1. INTRODUCTION

1.1 Overview

The Exposition Metro Line Construction Authority (Expo Authority) has prepared this Draft Environmental Impact Report (DEIR) to extend high-capacity, high-frequency transit service from the Westside of Los Angeles to Santa Monica. This project, called the Exposition Corridor Transit Project Phase 2 (Expo Phase 2), would improve transportation mobility and connectivity for residents and commuters in the project study area; provide faster, more reliable public transportation services; increase the capacity of the transportation system; and provide more travel choices. The area is currently underserved by mass transit.

This chapter explains the purpose of and need for the Expo Phase 2 project. The chapter describes the project background, including the results of related studies conducted to date; the transportation problems that the project is intended to improve; and the regional and local transportation needs that led the Expo Authority and Metro to identify the Expo Phase 2 project as a potential solution to the existing transportation problems. The chapter also identifies the local and regional goals and objectives that the Expo Phase 2 project will support and explains requirements under the *California Environmental Quality Act* (CEQA).

The primary purpose of this DEIR is to assist decision-makers and the public in assessing the impacts associated with the implementation of the alternatives under consideration. This DEIR will be circulated for review to interested parties, including private citizens, community groups, the business community, elected officials and public agencies in accordance with state requirements.

The project and environmental analysis was initially conceived as a joint federal/state undertaking, complying with the requirements of the *National Environmental Policy Act* (NEPA) and CEQA, and in pursuit of Federal Transit Administration New Starts funding. As a result of the November 2008 passage of Measure R, a half-cent sales tax in Los Angeles County dedicated to transportation improvements, it has been determined that the project will proceed with nonfederal funding sources only. Therefore, this document will address CEQA requirements and further references to any federal process are for informational purposes, except where federal requirements are more stringent than CEQA.

1.1.1 Exposition Metro Line Construction Authority

The Expo Authority was established by the passage of California Senate Bill 504 signed by the Governor on October 10, 2003. As described in California State Public Utilities Code (Code) Section 132600, the Expo Authority shall oversee various activities including conducting financial, planning, and engineering studies related to the completion of a light-rail line between downtown Los Angeles and downtown Santa Monica.

1.1.2 Expo Phase 2 Study Area

Expo Phase 2 project is located in the Westside of Los Angeles, extending approximately seven to eight miles from the Expo Phase 1 terminus at the Venice/Robertson Station in Culver City to Santa Monica. The study area is generally bounded by Santa Monica and Pico Boulevards on the north, La Cienega Boulevard on the east, Washington Boulevard on the south and the Pacific Ocean on the west. Major freeways present in the study area include Interstate 10 (I-10) running east to west and Interstate 405 (I-405) crossing north to south through the corridor. Major east/west arterials include Santa Monica, Olympic, Pico, Venice and Washington Boulevards; and Overland Avenue, Sepulveda Boulevard, Bundy Drive, Lincoln Boulevard and Ocean Avenue traversing north to south. Transit in the corridor includes bus service by Metro, Culver City, Los Angeles Department of Transportation (LADOT), and Santa Monica, with only the eastern portion of the corridor served by the Expo Phase 1 rail system. The Expo Phase 2 study area is illustrated on Figure 1.1-1 (Expo Phase 2 Study Area).

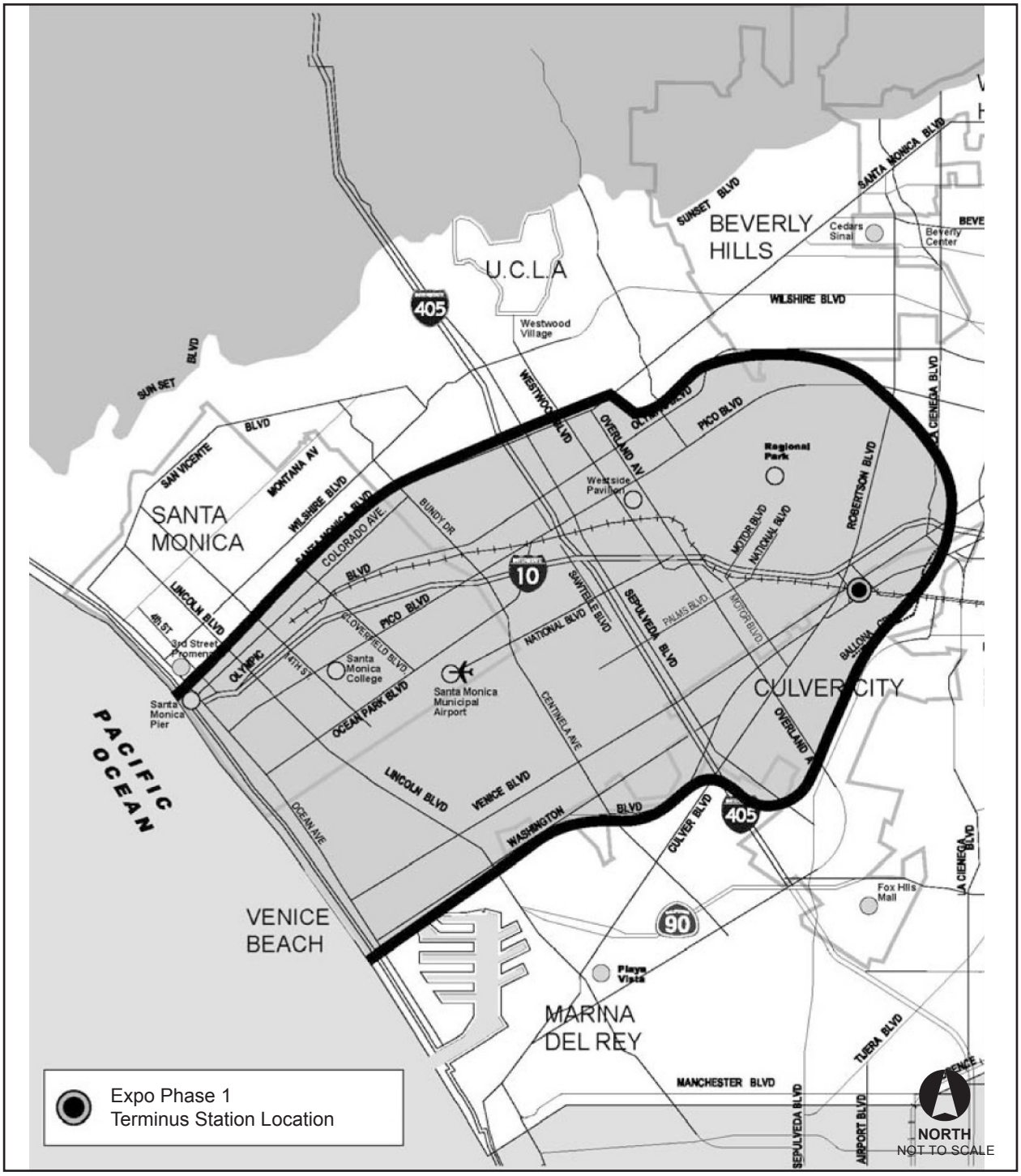
1.1.3 Regional Transit Context

Since 1990, various agencies within Los Angeles County have operated a regional fixed-guideway transit system that consists of heavy rail, light-rail transit (LRT), bus rapid transit (BRT), and commuter rail components. This system currently includes more than 70 miles of Metro Rail service, a 14-mile dedicated busway Metro BRT line, and nearly 400 miles of Metrolink commuter rail lines. The Metro system reported a total of 495.88 million boardings in fiscal year (FY) 2007 with an average weekday boarding level of 1,362,735 in December 2007. The Metro Rail service is shown in Figure 1.1-2 (Metro Rail Service).

Bus service in the study area is provided by Metro, LADOT, Culver City, and Santa Monica. Phase 1 of the Exposition Transit Corridor is under construction and scheduled to open in 2010 with service between the 7th/Metro Station in downtown Los Angeles and Culver City. Existing transit service in the study area is further described in Chapter 2 (Project Alternatives).

1.1.4 Project History

With an underserved market in the regional transit network, transportation problems and mobility issues on the Westside of Los Angeles County have long been recognized and well documented over the years. Since the 1970s, Metro and its predecessors have conducted numerous transportation planning and environmental studies that described the need for alternatives such as bus, light-rail, and/or heavy-rail service on the Westside. In 1999, the *Mid-City/Westside Major Investment Re-Evaluation Study* evaluated transportation options for an area that encompassed over 100 square miles and extended approximately 18 miles from downtown Los Angeles to the Pacific Ocean. Using this study as a guide, the Mid-City/Westside DEIS/EIR was completed in April 2001. Shortly thereafter, in June 2001, the Metro Board separated the Mid-City/Westside study area into two separate transit corridors, the Wilshire Transit Corridor and the Exposition Transit Corridor. This document addresses the Exposition Transit Corridor, which primarily follows the Metro-owned Exposition right-of-way (ROW) from downtown Los Angeles to Santa Monica. A DEIS/EIR was prepared for the Exposition Transit Corridor, which evaluated both LRT and BRT along this route. In 2001, the Metro Board adopted a Locally Preferred Alternative (LPA), LRT from downtown Los Angeles to Culver City. Work on the second phase of the project to Santa Monica was deferred. After a Final EIS/EIR, the FTA signed a Record of Decision (ROD) in February 2006 for the Expo Phase 1 project.



Source: DMJM Harris, 2008.

Figure 1.1-1
Expo Phase 2 Study Area

Source: Metro, 2008; DMJM Harris, 2008.

Figure 1.1-2
Metro Rail Service

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As noted above, the construction for Phase 1 began in October 2006 and the line is expected to be in operation by 2010. The Expo Phase 2 project is an adopted project in the Regional Transportation Plan and an identified Transportation Control Measure (TCM).

1.2 Project Purpose

The purpose described below presents a clear description and assessment of the transportation needs and opportunities in the corridor. The elements of the purpose relate to goals that are used to measure the effectiveness of the project alternatives. Building on prior Wilshire and Exposition Transit Corridor work efforts, the Expo Phase 2 project objectives are focused on the specific Expo Phase 2 corridor. Information on the larger area is still provided since the corridor is intricately linked to the overall issues and opportunities within the study area, county, and region as a whole. Updated population, employment, and travel projections through the year 2030 are also presented, offering the latest understanding of continuing growth trends in the corridor.

1.2.1 Purpose

The underlying purpose of the Expo Phase 2 project is to provide high-capacity transit service on the Westside of Los Angeles to Santa Monica, extending the mobility benefits of the Expo Phase 1 project beyond the planned terminus in Culver City. This proposed high-capacity, major transit investment would do the following:

- Accommodate existing population and employment growth and transit-supportive land use densities
- Improve mobility for the large Westside transit-dependent population who have modest incomes or do not drive
- Provide enhanced access to activity centers, including a linkage to downtown Los Angeles, Culver City, Santa Monica and other destinations in the corridor
- Attract more riders by greatly improving transit services and facilities in the corridor for both work and nonwork trips
- Provide an effective transit alternative to the current and future roadway congestion in the corridor
- Realize economic benefits from travel time savings, increasing the attractiveness of the corridor to employers and workers
- Spur redevelopment and revitalization plans through the availability of efficient and reliable high-capacity transit service
- Realize environmental benefits associated with increased transit usage, such as improved air quality and energy efficiencies

1.2.2 Issues and Opportunities

Previous studies identified key transportation-related problems in the Expo Phase 2 corridor. Issues and opportunities associated with these problems have been refined through further

analysis, agency coordination, and public involvement during the DEIR study process. The issues and opportunities that define the need for transportation improvements in the study area are as follows:

Population and Employment Growth

The need for a high-capacity, major transit investment in the Expo Phase 2 corridor is driven by population and employment concentrations, along with continued growth trends in the area. The Los Angeles region is the most populated in the State of California and second-largest in the country. As shown in Table 1.2-1 (Population and Employment Growth, 2000 to 2030), the six-county Southern California Association of Governments (SCAG) region[4] contained 16.6 million people and 7.9 million jobs in 2000, with 9.9 million living and 4.8 million working in Los Angeles County. Approximately 3 percent of the population and 5 percent of the jobs in the county are located within the study area.

Table 1.2-1 Population and Employment Growth, 2000 to 2030

	2000	2030	Percent Change
Population			
Study Area	290,787	331,116	13.9%
Los Angeles County	9,884,300	12,513,500	26.6%
SCAG Region	16,630,000	22,890,000	37.6%
Study Area % of County	3.0%	2.7%	
Employment			
Study Area	222,633	275,405	23.7%
Los Angeles County	4,761,400	5,775,000	21.3%
SCAG Region	7,860,000	10,500,000	33.6%
Study Area % of County	5.0%	4.9%	

SOURCE: 2000 U.S. Census and SCAG; DMJM Harris, 2007.

The study area includes the second and third largest of the region's employment "Peak Zones" in 2000. These are defined in a University of Southern California study[5] prepared for Metro as contiguous census tracts with at least 20,000 jobs among them and with a minimum of 20 jobs per acre in each tract. The "West LA" and "Santa Monica" Peak Zones had a total of 320,000 jobs in 2000, yet neither is served by fixed-guideway transit service. The study further notes that "Culver City" also qualifies as a Peak Zone, when the Peak Zone threshold is lowered to 10,000 jobs in contiguous tracts, and a minimum of 10 jobs per acre in each tract are used. Figure 1.2-1 (2000 Employment Density Peak Zones) shows the year 2000 employment densities, demonstrating the existing Westside and Santa Monica "Peak Zones."

[4] The six SCAG counties include Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.
[5] "Analysis of Los Angeles Metropolitan Spatial Structure," Genevieve Giuliano, School of Policy, University of Southern California, April 2005.

Source: SCAG, 2000

Figure 1.2-1
2000 Employment Density Peak Zones

According to forecasts produced by SCAG, study area employment will increase by nearly 24 percent, gaining 53,000 jobs by 2030 (Table 1.2-1 [Population and Employment Growth, 2000 to 2030]). Figure 1.2-2 (2030 Employment Density Peak Zones) shows the 2030 employment densities, including the increase of job density specifically in Santa Monica between Colorado Avenue and Santa Monica Boulevard.

Population in the study area is expected to grow by nearly 14 percent, gaining about 40,000 people between 2000 and 2030. The sustained population and employment growth in the corridor will place further demands on an already burdened transportation infrastructure, including transit service, local roadways, and regional highways.

Transit-Supportive Land Use Densities

Population and employment densities in the study area are some of the highest within Los Angeles County. These employment and population densities are critical to supporting a high-capacity transit investment. In 2000, the study area averaged approximately 11,147 persons per square mile; almost five times that of Los Angeles County, as shown in Table 1.2-2 (Population and Employment Densities, 2000 to 2030). According to SCAG's forecasts, population density within the study area will increase 14 percent, to over 12,693 persons per square mile, by 2030.

Table 1.2-2 Population and Employment Densities, 2000 to 2030

	2000	2030	Percent Change
Persons per Square Mile			
Study Area	11,147	12,693	13.9%
Los Angeles County	2,344	2,967	26.6%
Employees per Square Mile			
Study Area	8,535	10,558	23.7%
Los Angeles County	1,120	1,358	21.3%

SOURCE: 2000 U.S. Census and SCAG; DMJM Harris, 2007.

In 2000, employees per square mile totaled 8,535 in the study area and 1,120 in the county. By 2030, SCAG projects that job densities will increase almost 24 percent to 10,558 employees per square mile in the study area.

The existing activity centers in the study area are a central part of a large concentration of land uses that are considered by virtue of their density to be transit-supportive, such as high-density housing, commercial and retail.

Transit-Dependent Communities

As can be observed in Table 1.2-3 (Transit-Dependent Communities, 2000), of the high concentration of people living within the study area, a substantial percentage relies on transit for mobility. These communities include people age 65 and over, students, the mobility impaired, and persons living in no-car households. In the year 2000, the study area exceeded Los

Angeles County in two of the eight transit-dependent categories listed in Table 1.2-3 (Transit-Dependent Communities, 2000), including population 65+years old and college students.

Table 1.2-3 Transit-Dependent Communities, 2000

Characteristics	Study Area	County
Population 65+ Years Old	22%	21%
Population Students 1-12 Grade	18%	22%
Population College Students	12%	8%
No-Car Households	10%	11%
Mobility-Impaired Population	8%	10%
Households Below Poverty (1999)	9%	14%
Minority Population	46%	69%
Proportion of Population Using Public Transit	6%	7%

SOURCE: 2000 U.S. Census; DMJM Harris, 2008.

Because the study area enjoys a concentration of educational, cultural entertainment, and office centers and is one of the most densely populated areas within the region, it has traditionally seen a substantial amount of transit use. The proportion of the study area population using public transit was similar to that for the county in 2000. The transit-dependent communities would benefit from a high-capacity, major transit investment, providing enhanced mobility to work, cultural events, medical facilities, and other daily activities.

Major Activity Centers and Destinations

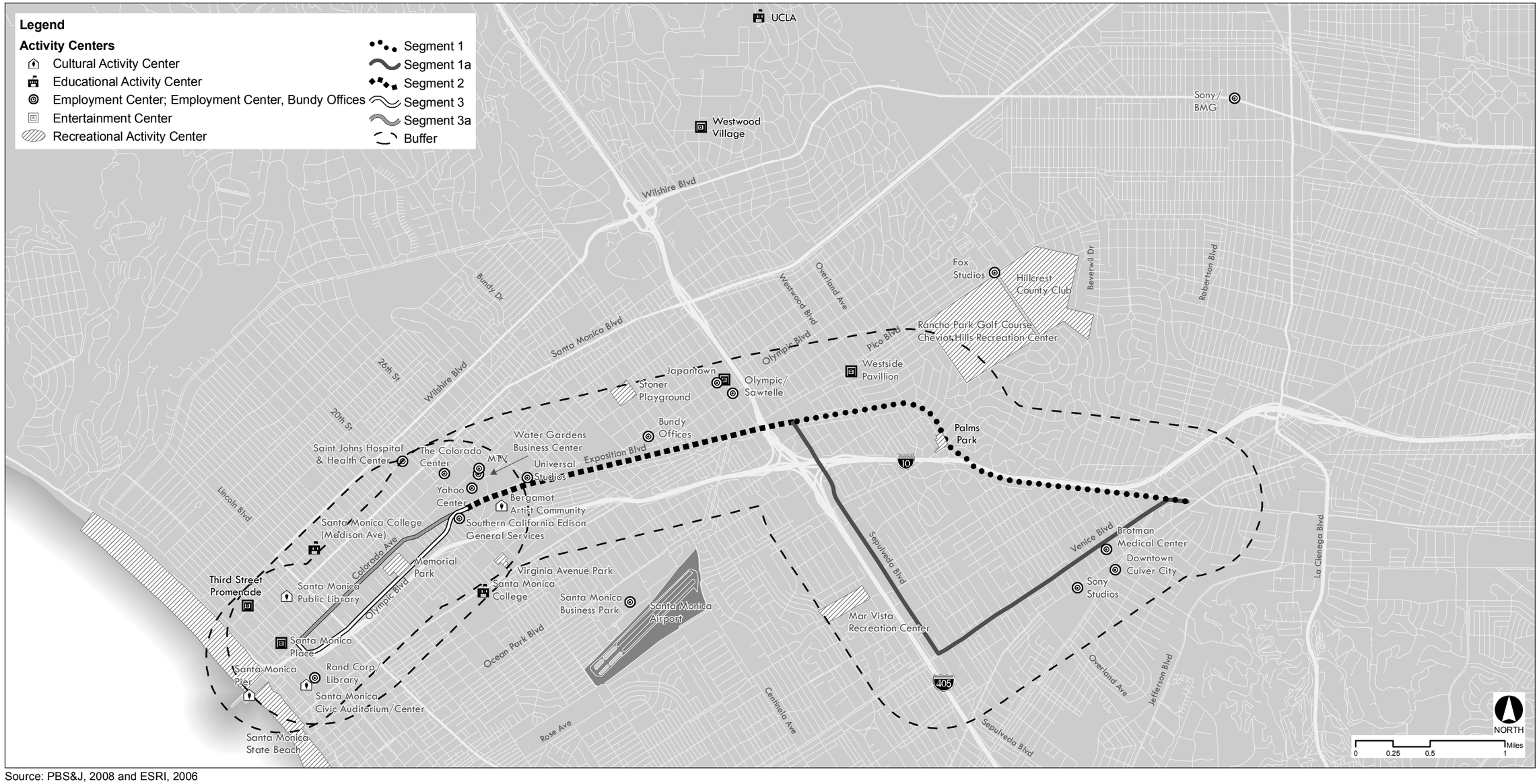
Los Angeles has been characterized not as a central downtown served by adjacent areas, but rather as a collection of urban centers. The “Centers Concept” from the 1960s and 1970s identified urban centers of various types throughout the region that represented concentrations of economic activity or a mix of economic activities and higher-density housing. The Centers Concept envisioned that these areas would be interconnected by transit infrastructure. The City of Los Angeles General Plan Framework revisited and reconfirmed this concept in 1970.

The concept specifically designated centers in Culver City and Santa Monica. The intent of the plan, which would be met for these centers by this project, is to link these centers with transit to improve mobility and improve transportation system capacity.

The cities in the study area all have implemented general plan and zoning policies that support the development of transit in the study area. The plans support use of transit to improve levels of service between Downtown Los Angeles, Culver City, and Santa Monica. Transit corridors and stations are planned for high density and mixed-use development that function as destinations for transit users (e.g., jobs, entertainment, and culture) and contain a high number of residents who can conveniently use transit. Major activity centers in the study area are shown in Figure 1.2-3 (Major Employment, Activity Centers, and Destinations, 2007).

Source: SCAG, 2000

Figure 1.2-2
2030 Employment Density Peak Zones



Source: PBS&J, 2008 and ESRI, 2006

Figure 1.2-3
Major Employment, Activity Centers, and Destinations, 2007

Travel Demand and Regional Connectivity

The population, jobs, and activity centers in the corridor represent substantial travel demand that is not currently served by a high-capacity transit system. Presently, the transportation network consists of a well-defined grid of arterials and freeways generally following an east/west and north/south orientation. These freeways and streets carry some of the highest traffic volumes in California and throughout the country.

Travel Markets

The primary travel markets associated with the Westside include east/west trips "within Westside" and east/west trips to and from Central Los Angeles. Of all trips produced in the Westside in 2005, 72 percent stay within the Westside while 14 percent access downtown Los Angeles. The remaining 14 percent travel to various other Los Angeles County travel districts. Forty-three percent of all trips into the Westside originate in other travel districts in Los Angeles County, 37 percent of which originate from downtown Los Angeles.[6]

Looking at just 2005 home-based work trips produced in the Westside, 49 percent of these trips access the Westside, and 22 percent access downtown Los Angeles. The remaining 29 percent of work trips access other locations in Los Angeles County. Sixty-nine percent of all work trips to the Westside originate from other travel districts in Los Angeles County, over 33 percent of which originate in downtown Los Angeles.

Vehicle Miles Traveled/Vehicle Hours Traveled

Between 2005 and 2030 substantial increases in vehicle miles traveled and vehicle hours traveled are projected. Daily vehicle miles traveled within the study area will increase by 27 percent between the years 2005 and 2030. The increase in vehicle miles traveled will be even greater during the peak periods, increasing by 32 percent during the morning peak period and 31 percent during the evening peak period. Daily vehicle hours traveled within the study area will increase by 74 percent between the years 2005 and 2030. The increase in vehicle hours traveled will be even greater during the peak periods, increasing by 93 percent during the morning peak period and 105 percent during the evening peak period.[7]

Trip Patterns

Travel between various locations in Los Angeles County and the Expo Phase 1 corridor and Expo Phase 2 study area is substantial. Table 1.2-4 (Select Travel Indicators [Average Weekday Person Trips]) below shows average weekday person trips[8] changes over time.

Of particular note is the substantial growth of trips into the study area from all other Los Angeles County locations (15 percent) and from the Expo Phase 1 study area into the Expo Phase 2 study area (20 percent), suggesting a rich potential transit market given the level of congestion on area highways.

[6] Metro Travel Demand Model, Los Angeles County Metropolitan Transportation Authority, *2008 Draft Long Range Transportation Plan*.
[7] Ibid.
[8] Weekday person trip – all trips (walk, bus, rail, and auto) on the average weekday.

Table 1.2-4 Select Travel Indicators (Average Weekday Person Trips)

	2005	2030	% Change
From Los Angeles County to Expo Phase 1 and 2 Study Area	3,590,000	4,130,000	15%
From Expo Phase 1 and 2 Study Area to other Los Angeles County destinations	2,410,000	2,860,000	12%
From Expo Phase 1 Study Area to Phase 2 Study Area	56,644	68,143	20%
From Expo Phase 2 Study Area to Phase 1 Study Area	51,654	57,470	11%

SOURCE: Metro, 2008

Transit Usage

Despite being underserved by a major transit investment, the study area maintains a relatively high transit mode split of 6 percent as compared to the United States average of 5 percent. In areas of Los Angeles County that are better served by transit, transit utilization is as high as 7 percent.

Assuming the construction of the Expo Phase 1 project, but not the Expo Phase 2 project, average weekday transit trips[9] from all other Los Angeles County locations to the Expo Phase 1 and Phase 2 study area in 2005 were 276,000; this demand is expected to increase 23 percent to 339,000 in 2030. Average weekday transit trips to all other Los Angeles County locations from the Expo Phase 1 and Phase 2 study area in 2005 were 124,000, increasing 32 percent to 164,000 in 2030. These numbers also assume that Metro Rapid Bus services are implemented.

Assuming the Expo Phase 2 project is not constructed, average weekday transit trips from the Expo Phase 1 study area to the Expo Phase 2 study area are projected to increase from 5,078 in 2005 to 7,357 in 2030 (i.e., 45-percent increase) and average weekday transit trips from the Expo Phase 2 study area to the Expo Phase 1 study area would increase from 2,218 in 2005 to 2,789 in 2030 (i.e., 26-percent increase). This assumes Metro Rapid Bus services are implemented.[10] The demand described above, both between the Expo Study Areas and the County and between the Expo Phase 1 and Phase 2 Study Areas indicates strong travel demand growth that could be satisfied with improved transportation services.

Congestion and Mobility

The Los Angeles/Long Beach/Santa Ana region ranks poorly in the key mobility measures of annual delay per traveler, travel time index, wasted fuel per traveler, and other mobility measures as reported in the *2007 Urban Mobility Report* by the Texas Transportation Institute.[11]

[9] Weekday transit trip – trips on transit (bus and rail) on the average weekday.
[10] Metro Travel Demand Model, Los Angeles County Metropolitan Transportation Authority, 2008 Draft *Long Range Transportation Plan.*
[11] 2005 annual hours of delay = 490,552,000 person hours; annual delay per peak traveler = 72 person hours; Los Angeles Travel Time Index = 1 (national ranking); annual excess fuel consumption = 383,674,000 gallons annual; excess fuel consumption per peak traveler = 57 gallons annually; ranking for excess fuel consumption = 1 (national ranking).

East/West Travel

In the study area specifically, the I-10 Freeway that currently serves the markets described above is over capacity in many segments. Based on annual counts conducted by the California Department of Transportation (Caltrans), the existing (2007) average daily traffic (ADT) on the I-10 ranges from 151,000 vehicles per day (west of Lincoln Boulevard) to 274,000 vehicles per day (east of the I-405). In 2030, volumes on the I-10 are expected to increase 7 to 9 percent.[12]

In the study area the I-10 Freeway operates at Level of Service (LOS) F (extreme congestion with substantial delay) conditions for more than three hours in each peak period, both in the morning and evening peak travel periods (i.e., 6:30 A.M. through 10:00 A.M. in the morning and 3:30 P.M. to 7:00 P.M. in the evening). An automobile commute on the I-10 from downtown Los Angeles to Santa Monica, a distance of approximately 15 miles, can take from 45 to 75 minutes on an average weekday morning.[13] This level of service is not expected to improve and may substantially worsen with population growth and increased trip making in the years ahead.

As a result of the congestion on the I-10 Freeway, east/west arterials are being used as alternate routes with resultant congestion, particularly during peak periods. As shown on Figure 1.2-4 (Traffic Volumes, Select Locations), average daily volumes are expected to increase 15 to 35 percent by 2030, with peak hour volumes increasing 13 to 32 percent. These east/west arterials currently function for the most part at LOS D through F indicating heavy to serious congestion, with several worsening from LOS D to E or F by 2030 as shown in Table 1.2-5 (Selected Arterials Level of Service, 2007 to 2030). This table also shows continued deterioration in the volume-to-capacity ratio (V/C)[14] for these streets in the AM and PM peak periods. Based on these data, in 2030 operations of these arterials will deteriorate.

North/South Travel

Other congestion results from trips north to and south from the San Fernando Valley, and south to and north from the South Bay cities via the I-405 Freeway. Caltrans reports an Average Daily Traffic (ADT) count on the I-405 ranging from 280,000 (south of Venice Boulevard) to 308,000 (between Venice Boulevard and Olympic Boulevard) translating to substantial congestion. ADT is only expected to increase 4 to 5 percent by 2030, due to the limited capacity to absorb additional traffic. North/south arterial streets show ADT increases between 15 and 30 percent and peak hour volume increases between 18 and 32 percent in 2030. As shown in Table 1.2-5 (Selected Arterials Level of Service, 2007 to 2030), the V/C ratio and LOS on many north/south streets will continue to deteriorate. Based on these data, in 2030 the function of these north/south arterials will deteriorate.

[12] Iteris, *Expo Phase 2 Transportation/Traffic Technical Background Report*.
[13] Metro, *Los Angeles Mid-City Westside Transit Corridor FEIS*, 2005.
[14] Volume-to-Capacity (V/C) is a ratio representing the total traffic volume on a street as compared to the as-designed traffic capacity of the street.

Table 1.2-5 Selected Arterials Level of Service, 2007 to 2030

Street	Location	AM Peak Hour					PM Peak Hour				
		2007	LOS	2030	LOS	Total Growth	2007	LOS	2030	LOS	Total Growth
East/West Arterials											
Olympic Blvd	Between Bundy Dr and Barrington Ave	3014	D	3598	D	19.38%	2958	D	3532	D	19.42%
Olympic Blvd	Between Barrington Ave and Sawtelle Blvd	3435	D	4072	D	18.54%	2957	D	3506	D	18.57%
Pico Blvd	Between 26th St and Centinela Ave	1985	D	2370	D	19.38%	1920	D	2293	D	19.42%
Pico Blvd	Between Centinela Ave and Bundy Dr	1830	D	2185	D	19.38%	1850	D	2209	D	19.42%
Pico Blvd	Between Bundy Dr and Barrington Ave	1878	D	2242	D	19.38%	1973	D	2356	D	19.42%
Pico Blvd	Between Barrington Ave and Sawtelle Blvd	3382	F	4038	F	19.38%	3350	F	4001	F	19.42%
Venice Blvd	Between Sawtelle Blvd and Sepulveda Blvd	3648	D	4334	D	18.80%	3694	D	4429	E	19.89%
Venice Blvd	Between Sepulveda Blvd and Overland Ave	3867	D	4594	F	18.80%	3931	D	4713	F	19.89%
Venice Blvd	Between Overland Ave and Motor Ave	4215	D	4992	F	18.45%	3581	D	4303	D	20.15%
North/South Arterials											
Sepulveda Blvd	Between National Blvd and Palms Blvd	2295	D	3038	F	32.35%	2763	D	3622	F	31.09%
Sepulveda Blvd	Between Palms Blvd and Venice Blvd	2058	D	2445	D	18.80%	2574	D	3086	F	19.89%
Overland Ave	Between National Blvd and Palms Blvd	3387	F	3830	F	13.08%	3896	F	4435	F	13.83%

SOURCE: Iteris, 2008.

Shaded cells indicate roadways with significant deterioration in LOS between 2007 and 2030.

1 Pico Blvd. Between 26th St. and Centinela Ave.	2005	2030
Average Daily Traffic	20,813	24,835
Peak Hour Traffic	1,985	2,370

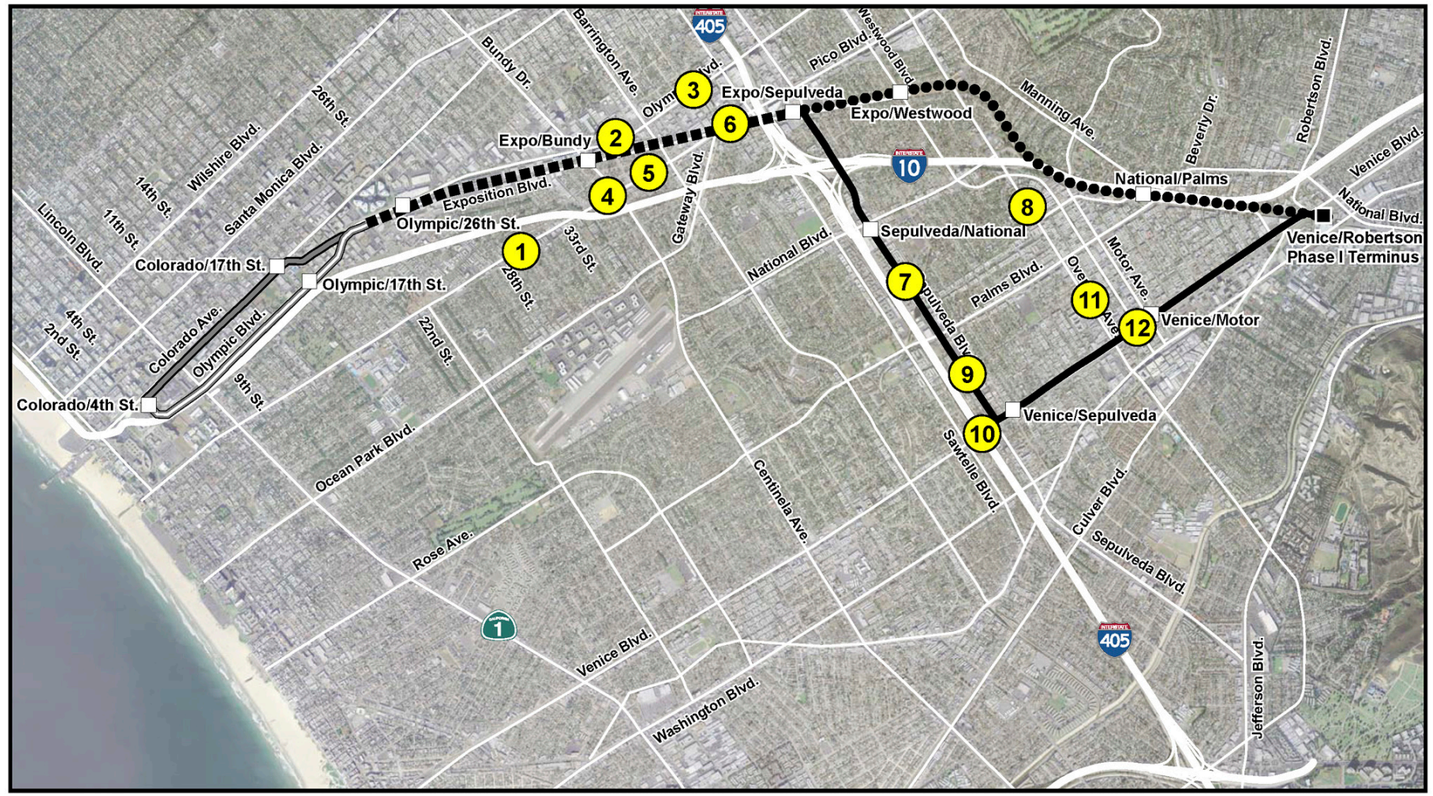
2 Olympic Blvd. Between Bundy Dr. and Barrington Ave.	2005	2030
Average Daily Traffic	12,147	16,089
Peak Hour Traffic	3,014	3,598

3 Olympic Blvd. Between Barrington Ave. and Sawtelle Blvd.	2005	2030
Average Daily Traffic	16,269	21,343
Peak Hour Traffic	3,435	4,072

4 Pico Blvd. Between Centinela Ave. and Bundy Dr.	2005	2030
Average Daily Traffic	23,612	27,108
Peak Hour Traffic	1,830	2,185

5 Pico Blvd. Between Bundy Dr. and Barrington Ave.	2005	2030
Average Daily Traffic	18,040	21,866
Peak Hour Traffic	1,878	2,242

6 Pico Blvd. Between Barrington Ave. and Sawtelle Blvd.	2005	2030
Average Daily Traffic	24,328	29,686
Peak Hour Traffic	3,382	4,038



Legend

- Proposed Stations
- Segment 1
- Segment 1a
- Segment 2
- Segment 3
- Segment 3a

7 Sepulveda Blvd. Between National Blvd. and Palms Blvd.	2005	2030
Average Daily Traffic	12,996	15,519
Peak Hour Traffic	2,295	3,038

8 Overland Ave. Between National Blvd. and Palms Blvd.	2005	2030
Average Daily Traffic	15,617	17,895
Peak Hour Traffic	3,387	3,830

9 Sepulveda Blvd. Between Palms Blvd. and Venice Blvd.	2005	2030
Average Daily Traffic	22,189	25,486
Peak Hour Traffic	2,059	2,445

10 Venice Blvd. Between Sawtelle Blvd. and Sepulveda Blvd.	2005	2030
Average Daily Traffic	25,315	33,746
Peak Hour Traffic	3,648	4,334

11 Overland Ave. Between Palms Blvd. and Venice Blvd.	2005	2030
Average Daily Traffic	21,743	25,828
Peak Hour Traffic	2,364	2,800

12 Venice Blvd. Between Overland Ave. and Motor Ave.	2005	2030
Average Daily Traffic	47,599	61,904
Peak Hour Traffic	4,215	4,992

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Source: AECOM, 2009; PBS&J, 2009.

Figure 1.2-4
Traffic Volumes, Select Locations

Travel Speeds

Related to congestion, daily average travel speeds within the study area are projected to decrease by 25 percent, from 32 miles per hour (mph) in 2005 to 24 mph in 2030. Average speeds during the AM peak period will decrease by 32 percent, from 28 mph to 19 mph; while average speeds during the PM peak period will decrease by 39 percent, from 26 mph to 16 mph.[15] SCAG predicts that a commuter's probability of arriving at a destination on time will decrease to 52 percent if traveling by car, illustrating the effect of increased congestion.

Numerous study area intersections currently operate at a poor level of service (LOS) as documented in the Exposition Corridor Transit Project Phase 2 *Transportation/Traffic Technical Background Report*. Twenty-six of the eighty-six study area intersections currently operate at LOS E or F. LOS is categorized from "A" to "F." LOS A is generally free flow traffic with little or no delay, while LOS F is congested traffic with a high level of delay. In 2030, with no additional transit investment, 38 of 86 study area intersections are projected to operate at LOS E or F during the AM peak, PM peak or both peak periods (refer to Section 3.2 [Transportation/Traffic]).

Bus services in the study area currently experience delay related to congestion. Average operating speed for buses in the study area is 12 mph. In response to congestion, operators are required to deploy additional buses to maintain schedules, increasing the costs to operate these services. This condition is expected to worsen by 2030. Peak hour loads on buses traveling in the eastbound or westbound directions within the study area will increase by 111 percent between 2005 and 2030, from 8,095 to 17,701.[16] During the same period, the average peak hour speeds of the buses will decrease by 8 percent to 11 mph, requiring more equipment and operators to provide the same service level.

System Capacity Constraints

As described above, there is a limit to the physical and operational capacity of existing highways and arterials to support congestion levels as population and job growth continues. The expansion of freeways and arterials is limited by the significant amount of existing development surrounding them. Expansion of the street network would require significant property acquisition and costs.

Due to the level of build-out and density within the study area, local jurisdictions (Los Angeles, Culver City, and Santa Monica) have generally determined that congestion relief improvements should focus on travel demand management, increased ridesharing and transit usage rather than highway/arterial road widening or new construction. Efforts to increase street speeds and capacity in the study area (e.g., Pico/Olympic one-ways) have been met with concern that commercial neighborhoods and more pedestrian-oriented environments reliant on slower traffic will suffer. In the face of planned growth, rail transit improvements would offer a way to expand the capacity of the transportation network, providing additional transportation options within the study area and connecting the study area to the larger community.

Because there is a large base of existing transit patrons, demonstrated by the 6-percent transit utilization, increasing the transit mode share through expanded service would represent a

[15] Metro, *Los Angeles Mid-City Westside Transit Corridor FEIS*, 2005.
[16] Connetics Transportation Group, August 8, 2008.

natural extension of existing patterns and trends. However, buses are subjected to the same traffic congestion as automobiles. As a result it will become increasingly expensive to provide a consistent level of service. These constraints need to be considered in the potential development of a high-capacity transit system in the corridor.

Economic Development Potential

Entertainment and media-related businesses will continue to fuel growth and economic development in the study area. In addition, as indicated by Grubb & Ellis,[17] other sectors in the study area will contribute to regional, as well as statewide, economic growth. Grubb & Ellis states that in the 1980s and 1990s, five sectors emerged to propel the California economic base forward: foreign trade, high-tech manufacturing, professional services, tourism, and entertainment. The study area market is home to most of these industries, particularly entertainment, which have been a principal catalyst to economic growth and a driving force for the office market.

Worsening congestion on the roadway system will reduce the economic competitiveness of development intended to generate jobs and revenue for the corridor and the region as a whole. As noted in Section 3.11 (Land Use/Planning), the cities of Los Angeles and Santa Monica are in the process of developing a variety of local area plans that would promote transit oriented development on the Westside in association with the project.

Environmental Impacts

In addition to congestion, the Los Angeles region has long been known for poor air quality, primarily caused by automobile traffic. The study area is located within the Los Angeles County portion of the South Coast Air Basin (SCAB). Ambient pollution concentrations recorded in the Los Angeles County are among the highest in the four counties comprising the basin.

The entire Basin is designated as a federal-level extreme nonattainment area for ozone and as a serious nonattainment area for CO and PM_{10}. The area also is a federal-level nonattainment area for NO_X and $PM_{2.5}$. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the SCAB are associated with heavy traffic. The Basin is in attainment for the state CO standard, and it is in attainment for both the federal and state ambient air quality standards for SO_2, Pb, and NO_2.[18]

1.2.3 Transportation Goals and Objectives

The elements of the project purpose listed in Section 1.2.1 (Purpose) were developed into more detailed goals by the Expo Authority through the public scoping and outreach process and in accordance with regionally adopted plans and policies (i.e., Metro Long Range Plan, SCAG Regional Transportation Plan). Criteria were developed to measure the ability of the alternatives to achieve the goals and objectives established for the study. These project objectives, goals and criteria, advanced from those used in the Screening of Alternatives, are used to compare the remaining alternatives to each other in Chapter 7 (Comparison of Alternatives). In addition, the Expo Authority determined that efficiency, cost-effectiveness, transit-supportive land use,

[17] Joseph Gabbaian, Vice President, Grubb and Ellis, January 2007.
[18] Air Resources Board, 2006.

financial commitment, and other factors would be considered. Following are the four main goals and associated objectives that have been established for the Expo Phase 2 project:

- Goal 1: Improve mobility and regional connectivity
  - Provide transit service on the Westside that can readily be integrated into the existing regional transit network
  - Provide a safe means of transportation between the Westside and downtown
  - Connect to downtown Los Angeles, the Westside and Santa Monica
  - Provide seamless access to the existing regional transit system
  - Support east/west travel patterns
  - Offer alternatives to highly congested roadways
  - Expand transportation system capacity
  - Decrease travel times
- Goal 2: Protect and enhance the human and natural environment
  - Support regional air quality plans
  - Conserve energy
  - Minimize negative impacts to neighborhoods
  - Avoid impacts to historic, archaeological and cultural resources
  - Protect natural resources
  - Minimize noise and vibration impacts
  - Minimize construction impacts
  - Minimize safety impacts
- Goal 3: Promote transit-supportive land use and economic development
  - Accommodate existing and future population and job growth on the Westside by providing a high-capacity transit service as an alternative to the congested I-10 freeway and adjacent east/west streets
  - Provide transit service to existing major trip attractors and generators in the corridor
  - Enhance opportunities for transit-oriented development in the corridor through the provision of an efficient, high-capacity transit alternative
  - Link the urban centers of Los Angeles, Culver City, and Santa Monica as regional employment and commercial centers
  - Improve access to jobs and major activity centers
  - Encourage development in planned activity centers
  - Generate investment in neighborhoods and commercial areas
  - Promote transit-supportive land use development policies

  - Create jobs
- Goal 4: Develop an affordable and cost-effective system
  - Provide a cost-effective, high-capacity transit system

1.3 Uses of the Environmental Document

This DEIR has been prepared for the Expo Authority for the purpose of evaluating proposed actions for the Expo Phase 2 project under CEQA.

1.3.1 CEQA Regulation Overview

Under CEQA, an EIR must be prepared whenever there is substantial evidence, in light of the whole record, that a project may have a significant effect on the environment. As defined in Section 21065 of the California *Public Resources Code* (PRC), "project" refers to an activity undertaken by a public agency, which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

1.3.2 Organization

Chapter 2 (Project Alternatives) describes the physical and operating characteristics of the alternatives evaluated in this document. Chapters 3 through 5 discuss the existing environment of the study area and how the different alternatives would affect that environment. They are organized as follows:

- Chapter 3—Environmental Analysis
- Chapter 4—Construction Impacts
- Chapter 5—Other CEQA Considerations

Where appropriate, mitigation measures are identified. Chapters 6, 7, and 8 are Financial Considerations, Comparison of the Alternatives, and Community Participation and Public Engagement, respectively.

This DEIR has been prepared in accordance with the requirements set forth in CEQA and its applicable regulatory guidance.

1.3.3 Role of the Environmental Determination in Project Development

The analysis presented in this DEIR is based on the project description provided in Chapter 2 (Project Alternatives) and Conceptual Engineering drawings included in Appendices E, F, and G. Also, Chapter 4 (Construction Impacts) describes the techniques to be used to construct the LRT Alternatives. The project description, construction scenario, and engineering drawings reflect comments received from various interest groups and the public during the scoping process and coordination activities carried out during evaluation of alternatives and project development.

This DEIR will be circulated for public review for a period of not less than 45 days. Following circulation and public review of the DEIR, the Expo Authority Board will select a LPA, continue

engineering and environmental studies on the LPA, and prepare written responses to address comments received during the DEIR review period. The completion of these engineering and environmental studies will result in the publication of a Final EIR. The Expo Authority Board will certify the Final EIR, permitting the project to be advanced to the final design and construction phases of project development.

Should the Expo Phase 2 project result in significant effects, before it may approve or carry out the project, the Expo Authority must make findings that address whether and what changes or alterations have been incorporated into the project to lessen these effects. In some instances impacts are found to be both significant and unavoidable. These are generally impacts that would require such extraordinary measures to mitigate that mitigation is not practicable. In the case of such significant and unavoidable impacts, the Expo Authority Board will be required to make a Statement of Overriding Considerations describing those project benefits that outweigh the adverse environmental effects or other specific reasons that support project approval (CEQA Guidelines Section 15093).

As part of the project approval process, the Expo Authority also must adopt a mitigation monitoring and reporting program (CEQA Guidelines Section 15097). This program would list all mitigation measures the Expo Authority intends to implement to avoid or reduce significant impacts identified in the Final EIR.

1.4 Permits and Approvals

In addition to the Expo Authority, other public agencies may have special expertise or jurisdiction by law and discretionary approval over elements of the proposed project. These agencies, known as “Responsible Agencies” under CEQA, will review the DEIR and may comment during the public review period or consider the project’s application for a permit for activities under that agency’s jurisdiction. These agencies are listed in Table 1.4-1 (Agencies with Permit or Approval Authority over the Proposed Project). In addition, other agencies are expected to review this document because the proposed project may affect resources over which they have jurisdiction. These agencies are known as “Trustee Agencies” and may also provide comment on the DEIR.

Table 1.4-1 Agencies with Permit or Approval Authority over the Proposed Project

Agency	Statutory Authority	Permit or Approval Jurisdiction, Actions Covered	Documentation or Prior Approvals Required
Federal			
U.S. Environmental Protection Agency	Section 404 of the Clean Water Act Amendment of 1997; Section 309 of the Clean Air Act of 1970 as amended	Section 404 oversight	Review of this EIR
U.S. Army Corps of Engineers (USACE)	Section 404 permit (Clean Water Act)	Section 404—permits for discharge of dredged or fill materials into waters of the United States, including jurisdictional wetlands according to Section 404(b)(1) guidelines	ENG form 4345, Application for a Department of the Army permit, RWQCB certification pursuant to Section 401 Review of this EIR
State			
California Department of Fish and Game	California Endangered Species Act (CESA); Fish and Game Code, Sections 1601–1603 review; Fish and Game Code, Sections 3503, 3503.5, 3513, 3800	CESA-Review of project for "take" (altering habitat) of endangered and other special status plant or animal species. Sections 1601–1603—Streambed Alteration Agreement, review of project for potential to alter streamflows or the bed and bank of a stream, lake, or pond. Sections 3503, 2503.5, 3513, 3800—prohibition to take possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto	Form FG2023 "Notification of Lake or Streambed Alteration Form," map of area indicating public access and environmental documentation
California Department of Transportation (Caltrans)	Caltrans Encroachment Permit	Encroachment onto federal and state-funded highways requiring the use of a Caltrans Encroachment Permit	Proposed project plans
California Department of Toxics Substances Control	Resource Conservation and Recovery Act of 1976; Hazardous Waste Control Law	Review and oversight of cleanup of sites where surface and/or subsurface contamination has occurred due to the potential release of hazardous materials or wastes	Proposed project plans

Table 1.4-1 Agencies with Permit or Approval Authority over the Proposed Project

Agency	Statutory Authority	Permit or Approval Jurisdiction, Actions Covered	Documentation or Prior Approvals Required
State Water Resources Control Board	Section 402(o) of Clean Water Act	Section 402—National Pollutant Discharge Elimination System (NPDES) General Permits which regulate discharges of storm water from construction and industrial activities	Notice of Intent for storm water general permit coverage
State Historic Preservation Office	CEQA	Trustee agency for historic resources	Review of this EIR
Native American Heritage Commission	Public Resource Code Section 5097	Review of project for potential disturbance to Native American heritage/burial sites	Consultation letter Review of this EIR
Regional			
Regional Water Quality Control Board	Sections 401and 402 of Clean Water Act; Porter-Cologne Water Quality Control Act	Section 401 and Porter-Cologne Water Quality Control Act—Water Quality Certification, or waiver thereof, for construction in wetlands areas determined to be under USACE jurisdiction (certification required before USACE Section 404 permit may become effective)	Copy of application to federal agency for permit (e.g., for Section 404 permit), EIR, copy of Section 404(b)(1) alternative analysis, proposed mitigation plan, if any; Stormwater Pollution Prevention Plan
Los Angeles Metropolitan Transportation Authority	Section 176 of Clean Air Act of 1970 as amended	Review all application for state or federal funding	Proposed project plans and EIR
Local			
City of Los Angeles	ROW Ownership	Master Cooperative Agreement for work within city ROW	Review of this EIR, review and approval of select design documents
City of Culver City	ROW Ownership	Master Cooperative Agreement for work within city ROW	Review of this EIR, review and approval of select design documents
City of Santa Monica	ROW Ownership	Master Cooperative Agreement for work within city ROW	Review of this EIR, review and approval of select design documents