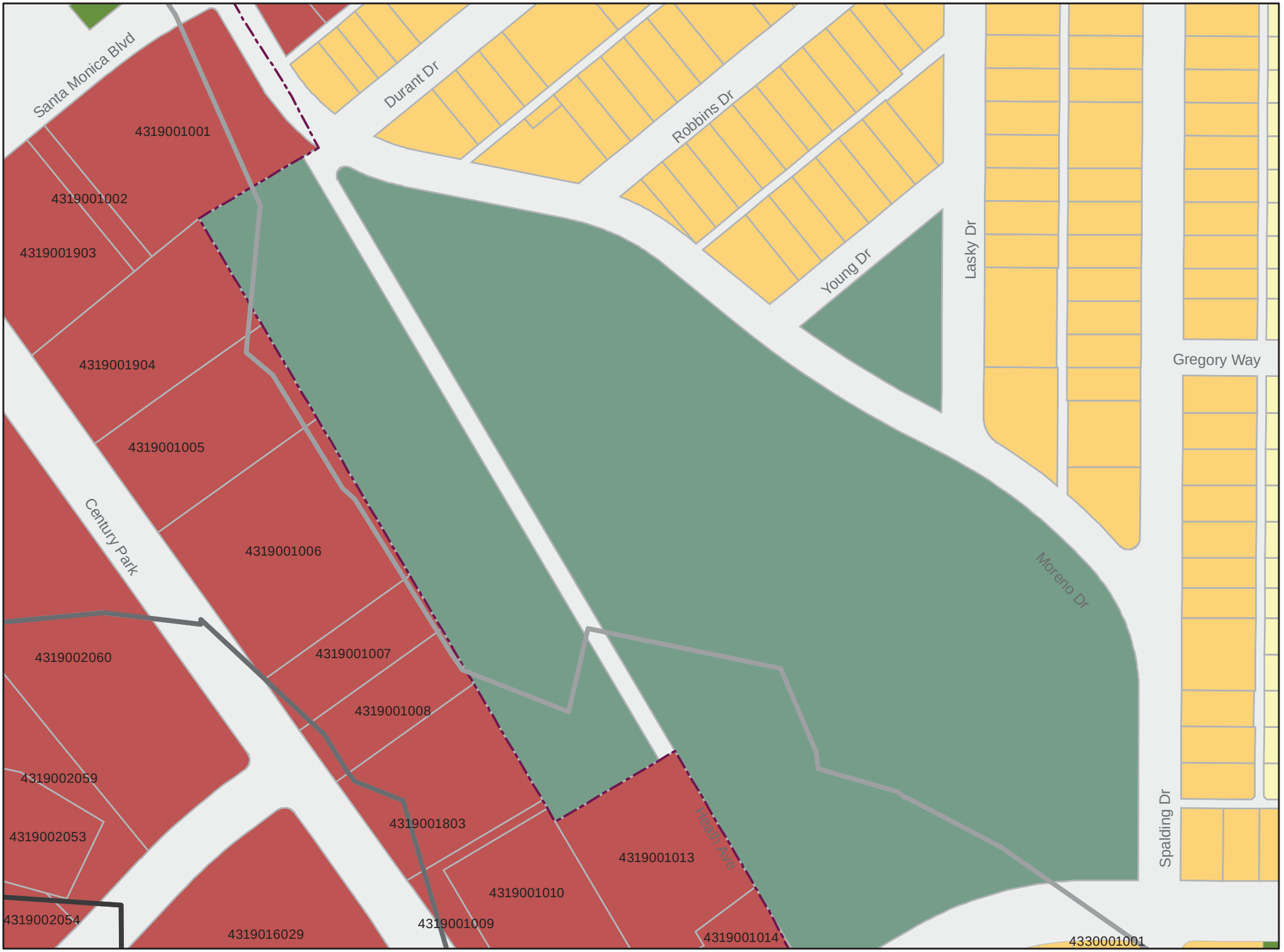
Updated October 11, 2011

Constellation Station - B2

Updated October 11, 2011

100 Feet

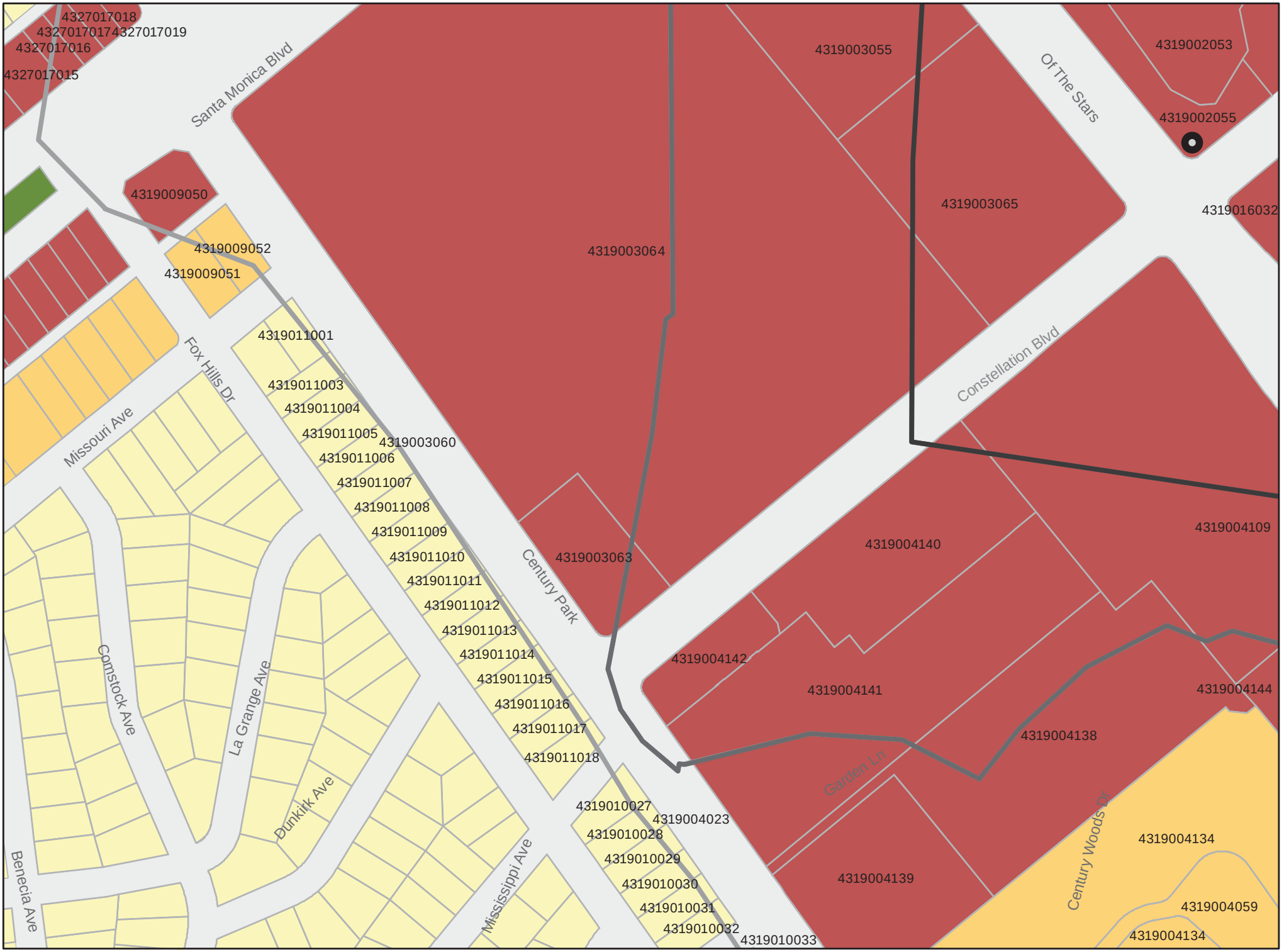
Constellation Station - B3



Updated October 11, 2011

100 Feet

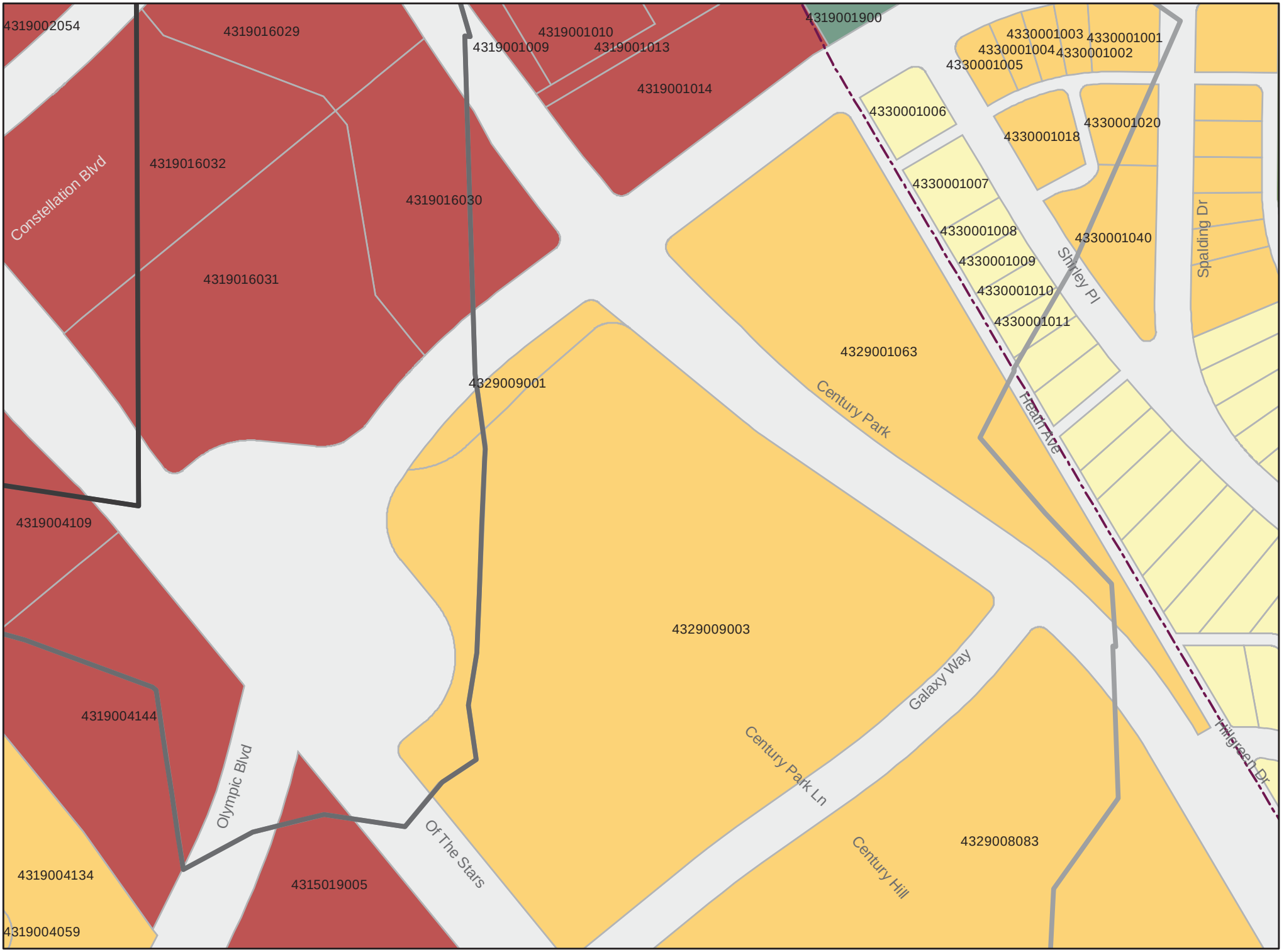
Constellation Station - C2



Updated October 11, 2011

100 Feet

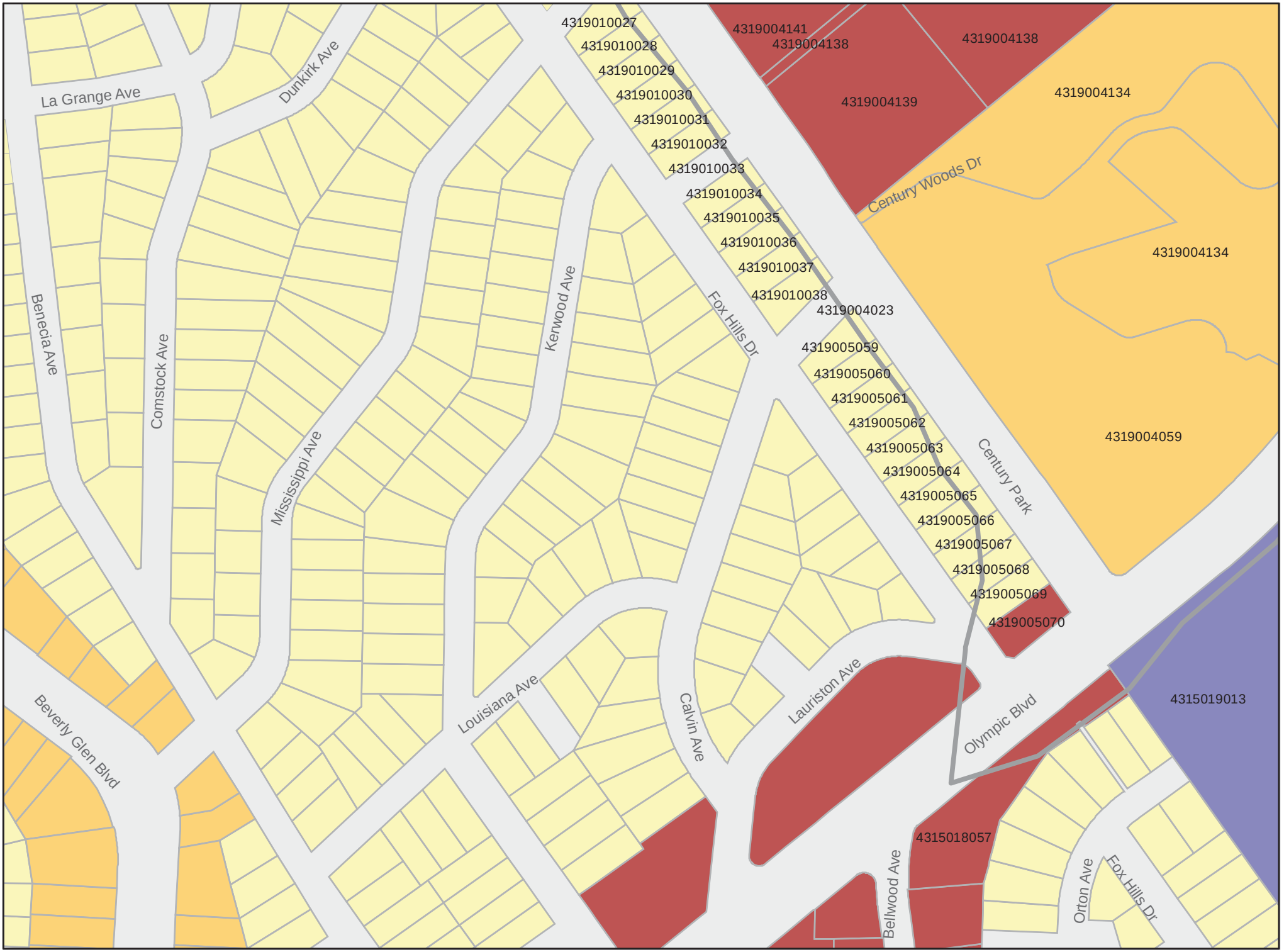
Constellation Station - C3



Updated October 11, 2011

100 Feet

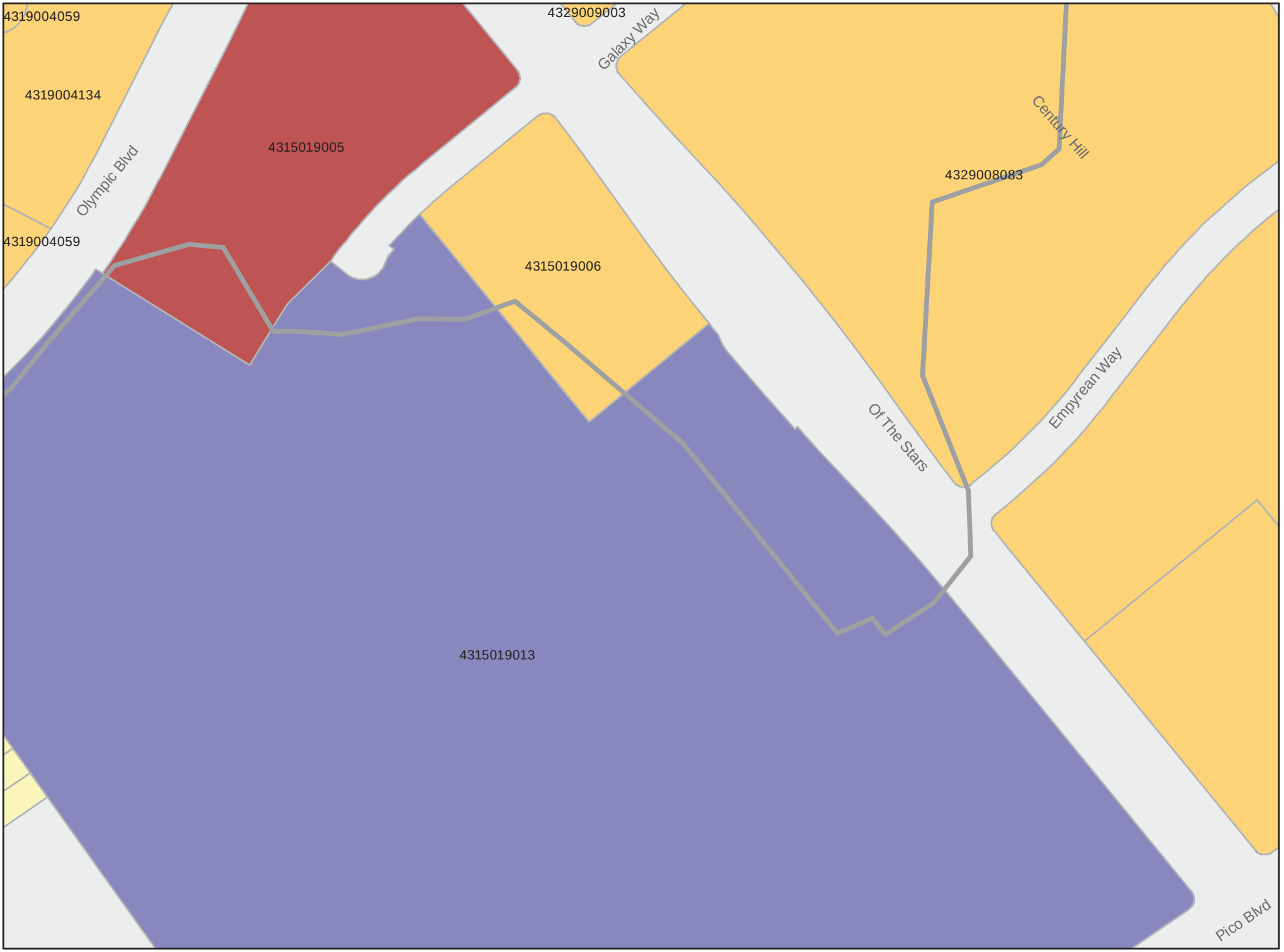
Constellation Station - D2



Updated October 11, 2011

100 Feet

Constellation Station - D3



Updated October 11, 2011

100 Feet

Appendix C - Century City Stations - Jobs and Population Calculations - Full Development

Santa Monica/Avenue of the Stars Station

A	B	C	D	E	F	G	H	I	
Walkshed/Plan Designation	**Acreage**	**Maximum Development Potential** (units or floor area)	**85% Buildout** (units or floor area)	**90% Commercial Occupancy** (floor area)	**Employees** (410 sq. ft. floor area per employee)	**Residents** (1.9 people per unit)	**Total Employees & Residents**	**Rounded Numbers Used in the Report**	
0-600 feet	15.0								
Residential Single Family (dwelling units)		0				0		0	Residents
Residential Multi-family (dwelling units)		0				0	6,837	6,840	Jobs
Commercial Employment (sq. ft. blg. floor area)		3,664,151	3,114,528	2,803,075	6,837			**6,840**	Total
600 feet to 1/4 mile	49.1								
Residential Single Family (dwelling units)		73	62			118		120	Residents
Residential Multi-family (dwelling units)		0				0	14,075	13,960	Jobs
Commercial Employment (sq. ft. blg. floor area)		7,480,439	6,358,373	5,722,536	13,957			**14,080**	Total
1/4 mile to 1/2 mile	182.9								
Residential Single Family (dwelling units)		229	195			370		2,420	Residents
Residential Multi-family (dwelling units)		1,268	1,078			2,048	31,939	29,520	Jobs
Commercial Employment (sq. ft. blg. floor area)		15,822,051	13,448,743	12,103,869	29,522			**31,940**	Total

Explanation

Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

Column A. The general or specific plan designations for the cities of Los Angeles and Beverly Hills were mapped on a parcel base map (see Figures C-1 through C-3). The walksheds prepared by Fehr & Peers for walking distances of 0 to 600 feet, 600 feet to ¼ mile, and ¼ mile to ½ mile were applied to the base map to identify the parcels and plan designations within the three walkshed areas for each of the three alternative station locations (Figures C-1 through C-3).

Column B. The land area for the plan designations within the 0-600 feet, 600 feet-1/4 mile, and ¼ mile-1/2 mile walksheds (created by Fehr & Peers) was calculated.

Column C. The maximum development potential for the plan designations within the walksheds was calculated based upon the land area within each walkshed multiplied by the maximum density allowed by the respective plan designations within the walksheds. For commercial uses, the Floor Area Ratio (FAR) in the plan documents was used to calculate the maximum development potential expressed in square feet of building floor area. The maximum density for single and multiple family development, expressed as the maximum number of units per acre, was used to derive the maximum amount of residential development potential.

Column D. The maximum (100%) figures in Column C were reduced to 85% for commercial and residential development to be more consistent with a likely full development outcome.

Column E. Commercial development is rarely 100% occupied, and a 90% occupancy rate is assumed (consistent with the Fehr & Peers analysis of existing conditions in Appendix A). The maximum development floor area in column C was reduced by 10% ([full development potential X 0.85] X 0.90 = occupied floor area at full development) to give a more realistic estimate floor area actually occupied by employees.

Column F. The estimated number of employees was calculated by applying an average floor area per employee of 410 square feet to the floor area derived in Column E. This average was based on the current employee/floor area figures supplied by Fehr & Peers for different commercial uses (office - 350 sq. ft., retail - 600 sq. ft., food service - 450 sq. ft., and hotel - 2 rooms) and the planned dominance of office employment in Century City.

Column G. The estimated number of residents was calculated by multiplying the number of units in Column D with an average of 1.9 persons per household.

Column H. The estimated total of employees and residents is presented.

Column I. The estimates in Column H were rounded for presentation in the report as shown.

Appendix C - Century City Stations - Jobs and Population Calculations - Parcel Level Inventory

Santa Monica/Avenue of the Stars Station Employment

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)
600 FOOT	B2	4319002046	Regional Center Commercial	Commercial	6	648,054	550,846	495,761	1,209
600 FOOT	B2	4319002056	Regional Center Commercial	Commercial	6	652,254	554,416	498,974	1,217
600 FOOT	B2	4319002057	Regional Center Commercial	Commercial	6	1,141,506	970,280	873,252	2,130
600 FOOT	B2	4319003055	Regional Center Commercial	Commercial	6	577,828	491,154	442,039	1,078
600 FOOT	B2	4319003061	Regional Center Commercial	Commercial	6	629,268	534,878	481,390	1,174
600 FOOT	B2	4327019023	General Commercial	Commercial	1.5	15,240	12,954	11,659	28
				600 FOOT SUBTOTAL		**3,664,151**	**3,114,528**	**2,803,075**	**6,837**
QUARTER MILE	B3	4319001903	Regional Center Commercial	Commercial	6	88,801	75,481	67,933	166
QUARTER MILE	B2	4319002045	Regional Center Commercial	Commercial	6	310,974	264,328	237,895	580
QUARTER MILE	B2	4319002060	Regional Center Commercial	Commercial	6	1,133,118	963,150	866,835	2,114
QUARTER MILE	C2	4319003063	Regional Center Commercial	Commercial	6	196,976	167,430	150,687	368
QUARTER MILE	C2	4319003064	Regional Center Commercial	Commercial	6	4,888,818	4,155,495	3,739,946	9,122
QUARTER MILE	C2	4319003065	Regional Center Commercial	Commercial	6	723,282	614,790	553,311	1,350
QUARTER MILE	C2	4319009050	General Commercial	Commercial	1.5	20,700	17,595	15,836	39
QUARTER MILE	C2	4327017015	General Commercial	Commercial	1.5	14,069	11,959	10,763	26
QUARTER MILE	C2	4327017016	General Commercial	Commercial	1.5	7,030	5,975	5,378	13
QUARTER MILE	C2	4327017017	General Commercial	Commercial	1.5	7,026	5,972	5,375	13
QUARTER MILE	C2	4327017018	General Commercial	Commercial	1.5	7,022	5,969	5,372	13
QUARTER MILE	C2	4327017019	General Commercial	Commercial	1.5	8,903	7,568	6,811	17
QUARTER MILE	B2	4327018010	General Commercial	Commercial	1.5	8,053	6,845	6,161	15
QUARTER MILE	B2	4327018011	General Commercial	Commercial	1.5	14,130	12,010	10,809	26
QUARTER MILE	B2	4327018012	General Commercial	Commercial	1.5	7,064	6,004	5,404	13
QUARTER MILE	B2	4327018013	General Commercial	Commercial	1.5	7,066	6,006	5,405	13
QUARTER MILE	B2	4327018014	General Commercial	Commercial	1.5	8,174	6,948	6,253	15
QUARTER MILE	B2	4327019010	General Commercial	Commercial	1.5	8,042	6,836	6,152	15
QUARTER MILE	B2	4327019011	General Commercial	Commercial	1.5	7,064	6,005	5,404	13
QUARTER MILE	B2	4327019012	General Commercial	Commercial	1.5	7,062	6,003	5,402	13
QUARTER MILE	B2	4327019013	General Commercial	Commercial	1.5	7,064	6,005	5,404	13
				QUARTER MILE SUBTOTAL		**7,480,439**	**6,358,373**	**5,722,536**	**13,957**

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)
HALF MILE	D3	4315019005	Regional Center Commercial	Commercial	6	1,610,904	1,369,268	1,232,342	3,006
HALF MILE	C1	4317001002	General Commercial	Commercial	1.5	7,427	6,313	5,682	14
HALF MILE	C1	4317001003	General Commercial	Commercial	1.5	7,428	6,314	5,682	14
HALF MILE	C1	4317001004	General Commercial	Commercial	1.5	8,269	7,029	6,326	15
HALF MILE	C1	4317001158	General Commercial	Commercial	1.5	15,264	12,975	11,677	28
HALF MILE	C1	4317002003	General Commercial	Commercial	1.5	7,667	6,517	5,865	14
HALF MILE	C1	4317002048	General Commercial	Commercial	1.5	7,668	6,518	5,866	14
HALF MILE	C1	4317002052	General Commercial	Commercial	1.5	15,918	13,530	12,177	30
HALF MILE	B3	4319001001	Regional Center Commercial	Commercial	6	562,230	477,896	430,106	1,049
HALF MILE	B3	4319001002	Regional Center Commercial	Commercial	6	64,108	54,492	49,043	120
HALF MILE	B3	4319001005	Regional Center Commercial	Commercial	6	359,574	305,638	275,074	671
HALF MILE	B3	4319001006	Regional Center Commercial	Commercial	6	561,012	476,860	429,174	1,047
HALF MILE	B3	4319001007	Regional Center Commercial	Commercial	6	180,100	153,085	137,777	336
HALF MILE	B3	4319001008	Regional Center Commercial	Commercial	6	179,156	152,283	137,054	334
HALF MILE	B3	4319001009	Regional Center Commercial	Commercial	6	108,198	91,968	82,771	202
HALF MILE	B3	4319001010	Regional Center Commercial	Commercial	6	360,006	306,005	275,405	672
HALF MILE	B3	4319001803	Regional Center Commercial	Commercial	6	343,308	291,812	262,631	641
HALF MILE	B3	4319001904	Regional Center Commercial	Commercial	6	399,857	339,878	305,891	746
HALF MILE	B2	4319002053	Regional Center Commercial	Commercial	6	674,616	573,424	516,081	1,259
HALF MILE	B3	4319002054	Regional Center Commercial	Commercial	6	195,737	166,377	149,739	365
HALF MILE	C2	4319002055	Regional Center Commercial	Commercial	6	256,441	217,975	196,177	478
HALF MILE	B3	4319002059	Regional Center Commercial	Commercial	6	328,232	278,998	251,098	612
HALF MILE	C3	4319004109	Regional Center Commercial	Commercial	6	1,512,972	1,286,026	1,157,424	2,823
HALF MILE	C2	4319004138	Regional Center Commercial	Commercial	6	907,806	771,635	694,472	1,694
HALF MILE	C2	4319004140	Regional Center Commercial	Commercial	6	491,839	418,063	376,257	918
HALF MILE	C2	4319004141	Regional Center Commercial	Commercial	6	936,954	796,411	716,770	1,748
HALF MILE	C2	4319004142	Regional Center Commercial	Commercial	6	93,555	79,522	71,570	175
HALF MILE	C3	4319004144	Regional Center Commercial	Commercial	6	968,916	823,579	741,221	1,808
HALF MILE	C2	4319009030	General Commercial	Commercial	1.5	8,038	6,832	6,149	15
HALF MILE	C2	4319009031	General Commercial	Commercial	1.5	7,579	6,442	5,798	14
HALF MILE	C2	4319009032	General Commercial	Commercial	1.5	7,519	6,391	5,752	14
HALF MILE	C2	4319009033	General Commercial	Commercial	1.5	7,462	6,343	5,709	14
HALF MILE	C2	4319009034	General Commercial	Commercial	1.5	7,405	6,295	5,665	14
HALF MILE	C1	4319009035	General Commercial	Commercial	1.5	7,346	6,244	5,619	14
HALF MILE	C1	4319009036	General Commercial	Commercial	1.5	7,289	6,196	5,576	14
HALF MILE	C1	4319009056	General Commercial	Commercial	1.5	28,099	23,884	21,496	52
HALF MILE	C1	4319009093	General Commercial	Commercial	1.5	37,023	31,469	28,322	69
HALF MILE	C3	4319016029	Regional Center Commercial	Commercial	6	602,790	512,372	461,134	1,125
HALF MILE	C3	4319016030	Regional Center Commercial	Commercial	6	625,704	531,848	478,664	1,167
HALF MILE	C3	4319016031	Regional Center Commercial	Commercial	6	1,144,044	972,437	875,194	2,135
HALF MILE	C3	4319016032	Regional Center Commercial	Commercial	6	985,194	837,415	753,673	1,838

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted FAR	Maximum Potential Built Square Feet	85% Trend Built Square Feet	90% Leasable Area Built Square Feet	Trend Employees (410 SF/employee)
HALF MILE	C1	4326032031	General Commercial	Commercial	1.5	21,319	18,121	16,309	40
HALF MILE	C1	4327006008	General Commercial	Commercial	1.5	13,533	11,503	10,353	25
HALF MILE	C1	4327006009	General Commercial	Commercial	1.5	6,599	5,609	5,048	12
HALF MILE	C1	4327006010	General Commercial	Commercial	1.5	6,599	5,609	5,048	12
HALF MILE	C1	4327006011	General Commercial	Commercial	1.5	6,601	5,611	5,050	12
HALF MILE	C1	4327006012	General Commercial	Commercial	1.5	15,674	13,323	11,991	29
HALF MILE	C1	4327006013	General Commercial	Commercial	1.5	6,178	5,252	4,726	12
HALF MILE	C1	4327007008	General Commercial	Commercial	1.5	19,414	16,502	14,852	36
HALF MILE	C1	4327007016	General Commercial	Commercial	1.5	47,007	39,956	35,960	88
HALF MILE	C1	4327017011	General Commercial	Commercial	1.5	17,970	15,275	13,747	34
HALF MILE	C1	4327017014	General Commercial	Commercial	1.5	14,078	11,967	10,770	26
HALF MILE	C1	4327017022	General Commercial	Commercial	1.5	10,676	9,075	8,167	20
HALF MILE	A3	4327028001	Low Density General Commercial	Commercial	2	773,438	657,422	591,680	1,443
HALF MILE	A3	4328002001	Low Density General Commercial	Commercial	2	18,335	15,584	14,026	34
HALF MILE	A3	4328002002	Low Density General Commercial	Commercial	2	11,995	10,196	9,176	22
HALF MILE	A3	4328002003	Low Density General Commercial	Commercial	2	11,991	10,193	9,173	22
HALF MILE	A3	4328002004	Low Density General Commercial	Commercial	2	11,996	10,196	9,177	22
HALF MILE	A3	4328002005	Low Density General Commercial	Commercial	2	11,989	10,190	9,171	22
HALF MILE	A3	4328002006	Low Density General Commercial	Commercial	2	11,998	10,199	9,179	22
HALF MILE	A3	4328002009	Low Density General Commercial	Commercial	2	48,006	40,805	36,725	90
HALF MILE	A3	4328002010	Low Density General Commercial	Commercial	2	12,002	10,202	9,181	22
HALF MILE	A3	4328002011	Low Density General Commercial	Commercial	2	12,006	10,205	9,184	22
HALF MILE	A3	4328002012	Low Density General Commercial	Commercial	2	11,999	10,199	9,180	22
HALF MILE	A3	4328002013	Low Density General Commercial	Commercial	2	11,996	10,197	9,177	22
HALF MILE	A3	4328002034	Low Density General Commercial	Commercial	2	23,991	20,393	18,353	45
HALF MILE	A3	4328002036	Low Density General Commercial	Commercial	2	24,003	20,403	18,363	45
				HALF MILE SUBTOTAL		**15,822,051**	**13,448,744**	**12,103,869**	**29,522**

Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

Appendix C - Century City Stations - Jobs and Population Calculations - Parcel Level Inventory

Santa Monica/Avenue of the Stars Station Resident Population

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population	Notes
				600 FOOT SUBTOTAL		**0**	**0**	**0**	
QUARTER MILE	B2	various	Low Residential	Residential - SF	8.7	73	62	118	
				QUARTER MILE SUBTOTAL		**73**	**62**	**118**	
HALF MILE	C1	4317001005	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4317001006	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4317001036	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4317001037	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4317001038	Medium Residential	Residential-MF	54.5	8	6	12	
HALF MILE	C1	4317001041	Medium Residential	Residential-MF	54.5	7	6	12	
HALF MILE	C1	4317001042	Medium Residential	Residential-MF	54.5	7	6	12	
HALF MILE	C1	4317001094	Medium Residential	Residential-MF	54.5	7	6	11	
HALF MILE	C1	4317001103	Medium Residential	Residential-MF	54.5	7	6	11	
HALF MILE	C1	4317001151	Medium Residential	Residential-MF	54.5	15	13	24	
HALF MILE	C1	4317002026	Low Medium II Residential	Residential-MF	29.0	7	6	10	
HALF MILE	C1	4319009007	Medium Residential	Residential-MF	54.5	7	6	12	
HALF MILE	C1	4319009008	Medium Residential	Residential-MF	54.5	7	6	12	
HALF MILE	C1	4319009009	Medium Residential	Residential-MF	54.5	7	6	12	
HALF MILE	C1	4319009017	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009018	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009019	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009020	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009021	Low Medium II Residential	Residential-MF	29.0	3	3	5	
HALF MILE	C1	4319009022	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009023	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009024	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009025	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009026	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009027	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009028	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C1	4319009029	Low Medium II Residential	Residential-MF	29.0	3	3	6	
HALF MILE	C2	4319009045	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C2	4319009051	Medium Residential	Residential-MF	54.5	11	9	17	
HALF MILE	C2	4319009052	Medium Residential	Residential-MF	54.5	11	9	17	
HALF MILE	C2	4319009062	Medium Residential	Residential-MF	54.5	16	14	26	
HALF MILE	C2	4319009075	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4319009081	Medium Residential	Residential-MF	54.5	14	12	23	
HALF MILE	C1	4319009101	Medium Residential	Residential-MF	54.5	21	18	34	
HALF MILE	C2	4319009121	Medium Residential	Residential-MF	54.5	8	7	13	

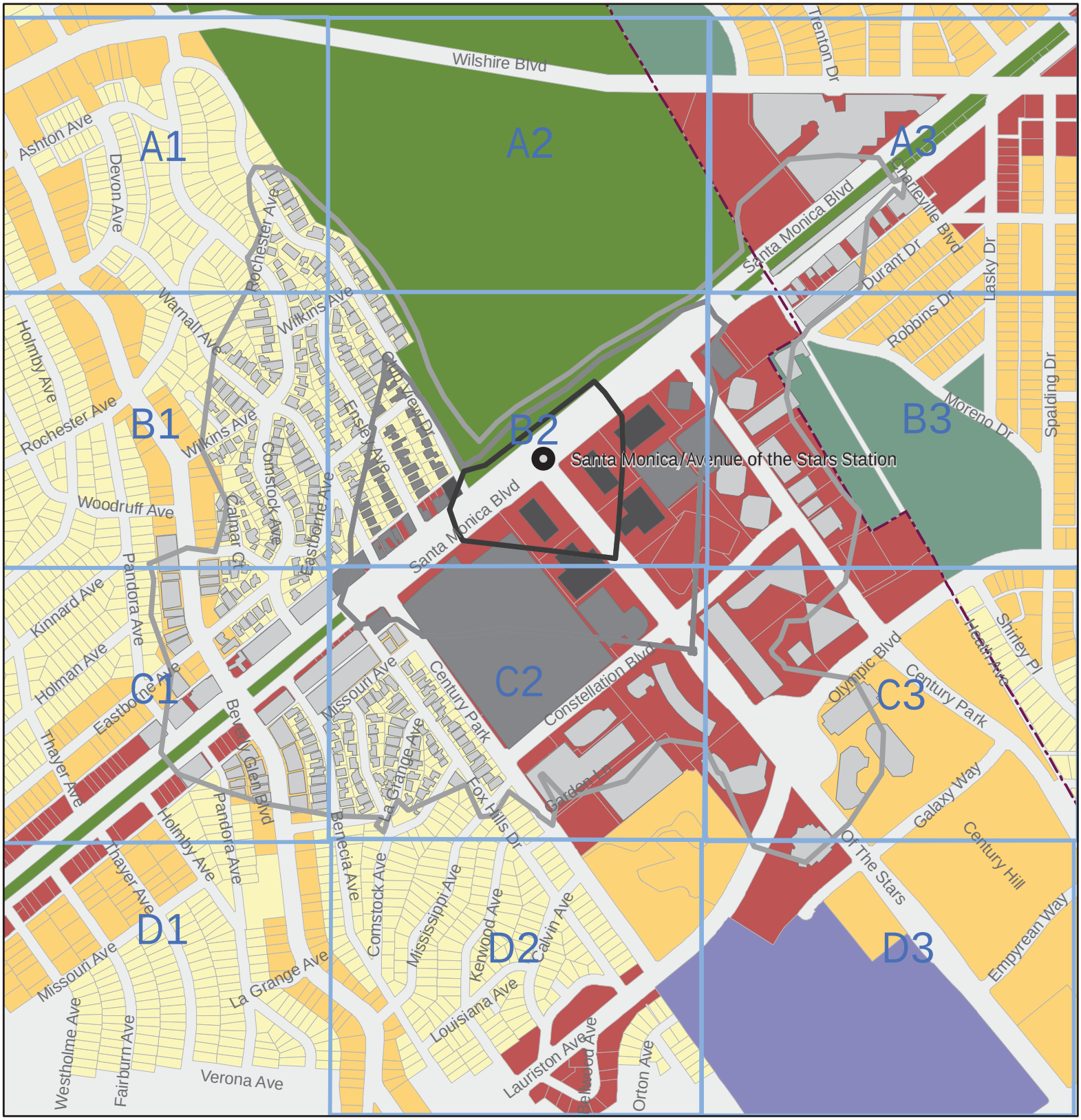
Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population	Notes
HALF MILE	C1	4319009136	Medium Residential	Residential-MF	54.5	22	18	35	
HALF MILE	C2	4319009151	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C2	4319009161	Medium Residential	Residential-MF	54.5	19	16	30	
HALF MILE	C2	4319009172	Medium Residential	Residential-MF	54.5	9	8	14	
HALF MILE	C2	4319011001	Low Medium II Residential	Residential-MF	29.0	4	4	7	
HALF MILE	C2	4319011002	Low Medium II Residential	Residential-MF	29.0	5	4	8	
HALF MILE	C2	4319014001	Low Medium II Residential	Residential-MF	29.0	3	3	5	
HALF MILE	C2	4319014002	Low Medium II Residential	Residential-MF	29.0	3	3	6	
HALF MILE	C2	4319014003	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014004	Low Medium II Residential	Residential-MF	29.0	3	3	6	
HALF MILE	C2	4319014005	Low Medium II Residential	Residential-MF	29.0	3	3	6	
HALF MILE	C2	4319014006	Low Medium II Residential	Residential-MF	29.0	3	3	5	
HALF MILE	C2	4319014007	Low Medium II Residential	Residential-MF	29.0	3	3	5	
HALF MILE	C2	4319014008	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014009	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014010	Low Medium II Residential	Residential-MF	29.0	4	4	7	
HALF MILE	C2	4319014011	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014012	Low Medium II Residential	Residential-MF	29.0	4	3	7	
HALF MILE	C2	4319014013	Low Medium II Residential	Residential-MF	29.0	4	4	7	
HALF MILE	C2	4319014014	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014015	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014016	Low Medium II Residential	Residential-MF	29.0	4	3	7	
HALF MILE	C2	4319014017	Low Medium II Residential	Residential-MF	29.0	4	3	6	
HALF MILE	C2	4319014018	Low Medium II Residential	Residential-MF	29.0	5	4	7	
HALF MILE	C2	4319014019	Low Medium II Residential	Residential-MF	29.0	5	4	7	
HALF MILE	C2	4319014020	Low Medium II Residential	Residential-MF	29.0	4	4	7	
HALF MILE	C2	4319014021	Low Medium II Residential	Residential-MF	29.0	4	4	7	
HALF MILE	C2	4319014022	Low Medium II Residential	Residential-MF	29.0	5	4	8	
HALF MILE	C2	4319014023	Low Medium II Residential	Residential-MF	29.0	4	3	7	
HALF MILE	C2	4319014037	Low Medium II Residential	Residential-MF	29.0	4	4	7	
HALF MILE	C2	4319014038	Low Medium II Residential	Residential-MF	29.0	5	4	7	
HALF MILE	C2	4319014039	Low Medium II Residential	Residential-MF	29.0	5	4	7	
HALF MILE	C1	4327005018	Medium Residential	Residential-MF	54.5	13	11	21	
HALF MILE	C1	4327005019	Medium Residential	Residential-MF	54.5	12	10	19	
HALF MILE	C1	4327005020	Medium Residential	Residential-MF	54.5	10	9	16	
HALF MILE	C1	4327005021	Medium Residential	Residential-MF	54.5	8	7	14	
HALF MILE	C1	4327005023	Medium Residential	Residential-MF	54.5	8	7	14	
HALF MILE	B1	4327005037	Medium Residential	Residential-MF	54.5	34	29	55	
HALF MILE	C1	4327005088	Medium Residential	Residential-MF	54.5	25	22	41	
HALF MILE	C1	4327006001	Medium Residential	Residential-MF	54.5	9	7	14	
HALF MILE	C1	4327006002	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4327006003	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4327006004	Medium Residential	Residential-MF	54.5	8	7	13	

Distance from Portal	Map Location	AIN	General Plan Designation	General Type	Permitted Density	Maximum Dwelling Units	85% Trend Dwelling Units	Trend Population	Notes
HALF MILE	C1	4327006005	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4327007006	Medium Residential	Residential-MF	54.5	11	9	18	
HALF MILE	C1	4327007007	Medium Residential	Residential-MF	54.5	10	9	17	
HALF MILE	B1	4327008001	Medium Residential	Residential-MF	54.5	9	8	14	
HALF MILE	C1	4327008002	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4327008003	Medium Residential	Residential-MF	54.5	8	7	13	
HALF MILE	C1	4327008004	Medium Residential	Residential-MF	54.5	9	7	14	
HALF MILE	C1	4327008005	Medium Residential	Residential-MF	54.5	17	15	28	
HALF MILE	A3	4328002025	High Density Multi-Family	Residential-MF	50.0	6	5	10	
HALF MILE	A3	4328002026	High Density Multi-Family	Residential-MF	50.0	6	5	10	
HALF MILE	A3	4328002028	High Density Multi-Family	Residential-MF	50.0	6	5	10	
HALF MILE	A3	4328002029	High Density Multi-Family	Residential-MF	50.0	5	4	8	
HALF MILE	A3	4328002030	High Density Multi-Family	Residential-MF	50.0	5	4	8	
HALF MILE	A3	4328002031	High Density Multi-Family	Residential-MF	50.0	7	6	12	
HALF MILE	A3	4328002035	High Density Multi-Family	Residential-MF	50.0	19	16	31	
HALF MILE	C3	4329009003	High Medium Residential	Residential-MF	108.9	564	479	911	(1)
				MULTI-FAMILY SUBTOTAL		1,268	1,078	2,048	
HALF MILE	A1, A2, B1	various	Low Residential	Residential - SF	8.7	229	195	370	
				HALF MILE SUBTOTAL		**1,497**	**1,272**	**2,418**	

Data Sources. The plan designations from the cities of Los Angeles and Beverly Hills were used to determine the maximum allowable development potential for the properties within the walksheds created by Fehr & Peers in Appendix A. The four sources used were: city of Los Angeles ZIMAS database information; Century City North Specific Plan; Century City South Specific Plan; and Beverly Hills General Plan.

(1) Took 40% of total for parcel, as 40% of property is within the walkshed

Santa Monica/Avenue of the Stars Station



NEW_SMStation

600 Ft Walkshed

1/4 Mile Walkshed

1/2 Walkshed

Station Area Buildings

Building Distance from Portal

600 Ft

1/4 Mile

1/2 Mile

General Plan Designation

- Commercial
- Residential -MF
- Residential-SF
- Manufacturing
- Park, Open Space, Recreation
- Public, Facility, Govt

350 Feet

Updated October 12, 2011

Santa Monica/Avenue of the Stars Station - A1

Updated October 12, 2011

100 Feet

Santa Monica/Avenue of the Stars Station - A2

Updated October 12, 2011

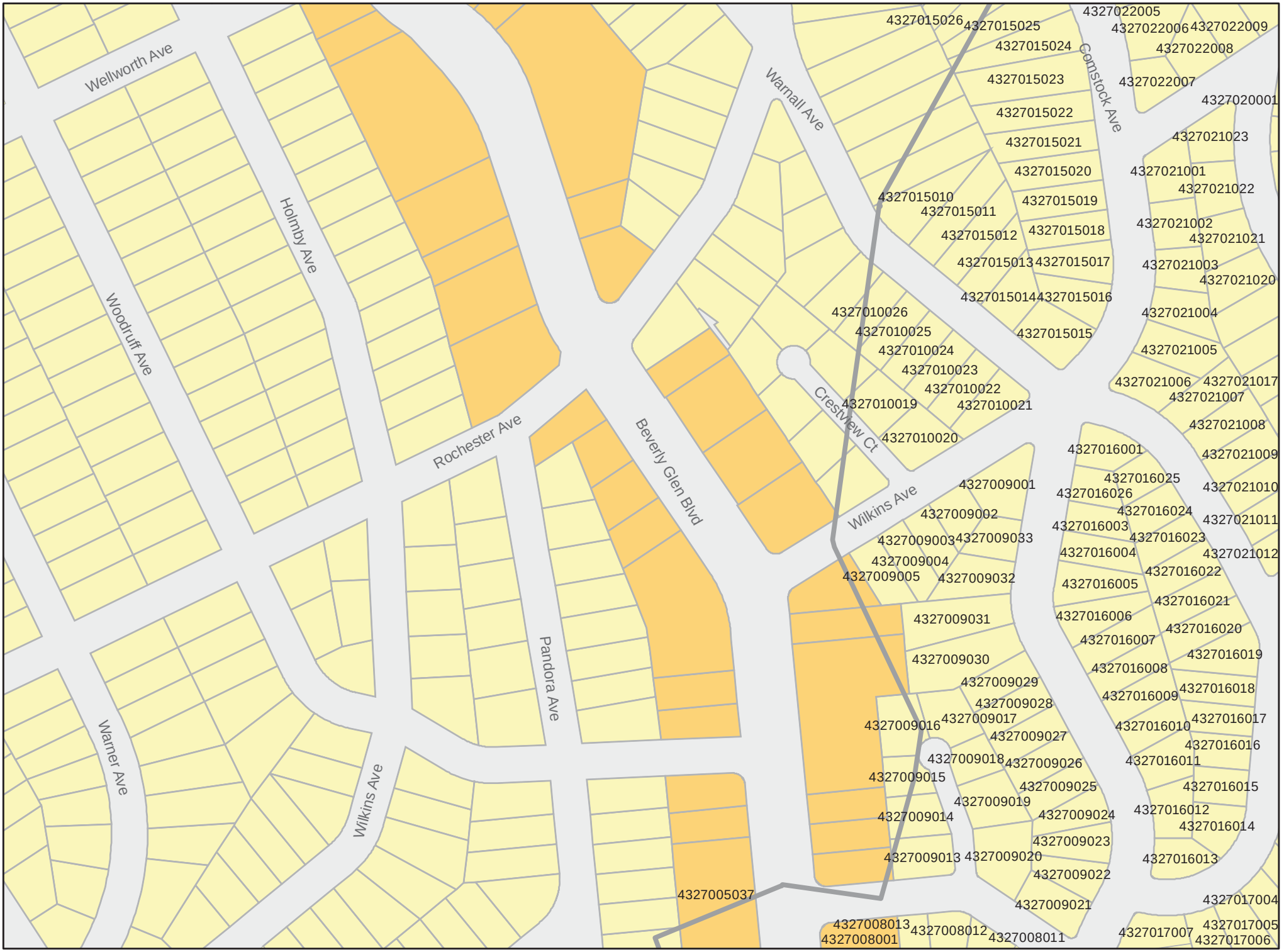
100 Feet

Santa Monica/Avenue of the Stars Station - A3

Updated October 12, 2011

100 Feet

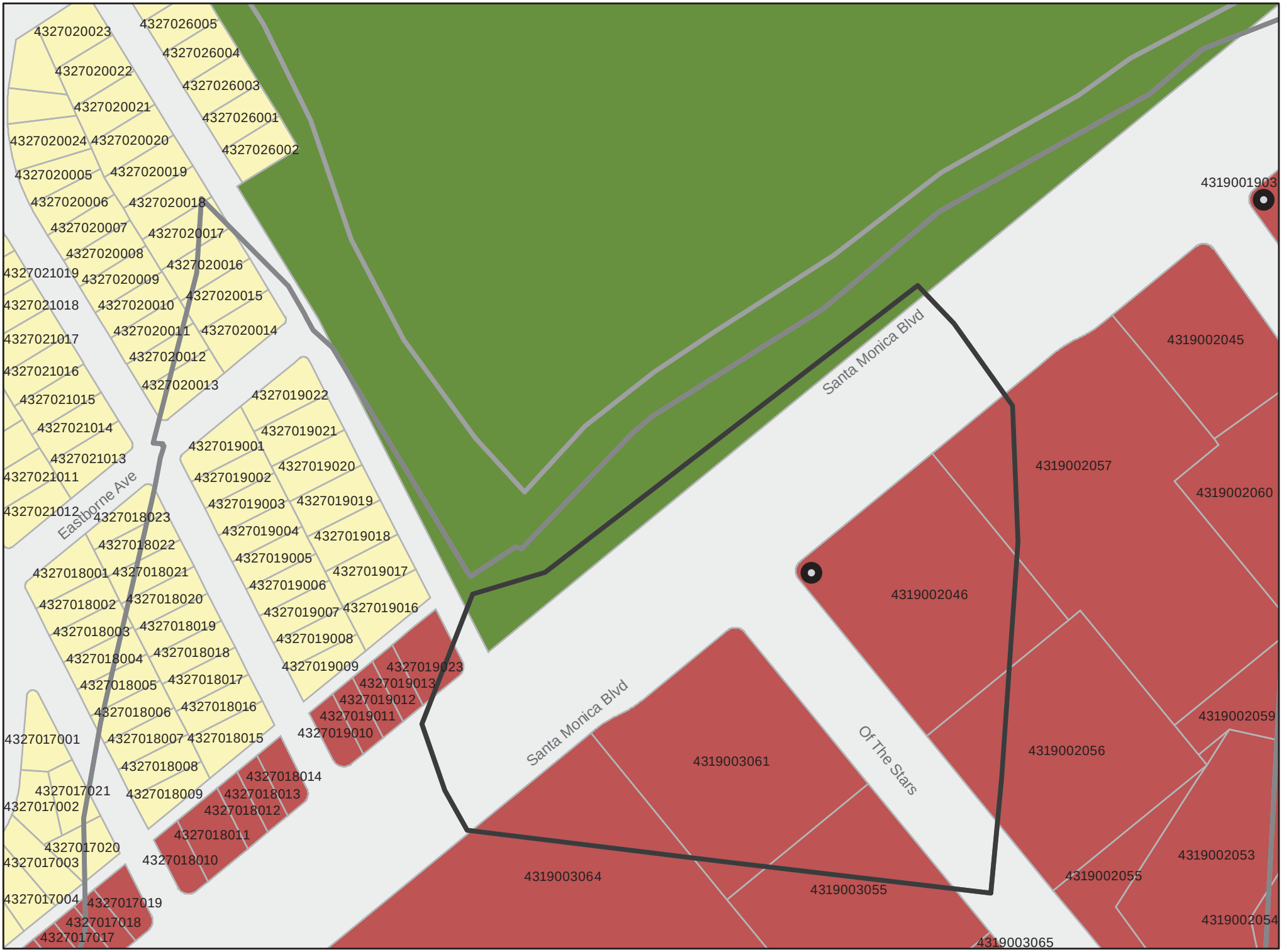
Santa Monica/Avenue of the Stars Station - B1



Updated October 12, 2011

100 Feet

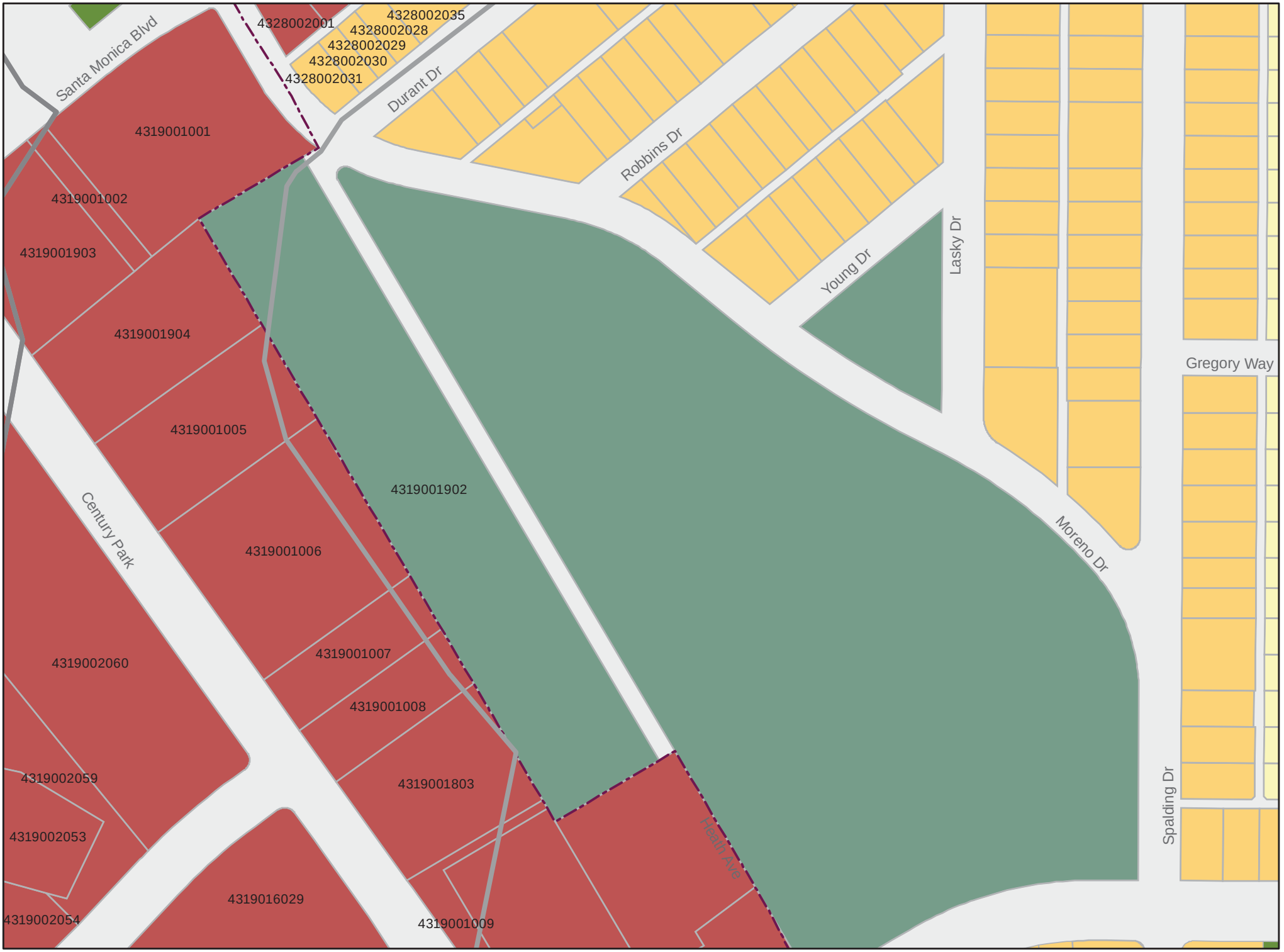
Santa Monica/Avenue of the Stars Station - B2



Updated October 12, 2011

100 Feet

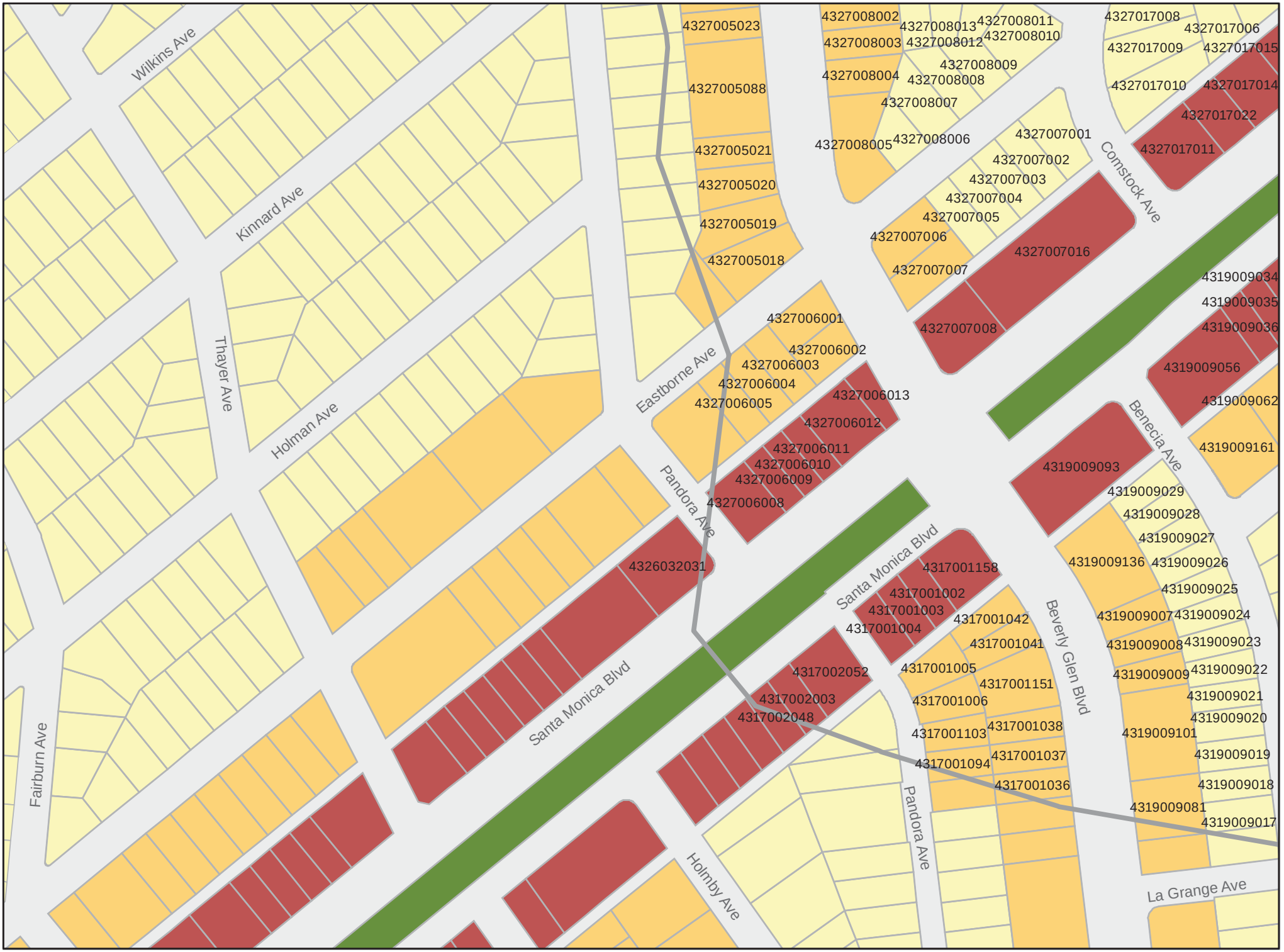
Santa Monica/Avenue of the Stars Station - B3



Updated October 12, 2011

100 Feet

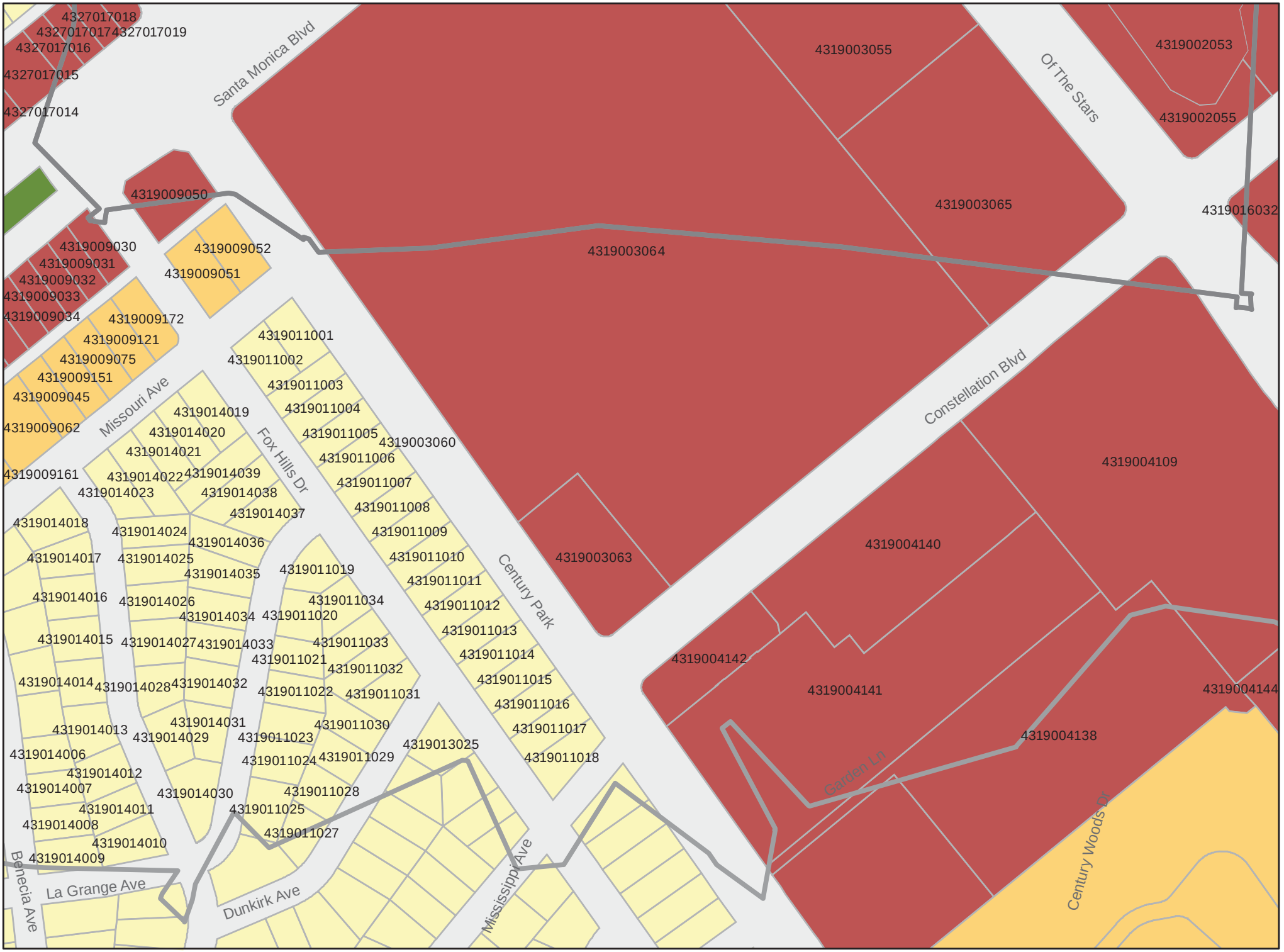
Santa Monica/Avenue of the Stars Station - C1



Updated October 12, 2011

100 Feet

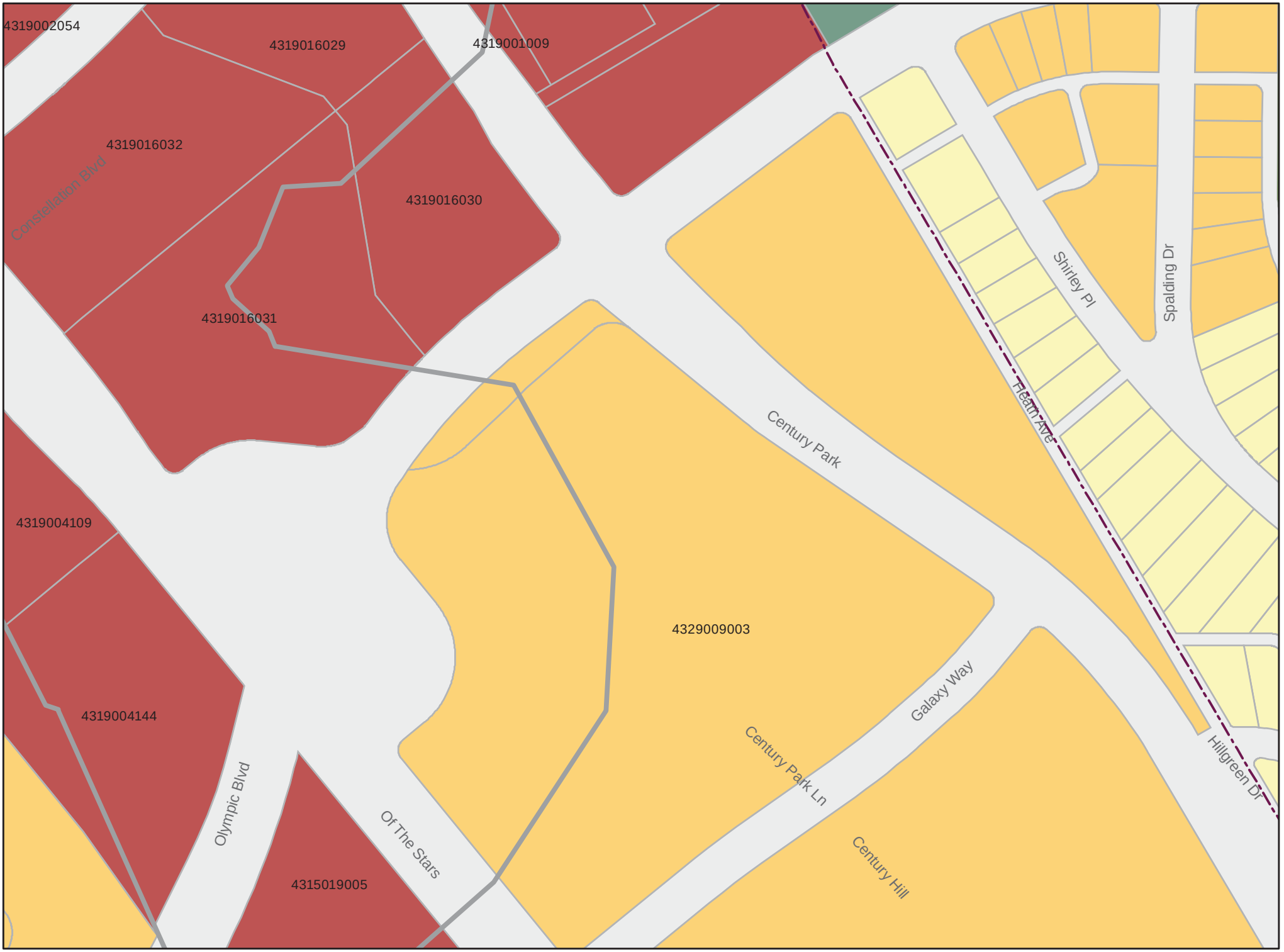
Santa Monica/Avenue of the Stars Station - C2



Updated October 12, 2011

100 Feet

Santa Monica/Avenue of the Stars Station - C3



Updated October 12, 2011

100 Feet

Appendix D CENTURY CITY STATIONS—EXISTING AND FULL DEVELOPMENT RIDERSHIP CALCULATIONS

Appendix D - Century City Stations - Existing and Full Development Ridership Calculations

EXISTING DEVELOPMENT

Santa Monica/Century Park East Station													
Walkshed		Existing Population				Walk Mode Share							
						Moudon		WMATA					
Distance	Acres	Jobs	Residents	Total Jobs & Residents	Pop./Acre	Factor	Estimated Riders	Factor-Jobs	Riders - Jobs	Factor-Resident	Riders - Resident	Estimated Total Riders
0'-600'	12.0	4,820	0	4,820	402	20%	964	35%	1,687	54%	0	1,687
600' - 1/4 mi.	36.5	5,490	180	5,670	155	10%	549	23%	1,263	43%	77	1,340
1/4 - 1/2 mi.	155.1	16,980	1,720	18,700	121	5%	849	10%	1,698	31%	533	2,231
Total	**203.6**	**27,290**	**1,900**	**29,190**			**2,362**		**4,648**		**611**	**5,258**

Constellation/Avenue of the Stars Station													
Walkshed		Existing Population				Walk Mode Share							
						Moudon		WMATA					
Distance	Acres	Jobs	Residents	Total Jobs & Residents	Pop./Acre	Factor	Estimated Riders	Factor-Jobs	Riders - Jobs	Factor-Resident	Riders - Resident	Estimated Total Riders
0'-600'	17.0	10,260	0	10,260	604	20%	2,052	35%	3,591	54%	0	3,591
600' - 1/4 mi.	54.6	9,910	210	10,120	185	10%	991	23%	2,279	43%	90	2,370
1/4 - 1/2 mi.	161.5	10,870	1,800	12,670	78	5%	544	10%	1,087	31%	558	1,645
Total	**233.1**	**31,040**	**2,010**	**33,050**			**3,587**		**6,957**		**648**	**7,606**

Santa Monica/Avenue of the Stars Station													
Walkshed		Existing Population				Walk Mode Share							
						Moudon		WMATA					
Distance	Acres	Jobs	Residents	Total Jobs & Residents	Pop./Acre	Factor	Estimated Riders	Factor-Jobs	Riders Jobs	Factor-Resident	Riders Resident	Estimated Total Riders
0'-600'	15.0	5,900	0	5,900	393	20%	1,180	35%	2,065	54%	0	2,065
600' - 1/4 mi.	49.1	6,150	110	6,260	128	10%	615	23%	1,415	43%	47	1,462
1/4 - 1/2 mi.	182.9	16,820	1,830	18,650	102	5%	841	10%	1,682	31%	567	2,249
Total	**247.0**	**28,870**	**1,940**	**30,810**			**2,636**		**5,162**		**615**	**5,776**

Explanation

Walkshed acreage calculated from Fehr & Peers (Appendix A).

Walkshed jobs and residential population from Fehr & Peers (Appendix A).

Moudon calculations are based only upon the number of employees, and they do not include residents.

FULL DEVELOPMENT

Santa Monica/Century Park East Station												
Walkshed		Full Development Population				Walk Mode Share						
						Moudon		WMATA				
Distance	Acres	Jobs	Residents	Total Jobs & Residents	Pop./Acre	Factor	Estimated Riders	Factor-Jobs	Riders Jobs	Factor-Resident	Riders Resident	Estimated Total Riders
0'-600'	**12.0**	8,070	0	8,070	673	20%	1,614	35%	2,825	54%	0	2,825
600' - 1/4 mi.	**36.5**	5,490	180	5,670	155	10%	549	23%	1,263	43%	77	1,340
1/4 - 1/2 mi.	**155.1**	32,640	2,310	34,950	225	5%	1,632	10%	3,264	31%	716	3,980
Total	**203.6**	**46,200**	**2,490**	**48,690**			**3,795**		**7,351**		**794**	**8,145**

Constellation/Avenue of the Stars Station												
Walkshed		Full Development Population				Walk Mode Share						
						Moudon		WMATA				
Distance	Acres	Jobs	Residents	Total Jobs & Residents	Pop./Acre	Factor	Estimated Riders	Factor-Jobs	Riders Jobs	Factor-Resident	Riders Resident	Estimated Total Riders
0'-600'	**17.0**	13,670	0	13,670	804	20%	2,734	35%	4,785	54%	0	4,785
600' - 1/4 mi.	**54.6**	23,140	820	23,960	439	10%	2,314	23%	5,322	43%	353	5,675
1/4 - 1/2 mi.	**161.5**	13,160	7,190	20,350	126	5%	658	10%	1,316	31%	2,229	3,545
Total	**233.1**	**49,970**	**8,010**	**57,980**			**5,706**		**11,423**		**2,582**	**14,005**

Santa Monica/Avenue of the Stars Station												
Walkshed		Full Development Population				Walk Mode Share						
						Moudon		WMATA				
Distance	Acres	Jobs	Residents	Total Jobs & Residents	Pop./Acre	Factor	Estimated Riders	Factor-Jobs	Riders Jobs	Factor-Resident	Riders Resident	Estimated Total Riders
0'-600'	**15.0**	6,840	0	6,840	456	20%	1,368	35%	2,394	54%	0	2,394
600' - 1/4 mi.	**49.1**	13,960	120	14,080	287	10%	1,396	23%	3,211	43%	52	3,262
1/4 - 1/2 mi.	**182.9**	29,520	2,420	31,940	175	5%	1,476	10%	2,952	31%	750	3,702
Total	**247.0**	**50,320**	**2,540**	**52,860**			**4,240**		**8,557**		**802**	**9,359**

Explanation

Walkshed acreage calculated from Fehr & Peers (Appendix A).

Walkshed jobs and residential population from Parsons Brinckerhoff (Appendix C).

Moudon calculations are based only upon the number of employees, and they do not include residents.