Purpose and Need Report

for the East San Fernando Valley Transit Corridor

November 2012

Metro®

Prepared by the
U.S. Department of Transportation
Federal Transit Administration

and the Los Angeles County
Metropolitan Transportation Agency

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Abbreviations/Acronyms

AB	Assembly Bill
AA	Alternatives Analysis
ADT	Average Daily Traffic
AADT	Annual Average Daily Traffic
BRT	Bus Rapid Transit
CH4	Methane
CO2	Carbon Dioxide
DEIR	Draft Environmental Impact Report
DEIS	Draft Environmental Impact Statement
FTA	Federal Transit Administration
GHG	Greenhouse Gas
I	Interstate
LADOT	Los Angeles Department of Transportation
LOS	Level of Service
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority
MOL	Metro Orange Line
MPH	Miles per Hour
N2O	Nitrous Oxide
ROW	Right of Way
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SR	State Route
V/C	Vehicle/Capacity
VMT	Vehicle Miles Traveled

1.0 Introduction

This section describes the purpose and need for transportation improvements in the East San Fernando Valley. The project study area extends from Ventura Boulevard on the south, to the City of San Fernando, Sylmar-San Fernando Metrolink Station and the Lakeview Terrace neighborhood on the north. The study area includes the two major north-south arterial roadways of Sepulveda Boulevard and Van Nuys Boulevard, spanning 10-12 miles and the major north-west arterial roadway of San Fernando Road. These roadways and nearby neighborhoods are the focus of the analysis presented within this document.

Bordering and traversing the area are several interregional freeways including the Ventura Freeway (US-101), the San Diego Freeway (I-405), the Golden State Freeway (I-5), the Ronald Reagan Freeway (SR-118) and the Foothill Freeway (I-210). To the east is the Hollywood Freeway (SR-170). There are three major transit services that serve interregional trips: the Metro Orange Line (MOL), the Metrolink Ventura Line and Amtrak service, and the Metrolink Antelope Valley Line.

Within the limits of this study area, these freeway corridors are heavily congested during peak periods, and quite often for many hours throughout the day. The most heavily traveled and congested of these freeways is the San Diego Freeway. Congestion on this freeway often results in spillover traffic onto the north-south arterials, as a means to provide relief from travel delay and low vehicle speeds. This results in heavy local roadway congestion, which hinders local and area-wide travel.

The study area is comprised of a variety of land uses which include neighborhood and regional commercial; numerous car dealerships on Auto Row along Van Nuys Boulevard south of Chandler Boulevard; government services at the Van Nuys Civic Center; major shopping and office uses at the Sherman Oaks Galleria; and medium/high density residential throughout other parts of the study area. There are a number of other major activity centers in the surrounding area that are served directly and indirectly by Metro bus lines including The Village at Sherman Oaks; Panorama Mall; Cal State Northridge; Van Nuys Airport; Mission Hills Hospital; Kaiser Permanente; and multiple schools, youth centers, and recreational centers.

According to the Southern California Association of Governments (SCAG), by the year 2035, population in the study area is forecast to increase by 12 percent and employment is forecast to increase by 14 percent. With this growth, the performance of area roadway and freeway networks will further decline due to increased demands on the design capacity of these networks. Growth in neighboring sub-regions that generate substantial volumes of through traffic will also impact the study area, including the Santa Clarita Valley to the north, Burbank and Glendale to the east, and West Los Angeles and the South Bay to the south. Furthermore, the projected growth in travel demand on area transit services will result in greater vehicle crowding, service delays, longer travel times and stresses on the reliability of the system.

Project Background

The East San Fernando Valley Transit Corridor Alternatives Analysis/Draft Environmental Impact Statement/Environmental Impact Report (AA/DEIS/DEIR) is being undertaken by the Los Angeles County Metropolitan Transportation Authority (Metro), with the City of Los Angeles as project co-lead. This study will enable Metro, the City of Los Angeles, and the City of San Fernando to evaluate a range of new public transit service alternatives that can accommodate future population growth and transit demand, while being compatible with existing land uses and future development opportunities.

An overview of the project study area is illustrated on Figure 1-1.

The study area is also inclusive of connecting transit services that include the following:

- Metro Orange Line (MOL)
- Ventura Boulevard Metro Rapid Bus
- Van Nuys Boulevard Metro Rapid Bus
- Sepulveda Boulevard Metro Rapid Bus
- San Fernando Road Metro Rapid Bus
- Metrolink Ventura County Line
- Metrolink Antelope Valley Line
- Amtrak Pacific Surfliner

The study considered the I-405/Sepulveda Pass Corridor, which is another Measure R Project, and the proposed California High Speed Rail project. The proposed I-405/Sepulveda Pass Corridor project could someday link the West Los Angeles area to the east San Fernando Valley and the California High Speed Rail Project via connections to other regional rail projects.

Figure 1-1 - Project Study Area

Source: Metro, 2012

1.1 Project Objective

The purpose of this section is to present information that characterizes the travel conditions and study area transportation system deficiencies that underscore the need for the project.

The East San Fernando Valley Transit Corridor will provide new service and/or infrastructure that improves passenger mobility and connectivity to regional activity centers, increases transit service efficiency (speeds and passenger throughput), and makes transit service more environmentally beneficial via reductions in greenhouse gas emissions.

1.2 Summary of Project Purpose and Need

Based on an evaluation of socioeconomic and congestion growth trends, travel conditions, and feedback from the project community meetings it is demonstrated that existing and projected levels of traffic congestion limit mobility in general, and reduce the reliability of transit services and operations. In light of these conditions, the purpose of the project can be summarized as follows:

- Improve mobility in the eastern San Fernando Valley by introducing an improved north-south transit connection between key transit hubs/routes
- Enhance transit accessibility/connectivity for residents within the study area to local and regional destinations
- Provide more reliable transit service within the eastern San Fernando Valley
- Provide additional transit options in an area with a large transit dependent population and high transit ridership
- Encourage modal shift to transit in the eastern San Fernando Valley, thereby improving air quality

1.3 Project Needs

The section summarizes the nexus between the purpose of the project and the identified needs in the study area. The five project purposes are defined below and followed by a discussion of supporting study area needs.

Purpose: Improve mobility in the eastern San Fernando Valley by introducing an improved north-south transit connection between key transit hubs/routes.

Supporting Needs:

The project study area contains three major transit corridors (MOL, Metrolink Antelope Valley Line and Metrolink Ventura County Line/Amtrak Pacific Surfliner), which are vital to the regional movement of residents and workers into and out of the east San Fernando Valley. These core transit services traverse and serve the study area at various geographic locations and are linked by local and Rapid Bus service. The northern portion of the study area includes the Sylmar/San Fernando Metrolink Station, which is served by the Metrolink

Antelope Valley Line. The middle portion of the study area is served by the Metrolink Ventura County Line/Amtrak Pacific Surfliner via the Van Nuys Station. The southern portion is served by the MOL at the Van Nuys and Sepulveda station stops.

The extent of the study area's transit dependency is supported in part by boarding and alighting data in each corridor as well as its socioeconomic profile. For example, the north-south Metro Bus lines have some of the highest ridership in the San Fernando Valley and Los Angeles County. Offering Metro riders an improved north-south transit connection is imperative to fostering increased future travel opportunities between key regional transit hubs.

Based on the Metro travel forecast model, the number of congested roadway segments (a portion of the roadway located between two intersections) in the study area is expected to increase from 126 to 162, a 29 percent increase in the AM peak hour and from 103 to 159, a 54 percent increase in the PM peak hour. Average speeds on these segments are expected to decrease by up to 12 miles per hour (mph) during the AM and PM peak hours. The increase in congested segments will result in lower vehicle speeds and increased travel delay in the study area, reducing mobility.

The forecasts also indicate that by the year 2035, peak-hour average vehicle travel speeds will:

- Decline in the Van Nuys Boulevard Corridor by about 4.6 mph (a 15.6 percent decrease), from 30.1 mph to 25.4 mph in the AM peak period and by about 4.3 mph (a 14.8 percent decrease) from 28.9 to 24.6 mph in the PM peak period.
- In the Sepulveda Boulevard Corridor, speeds are forecasted to decrease by about 3.5 miles per hour (an 11.3 percent decrease) from 30.9 mph to 27.4 mph in the AM peak period and by about 3.1 mph (a 14.8 percent decrease) from 30.7 to 27.6 mph in the PM peak period.
- For the study area as a whole, speeds are forecasted to decrease by about 4.1 miles per hour (a 13.4 percent decrease) from 30.5 mph to 26.4 mph in the AM peak period and by about 3.7 mph (a 14.8 percent decrease) from 29.8 to 26.1 mph in the PM peak period.

Based on travel projections from the Metro model, the number of study intersections currently operating at LOS E or F along the Van Nuys Boulevard corridor and the Sepulveda Boulevard corridor will more than double by the year 2035.

Mobility is directly related to, among other measures, average travel speeds and commute times. As traffic levels increase, travel times and speeds will worsen and create disincentives for travelers to use regional transit. Providing an improved north-south transit option that is not impacted by traffic conditions is paramount in continuing to provide local mobility within the east San Fernando Valley, as well as providing regional mobility to and from the area.

Purpose: Enhance transit accessibility/connectivity for residents within the study area to local and regional destinations.

Supporting Needs:

According to the Metro model, the person-trip distribution for the project study area indicates that a high number of travel trips tend to be localized to the communities within the area. Approximately 50 percent of the trips stay within the study area, with a large portion of trips occurring between the northern communities of the City of San Fernando and Pacoima and the southern communities of Mission Hills and Panorama City. These southern communities have a higher number of activity centers that include Kaiser Permanente, several high schools, and the Panorama Mall. A significant proportion of the overall study area trip distribution is to and from the Van Nuys Civic Center area, constituting approximately 52 percent of all study area trips. These general trip trends are expected to remain similar in 2035 and show a high attraction of trips between the central study area and the Civic Center area.

Because of the centralized trip patterns, transit accessibility and connectivity are integral to study area resident travel needs, especially to those who are transit dependent (35 percent). A total of 10 percent of households do not own a car and the average adult poverty ratio is 2.26 persons per acre compared to 1.08 per acre for Los Angeles County. These residents rely on Metro and City of Los Angeles Department of Transportation bus services for work and non-work trips within the study area and the greater Los Angeles County area.

By 2035, the trip pattern is expected to remain similar, with a high number of trips (approximately 50 percent) staying within the study area. Local trips will remain a significant contributor to traffic and transit trends. Therefore, providing enhanced transit connections and accessibility to surrounding destinations is critical for residents that rely on public transit.

Purpose: Provide more reliable transit services within the eastern San Fernando Valley.

Supporting Needs:

The existing bus service along the study area corridors does not meet the Metro on-time performance goal of 80 percent. This is directly correlated to levels of congestion and related vehicular speeds, which together reduce the mobility of area bus riders. As congestion continues to increase, the reliability of bus service for riders will also worsen. Providing transit services that are less impacted by increasing traffic congestion will provide increased reliability.

The increased congestion and reduction of speeds will increase both automobile and transit vehicle delay at intersections in the study area. The analysis indicates that the increase in average vehicle delay at key intersections in the study area are expected to increase by at least 30 seconds to possibly over two minutes at several locations during the AM and PM peak hours. Driver delay within the study area commute corridors could increase by 40 percent or more without major mobility improvements. For example, a driver approaching an

intersection in the Civic Center that is currently experiencing 25 seconds in delay will now experience 35 seconds in delays by the year 2035.

Existing Metro bus performance data for the study area indicates that there are large overall differences between peak and off-peak scheduled runtimes (with an increase in runtimes from approximately 25 percent to 50 percent, between the fastest and slowest trips) and bus speeds (with an increase ranging from approximately 33 percent to 50 percent during peak periods). In the Van Nuys Boulevard and Sepulveda Boulevard corridors, there is a lack of a substantial speed advantage for the Rapid Line, as compared to the local line.

The Rapid Line 761 and the Local Line 233 operating on Van Nuys Boulevard do not meet the Metro on-time performance goal during peak periods. For example, the on-time performance of Rapid Line 761 within the study area is less than 50 percent at all time-points traveling northbound and approximately 60 to 70 percent at the southbound time-points.

The on-time performance of the Local Line 233 averages to 69 percent in the southbound direction and 75 percent in the northbound direction. The same occurs along the length of Sepulveda Boulevard within the study area, where Rapid Line 734 and the Local Line 234 do not typically meet the on-time performance goal. On San Fernando Road, the Local Lines 94, 224, 230 and 234 generally perform below the goal within the study area.

On-time performance tends to be slightly better when it is measured across the entirety of these Rapid and Local lines. For instance, the on-time performance for the entire length of Line 233 along Van Nuys Boulevard is approximately 77 percent – still below the 80 percent on-time performance goal, but an improvement over the on-time performance within the study area specifically. This implies that congestion and subsequent poor on-time performance is especially severe in the study area, which may lead to the potential reductions in reliability along other portions of the routes outside of the study area.

The longer travel times, slower speeds, and on-time performance during the AM and PM peak hours support the need for improved transit service in the Van Nuys Boulevard and Sepulveda Boulevard corridors.

Purpose: Provide additional transit options in an area with a large transit dependent population and high transit ridership.

Supporting Needs:

The Van Nuys Boulevard corridor has the seventh highest total transit boardings on the Metro Bus system. This corridor is served by Rapid Line 761 and Local Line 233, which have combined passenger boardings that are the second-highest in the San Fernando Valley, with the MOL boardings at a slightly higher number. Sepulveda Boulevard and San Fernando Road also have some of the highest total boardings of all transit corridors in the San Fernando Valley.

Boardings and alightings along Van Nuys Boulevard are highest between Nordhoff Street and the MOL, and between Laurel Canyon Boulevard and Glenoaks Boulevard. Sepulveda Boulevard also has substantial boardings between Nordhoff Street and the MOL.

The demand in passenger boardings is constituted by both transit dependent and discretionary riders. The overall population density and the transit dependent population density are both more than twice as high in the study area as in the urbanized area of the County as a whole:

- The study area average of 0.53 zero-vehicle households per acre is 77 percent higher than the 0.30 County average.
- The study area average transit dependent population of 7.04 persons per acre is 54 percent higher than the 3.21 County average.
- The study area average of 2.26 adult persons below the poverty line per acre is over two times the 1.08 County average.

Although population density and transit dependent population characteristics are expected to stay the same or improve slightly, study area population is expected to increase by almost 12 percent by the year 2035, and area employment will increase by approximately 15 percent. With the increase in population and employment growth, it is likely that there will be an increase in bus crowding.

The large number of existing riders within the Van Nuys and Sepulveda Boulevard corridors, and the projected population growth indicates that an especially large market is available if transit is further improved in the study area. There will be future needs for increased and upgraded transit services, as populations increase, and transit dependent factors related to age, the concentration of persons without private transportation, and the number of adults below the poverty line are expected to remain higher than County averages. The additional transit option that would be provided by the project will serve existing and future riders well.

Purpose: Encourage modal shift to transit in the eastern San Fernando Valley, thereby improving air quality.

Supporting Needs:

Standards for many of the criteria pollutants monitored within the east San Fernando Valley have been exceeded multiple times during each of the previous three years of collected data (2009 – 2011). The traffic analysis indicates that travel speeds, vehicular delay and congestion will worsen by 2035. This will result in increased gas consumption and vehicle emissions in the study area. The increase in delay at the study intersections is expected to increase vehicle emissions and fuel consumption.

To address climate change and greenhouse gas (GHG) emissions, thus air quality in California, two major initiatives were passed. Assembly Bill 32 (AB 32) was passed in 2006 with the aim of reducing GHG to 1990 levels by 2020. In 2008, Senate Bill 375 (SB 375) was passed to enhanced the State's ability to reach the goals set forth in AB 32 via the promotion of planning more sustainable communities through integrated land use and transportation strategies. As a result of these policies, it is imperative that State and local agencies work toward a solution.

A primary project objective is to encourage a mode shift from automobile to transit, which would result in a reduction of mobile-source air pollutant emissions. The East San Fernando Valley Transit Corridor project would provide transportation and transit improvements that could potentially include Bus Rapid Transit (BRT), streetcar, or Light Rail Transit (LRT). Each of these transit modes would provide the study area with high-quality transit service, where currently there are limited competitive alternatives to driving. All existing corridor services, excluding the MOL running on a guideway, are slowed by mixed-flow traffic and traffic signal operations.

As such, the proposed project would provide the opportunity for auto drivers to choose low-emission transit modes to serve their transportation needs. By shifting mode share from personal automobiles to transit, fewer automobile trips will occur on area roadways, which would reduce the amount of time vehicles idle in severely congested traffic. To the extent that the proposed project can offer an alternative to automobile travel, mobile-source air pollutant emissions would be reduced.

1.5 Project Study Area Characteristics

1.5.1 Study Area Demographics

An overview of the study area demographics are described within this section. This includes information on population, employment, households, vehicle ownership, and transit dependency. Figure 1-2 illustrates the general boundaries of communities within the project study area.

Table 1-1 summarizes the demographic profile of the study area and urbanized Los Angeles County. The use of the conglomerated urbanized (i.e. developed) areas of the County removes low-density areas such as the deserts and mountains.

Table 1-1 Demographic Profile

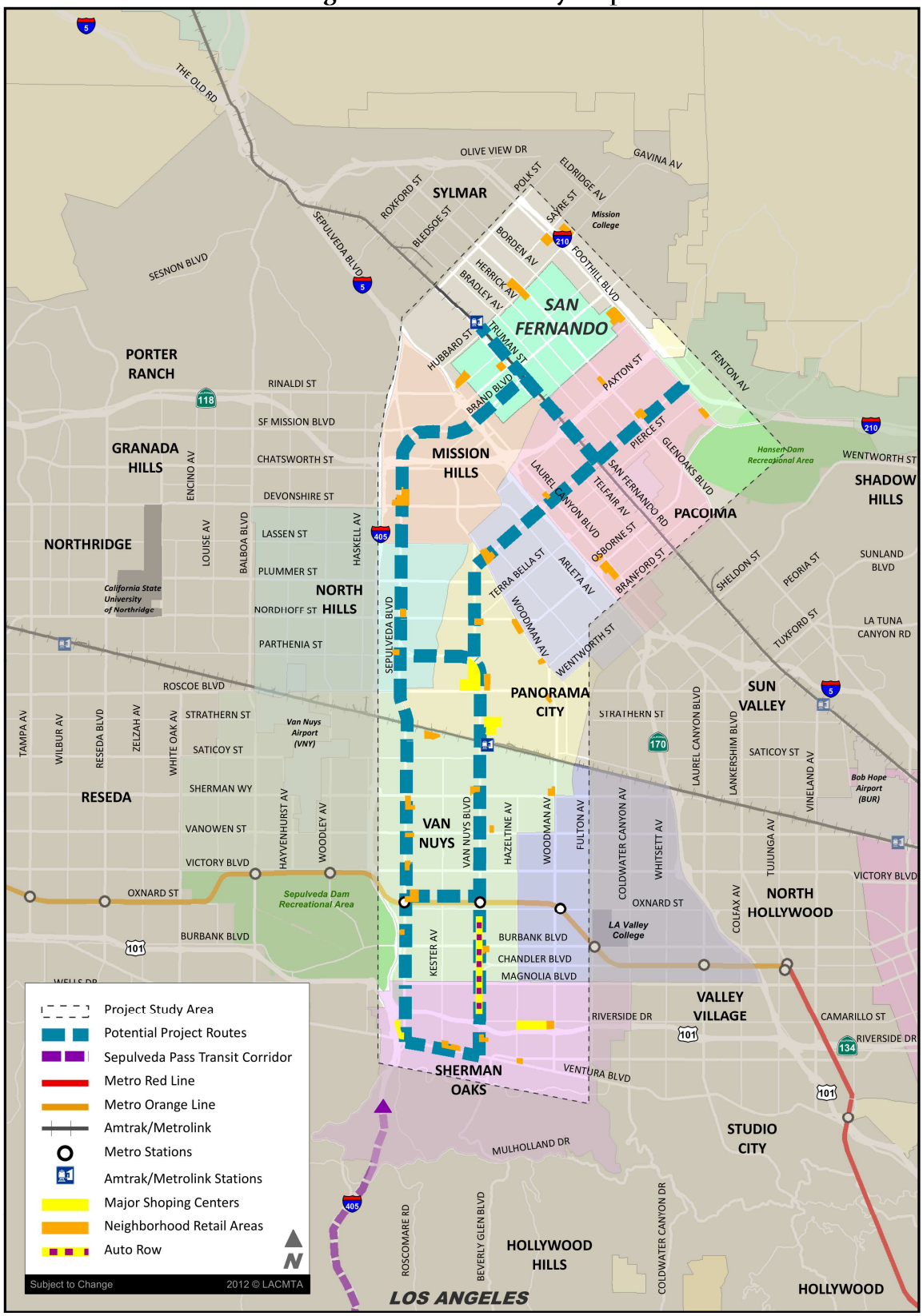
Demographic Categories	Study Area	Urbanized LA County
Total Population[1]	448,974	9,100,836
Household Population[1]	445,702	8,950,220
Households[1]	131,153	3,003,134
Population Density (Persons per Acre)[1]	19.63	9.23
Persons per Household[1]	3.40	3.03
Average Household Income[2]	$62,785	$78,685
Transit Dependent Population[3]	159,868 (35.6%)	3,163,267 (34.7%)
Transit Dependent Population Per Acre	7.04	3.21
Zero Vehicle Households[4]	11,967 (2.6%)	296,391 (3.3%)
Zero Vehicle Households Per Acre	0.53	0.30
Adult Persons below Poverty Line per Acre[5]	2.26	1.08
Employment Density (Jobs per Acre)[6]	5.79	5.55
Vehicles per Household[7]	1.72	1.74

1. Based on U.S. 2010 Census SF-1 estimates.
2. Based on the ACS 2010 5-Year estimates in constant 2010 dollars.
3. Based on U.S. Census 2010 SF-1 estimates, defined as persons below the age of 18 Years 65 Years and over.
4. Based on the ACS 2010 5-Year estimates.
5. Based on the ACS 2010 5-Year estimates; adults are defined as persons 18 Years and over.
6. Based on the SCAG 2012 RTP estimates.
7. Based on the ACS 2010 5-Year estimates.
8. The urbanized portion of Los Angeles County excludes the following Census County Divisions (CCD): North Antelope Valley, South Antellope Valley, Newhall, and Aguora Hills-Malibu

Sources:

American Community Survey (ACS) 2006-2010 5-Year Estimates
U.S. Census, 2010
Southern California Association of Governments (SCAG)
2012 Regional Transportation Plan (RTP)

Figure 1-2 – Community Map



Source: Metro, 2012

Population and Employment Trends

The population and employment trends for the study area, as compared to the San Fernando Valley, the City of Los Angeles, the County of Los Angeles, and the Southern California region, are summarized in Table 1-2. This data represent conditions in 2010 and 2035, based on the 2012 SCAG RTP.

Table 1-2 Population and Employment Trends

Area	2010	2035	Growth Rate 2010-2035
Population			
Study Area	457,733	511,104	12%
San Fernando Valley	1,742,114	1,907,708	10%
City of Los Angeles	3,792,621	4,170,555	10%
County of Los Angeles	9,818,605	11,211,991	14%
Southern California Region	18,051,534	22,057,210	22%
Employment			
Study Area	141,471	161,797	14%
San Fernando Valley	752,029	877,635	17%
City of Los Angeles	1,650,417	1,906,811	16%
County of Los Angeles	5,713,857	6,663,931	17%
Southern California Region	8,815,413	11,283,355	28%

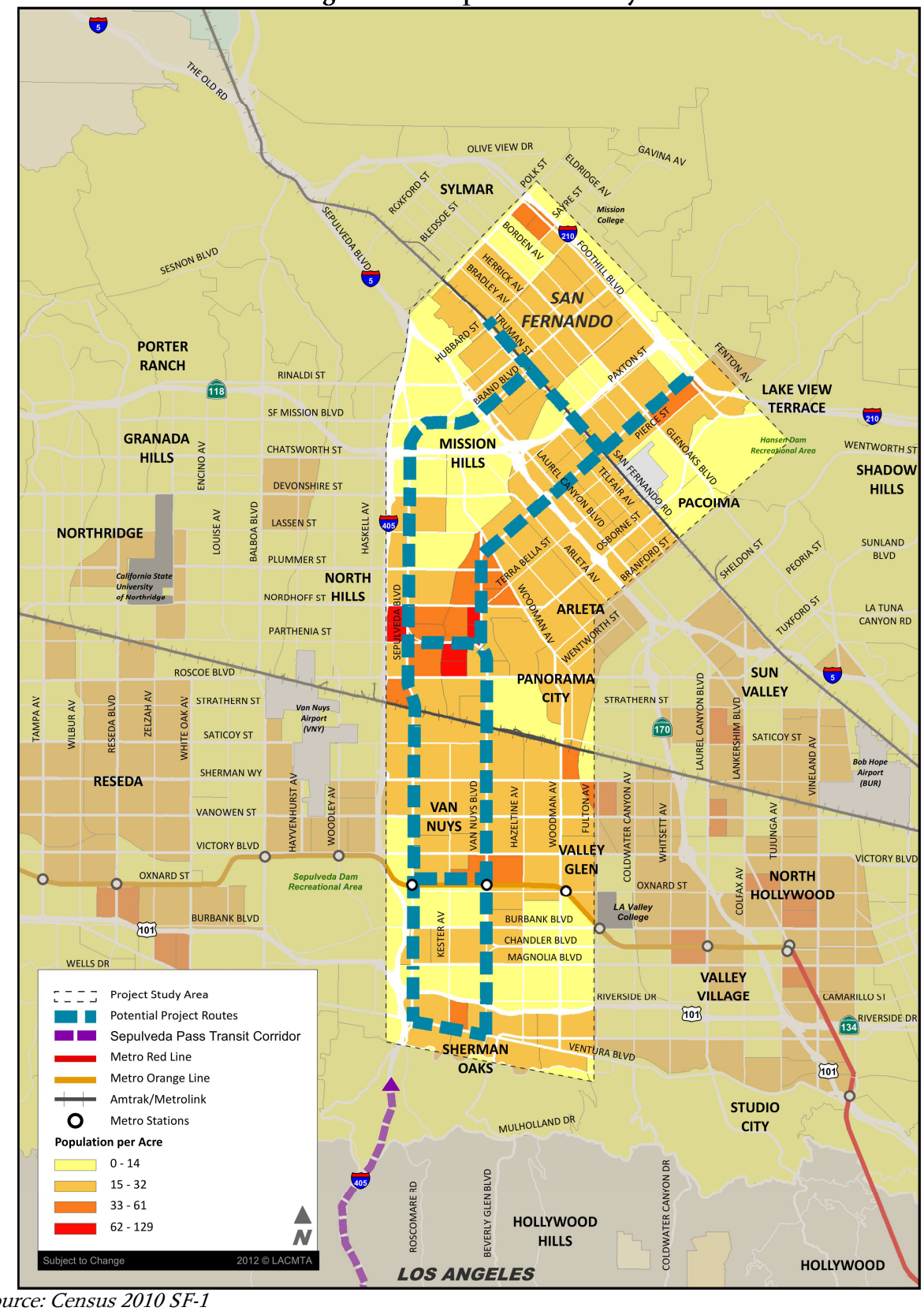
Source: 2012 RTP Model

For 2010, the study area population comprised 26.3 percent of the San Fernando Valley population, 12.1 percent of the City of Los Angeles population, and 4.1 percent of the County of Los Angeles population. By 2035, the population within the study area is expected to grow by 12 percent, as compared to 10 percent in the San Fernando Valley and the City of Los Angeles.

Based on the population density (measured as persons per gross acre, i.e., including acreage for public facilities, streets and roads, utilities and parks and open space) of 19.63, the study area population density is approximately two times higher than urbanized Los Angeles County as a whole (with an average persons per acre of 9.23). The high population density is supportive of higher levels of transit service. Figure 1-3 illustrates the population density within the study area.

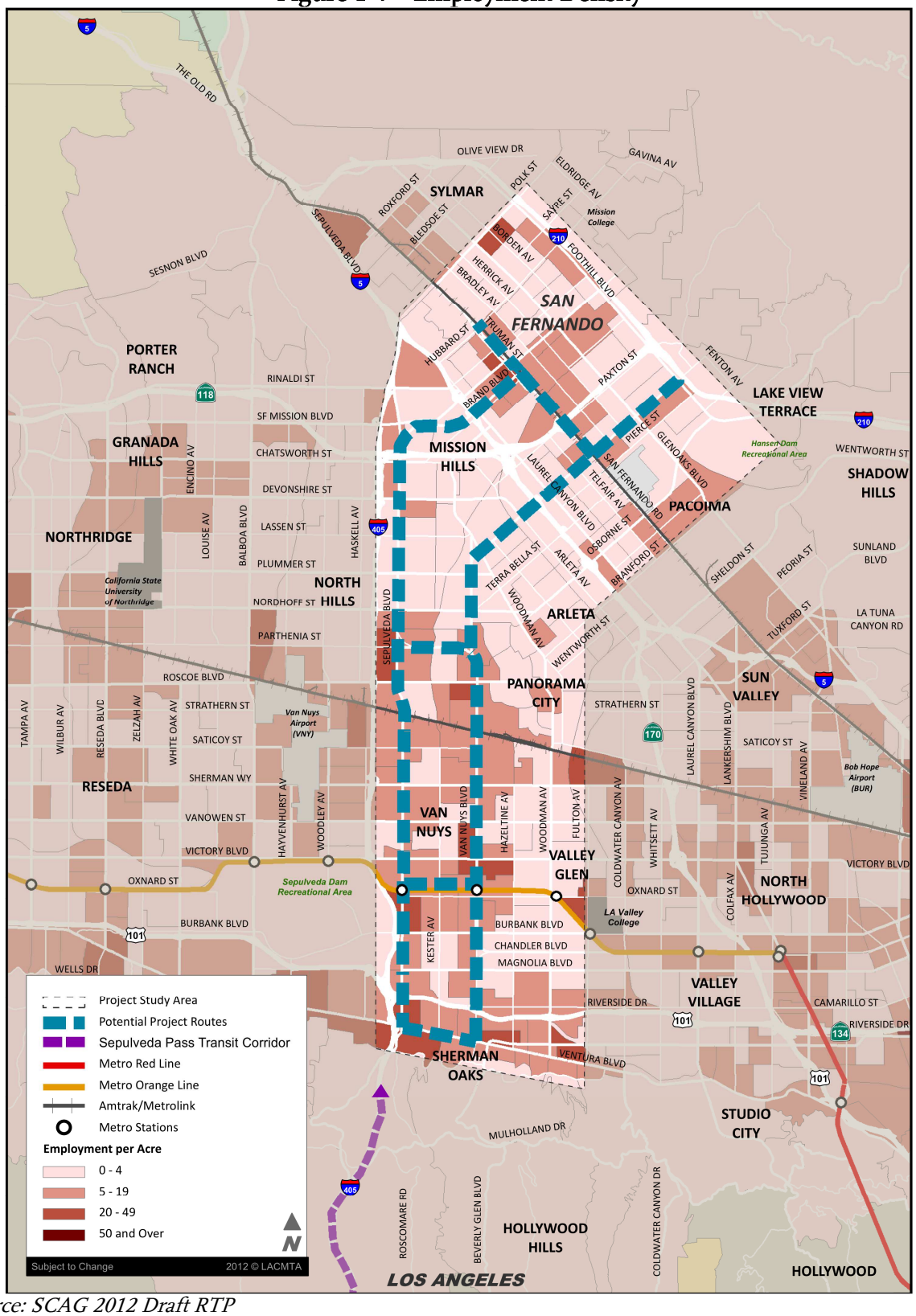
Another factor that influences transit use is employment. Within the study area, employment comprises 18.8 percent of the employment located within the San Fernando Valley, with an overall average of 5.79 jobs per acre. This constitutes 8.6 percent of the employment within the City of Los Angeles, and 2.5 percent of the employment within the County of Los Angeles. Employment is projected to increase by 14 percent by 2035, as compared to 17 percent and 16 percent for the San Fernando Valley and the City of Los Angeles, respectively. Figure 1-4 illustrates the employment density within the study area.

Figure 1-3 – Population Density



Source: Census 2010 SF-1

Figure 1-4 – Employment Density



Source: SCAG 2012 Draft RTP

The population and employment densities are projected to increase annually through the year 2035, further supporting a need for transit improvements in the study area.

1.5.1.1 Transit Dependence

According to the Federal Transit Administration (FTA), transit dependence is defined as persons without private transportation; elderly (over the age of 65); youths (under the age of 18); and persons below poverty or median income levels defined by the U.S. Census Bureau. Populations that fall within this definition have a higher need for public transit for their local and regional mobility.

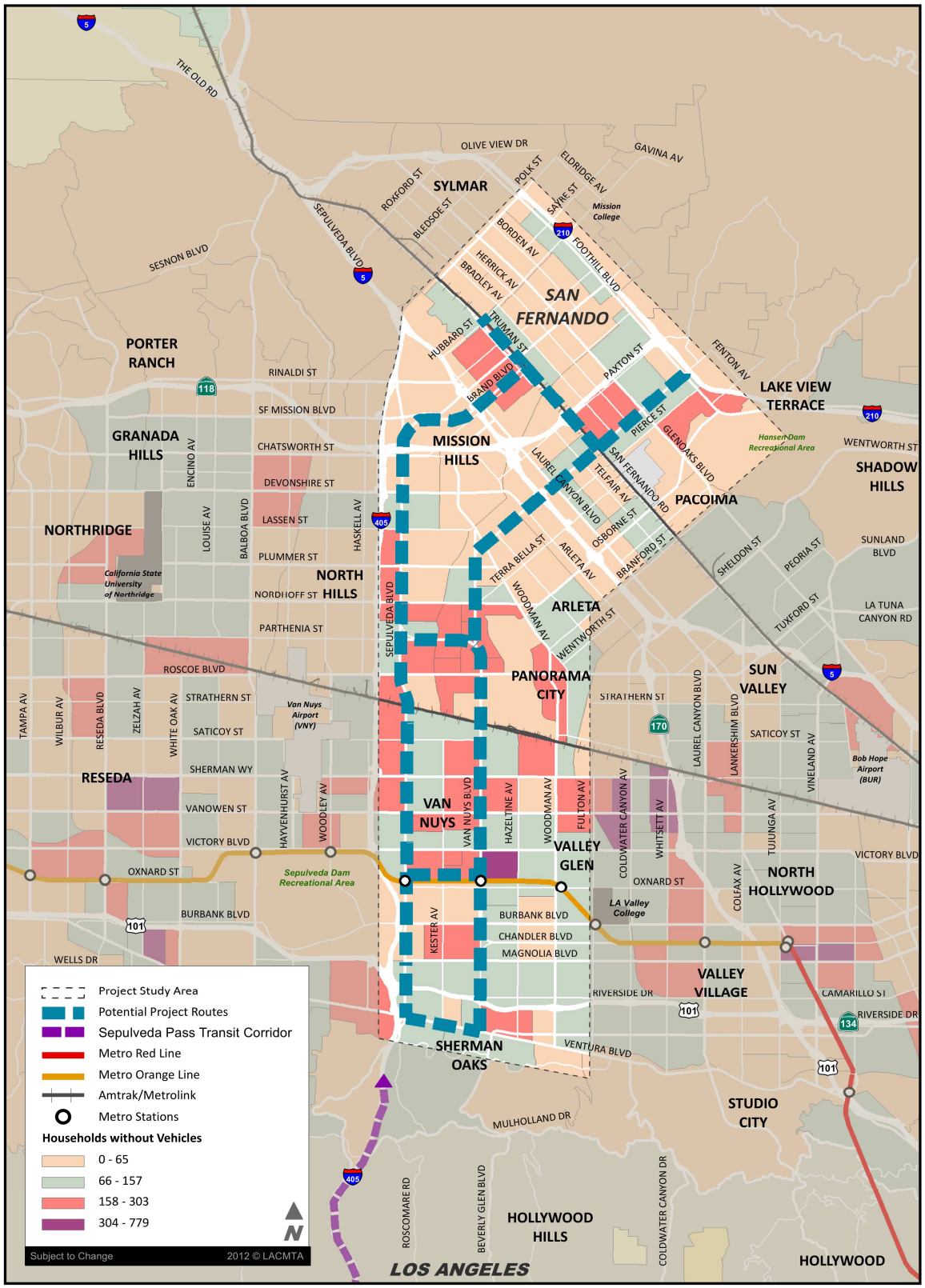
Within the study area, there are a total of 11,967 households without vehicles. At an average of 0.53 households per acre, the density of households without vehicles is approximately 77 percent higher when compared to an average of 0.30 for urbanized Los Angeles County. As illustrated by Figure 1-5, the heaviest concentration of transit-dependent households without vehicles is in the central portion of the study area.

Of the population within the study area, approximately 159,868 elderly persons and youth are considered transit dependent. The overall average for the study area is 7.04 transit dependent persons per acre. As illustrated in Figure 1-6, the highest concentration of transit dependent populations are located in the central portion of the study area.

Another consideration for transit dependence is adult persons (18 years and over) below poverty or median income levels. The study area averages 2.26 for this variable, with a higher concentration located in the central portion of the study area, as illustrated by Figure 1-7.

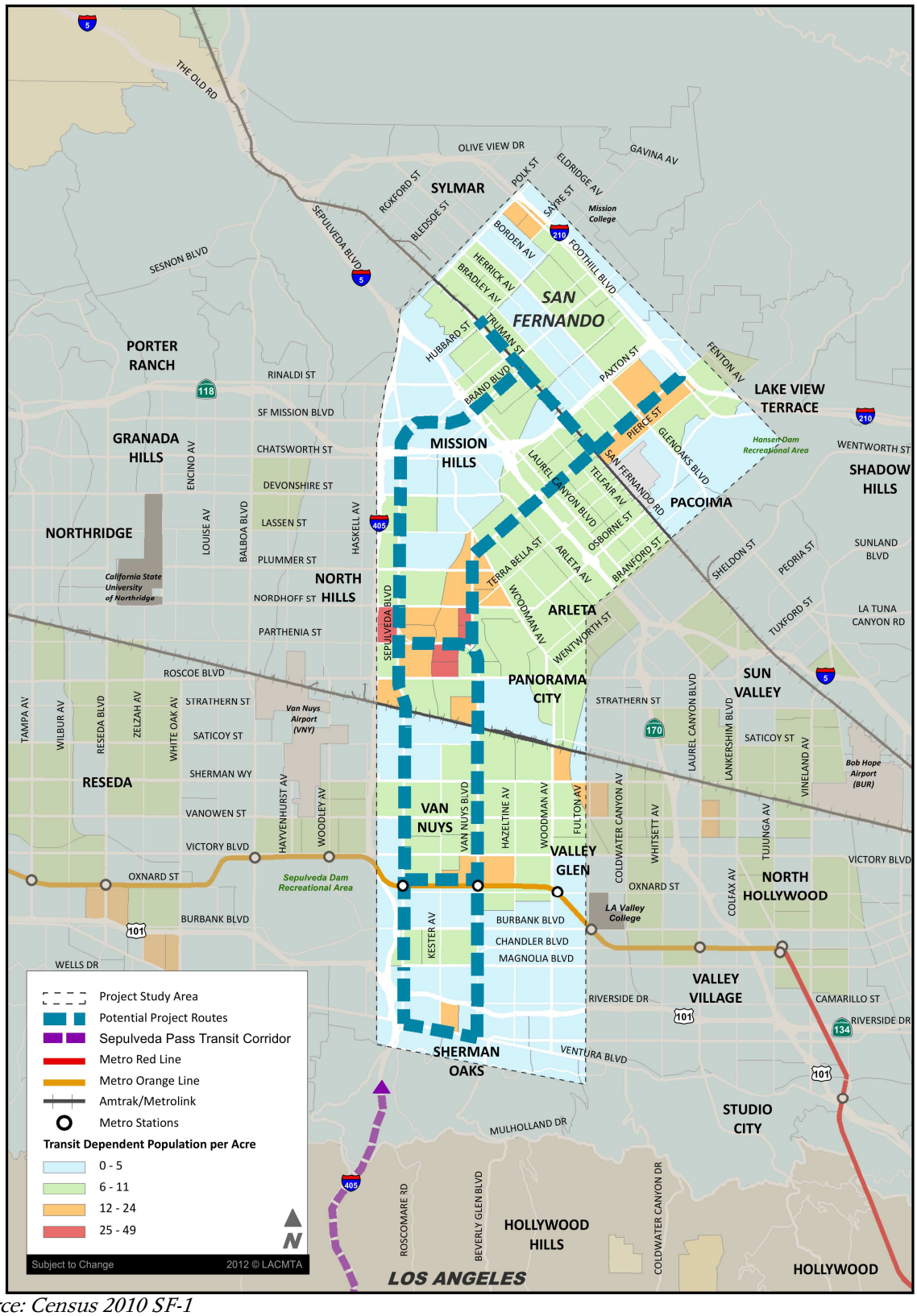
The study area data illustrates a need for increased and upgraded transit services due to expected population increases, transit dependence factors related to age, the concentration of persons without private transportation, and adults below the poverty line. This need supports the project purposes of transit accessibility/connectivity and the provision of service to transit dependent areas.

Figure 1-5 – Zero Vehicles per Household



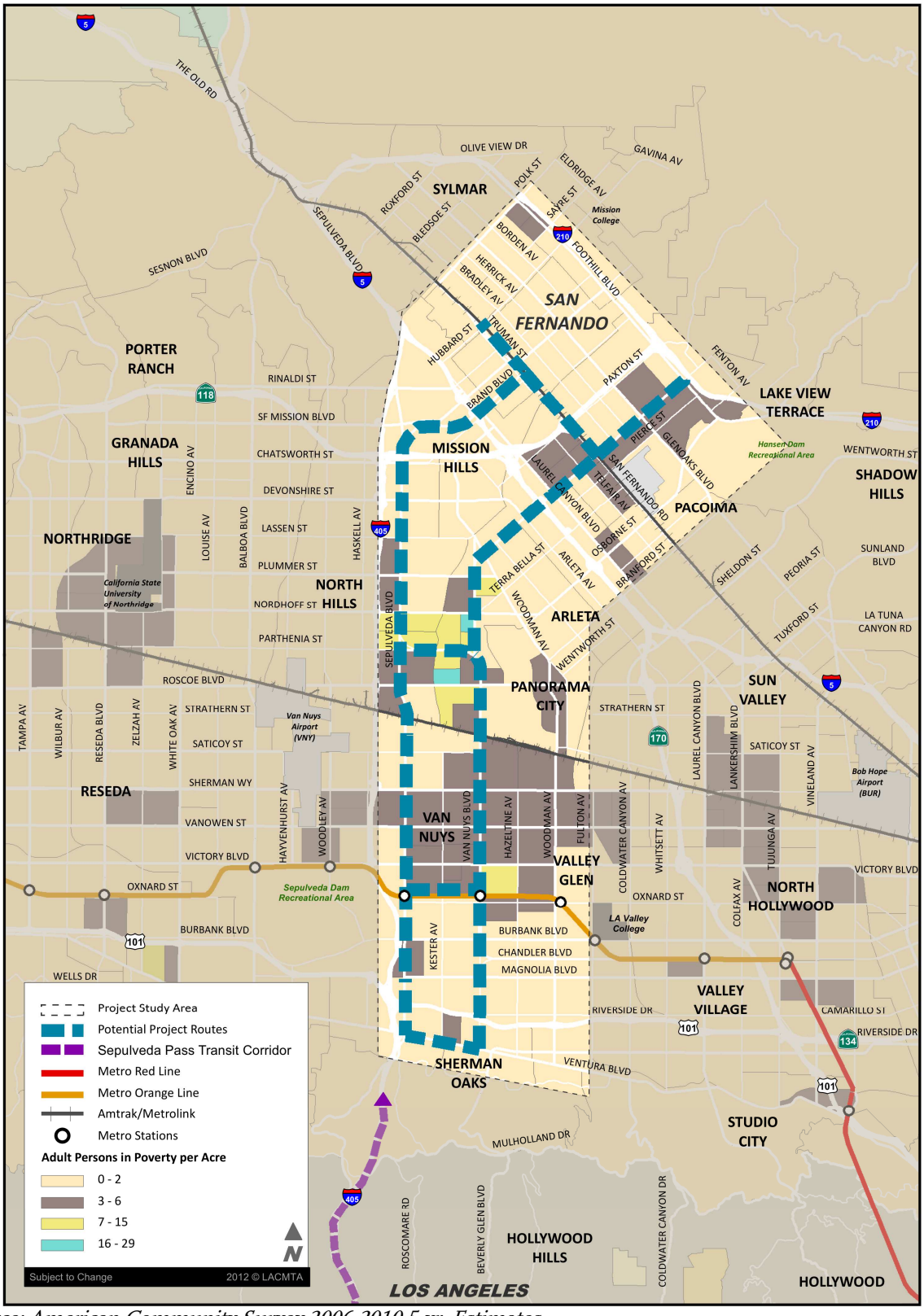
Source: American Community Survey 2006-2010 5 yr. Estimates

Figure 1-6 – Transit Dependent Population



Source: Census 2010 SF-1

Figure 1-7 – Adult Persons in Poverty



Source: American Community Survey 2006-2010 5 yr. Estimates

1.5.2 Potential Travel Markets

1.5.2.1 Land Use

The majority of land uses in the project study area are residential, and this is characterized by primarily low and medium density housing. The greatest variation in land use type is generally located along areas that are adjacent to major transit services, such as the Metrolink Antelope Valley Line, the Metrolink Ventura County Line/Amtrak Pacific Surfliner, and the MOL. The northern portion of the study area is largely medium-density residential with some low-density industrial uses. Land use patterns specific to the study corridors are described below.

Along Van Nuys and Sepulveda Boulevards, there are commercial businesses, and clusters of government institutions such as in the Van Nuys Civic Center area. A higher density of housing and jobs in the study area correlates to the importance of providing connectivity to local and regional destinations.

The land uses are summarized in Table 1-3 and displayed in Figure 1-8.

Table 1-3 Land Use

	Project Study Area	Urban LA County
Low-Density Residential	49.90%	40.00%
High-Density Residential	10.70%	9.80%
Commercial	12.70%	7.00%
Industrial	8.00%	8.50%
Public Facilities / Institutions	6.80%	4.80%
Transportation / Utilities	4.40%	7.00%
Open Space / Recreation	4.00%	4.60%
Vacant	1.30%	15.00%
Other Uses	2.20%	3.20%

Source: SCAG, 2008

When compared to urbanized Los Angeles County, the study area has a higher percentage of low and high density residential, at approximately 61 percent of the total land area, which is 21.7 percent higher than the urbanized County average.

Van Nuys Boulevard Corridor

This corridor includes the Van Nuys Civic Center as well as a number of commercial centers that support the commercial and civic activities of both the San Fernando Valley as a whole and surrounding local communities such as Sherman Oaks, North Hills, Panorama City, Pacoima, and the foothill communities.

The land uses vary greatly along the corridor, when considered from south (near Ventura Boulevard in Sherman Oaks) to north (near Foothill Boulevard in Pacoima):

- Ventura Boulevard commercial corridor
- Sherman Oaks medical offices
- Van Nuys Auto Mall
- Van Nuys Civic Center-downtown commercial uses and City/State/Federal institutions
- Panorama City/Arleta low-density residential uses
- Pacoima medium-density residential uses and light industrial uses
- Foothill Boulevard corridor low-density commercial and light industrial uses

Sepulveda/Brand Boulevard Corridor

Land uses along the Sepulveda Boulevard and Brand Boulevard corridors have fewer commercial uses, as compared to the Van Nuys corridor. The Sepulveda Boulevard corridor land uses tend to be more residential in nature with higher residential densities concentrated around the North Hills neighborhood.

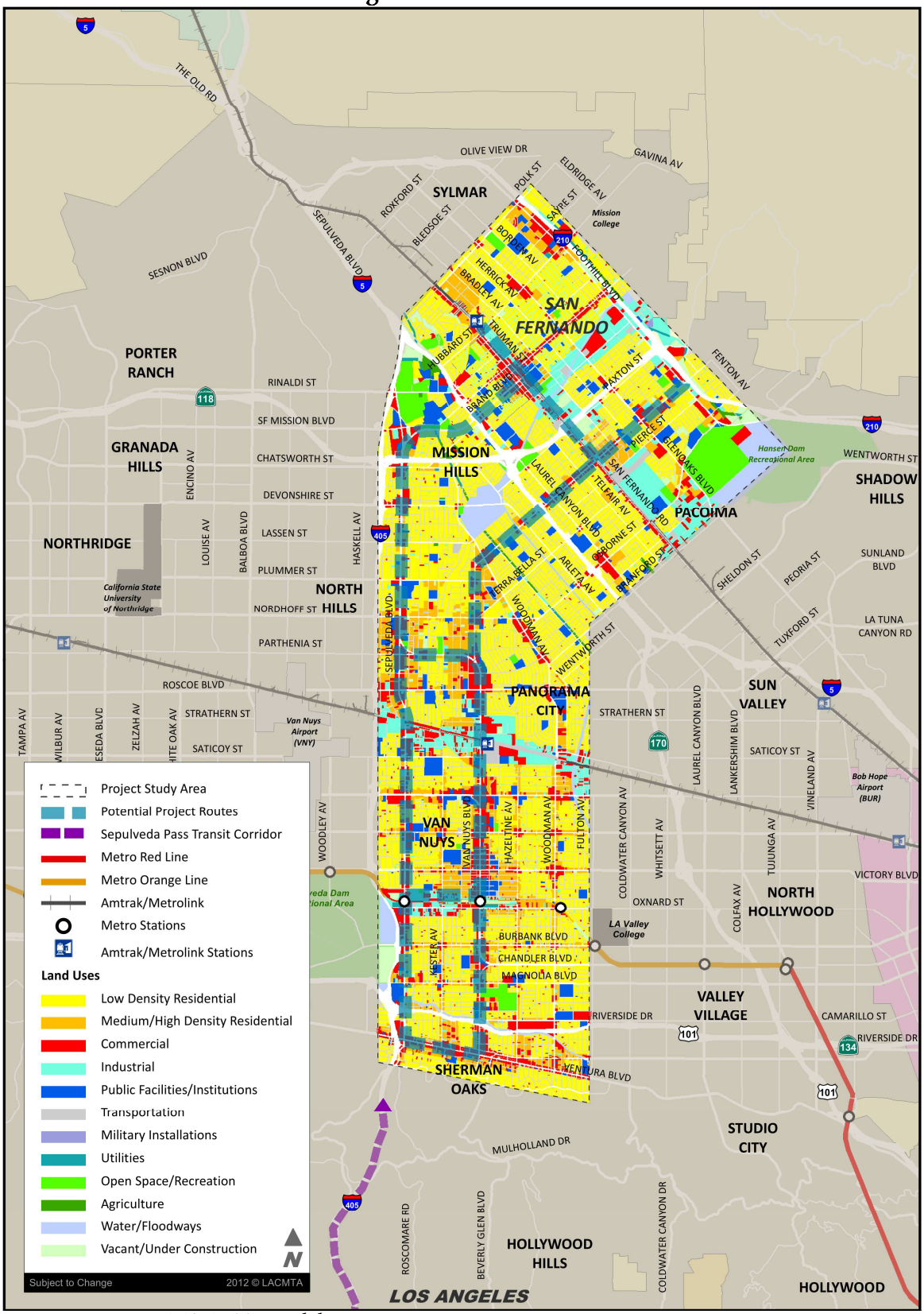
The corridor land use varies from south (Ventura Boulevard in Sherman Oaks) to north (toward the City of San Fernando) in the following manner:

- Ventura Boulevard commercial corridor south of US-101
- Industrial uses near the MOL
- Mix of commercial and residential between the MOL to the Metrolink Ventura County Line
- Higher density residential north to Mission Hills
- Medium density residential and commercial uses to the north of SR-118

San Fernando Road/Truman Street Corridor

A large portion of the San Fernando Road/Truman Street Corridor is located within the City of San Fernando downtown area. These fronting land uses are comprised of commercial and industrial uses. San Fernando Road within the City of Los Angeles has fronting land uses that are primarily industrial and provides access to the Metrolink Sylmar/San Fernando Station, which is a highly utilized regional transit hub.

Figure 1-8 – Land Use



Source: Metro, 2012; SCAG RTP Model, 2008

1.5.2.2 Activity Centers

Major activity centers are located within the Van Nuys and Sepulveda Boulevard corridors. In addition to study area specific activity centers, off-corridor locations are connected to the area by the gridiron pattern of roadways present in the San Fernando Valley. These activity centers generate a sizeable proportion of vehicle, transit, bicycle, and pedestrian trips.

The primary activity centers in the area include large-scale medical facilities such as the Kaiser Permanente Panorama City Medical Center, Valley Presbyterian Hospital, Sherman Oaks Hospital, and Mission Community Hospital. Major commercial developments in the area include Auto-Row and the Civic Center on Van Nuys Boulevard and large-scale shopping centers such as the Plant Shopping Center, Westfield Fashion Square, Sherman Oaks Galleria, The Village at Sherman Oaks, and the Panorama Mall. Transportation facilities that serve the region include Burbank Airport, Ventura/San Fernando Metrolink lines, and MOL/Red Line junction in North Hollywood. Higher educational institutions include Cal State Northridge, Mission College, Los Angeles Valley College, Arleta High School, Panorama High School, Van Nuys High School, and San Fernando Senior High School.

Of the activity centers in the study area, regional centers include Ventura Boulevard, segments of the Van Nuys Boulevard and Sepulveda Boulevard corridors, and downtown San Fernando.

Figure 1-9 illustrates activity center locations within the study area.

Figure 1-9– Activity Centers

Source: Metro, 2012

1.5.2.3 Trip Patterns

Metro model data for the study area indicates that 50 percent of person-trips stay within the study area. By 2035, this trip pattern is expected to remain roughly the same. These local trips, however, will remain a significant contributor to traffic and transit trends.

Of the approximately 2,954,963 daily trips that either originate or are destined to the study area, approximately 1,487,397 (around 50 percent) stay within the study area, with a large portion of trips occurring between the northern communities of the City of San Fernando and Pacoima and the southern communities of Mission Hills and Panorama City. These southern communities have a higher number of activity centers that include Kaiser Permanente, several high schools, and the Panorama Mall. Additional significant trip distribution is to and from the Van Nuys Civic Center area, with a large number of study area trips (52 percent) occurring between Mission Hills, Panorama City, and Sherman Oaks. These general trip trends are expected to remain similar in 2035 and represent high trip distribution attraction between the central study area and the Civic Center.

Existing Metro service boarding data generally supports these estimated trip patterns. The boarding activity is higher along the Van Nuys Boulevard corridor, at the MOL Van Nuys Station, Vanowen Street, Roscoe Boulevard, and Nordhoff Street stops. These locations are all located within the central study area and the Civic Center area. Along the Sepulveda Boulevard corridor, boarding patterns are similar to the Van Nuys Boulevard corridor. The higher level of passenger activity in the central study area and the Civic Center area could be attributed to the connectivity to east-west bus services and also activity centers that are located in these areas.

Trip Distribution

The 2010 and 2035 person-trips from the Metro travel demand model were analyzed to determine the travel patterns to and from the project study area, and are illustrated on Figures 1-10 through 1-13. Approximately 50 percent of the 2010 and 2035 person-trips from the study area remain within the study area. With approximately half of all person trips beginning and ending in the study area, there is a high potential local transit service market. In addition, approximately 27 percent of the study area person trips remain in the San Fernando Valley, implying a strong east-west connection to and from the corridor to outside of the study area.

This data defines a high propensity for trips linked to east-west bus services including the MOL. This need supports project purposes of mobility and transit accessibility/connectivity.

Figure 1-10 – 2010 Daily Trip Patterns

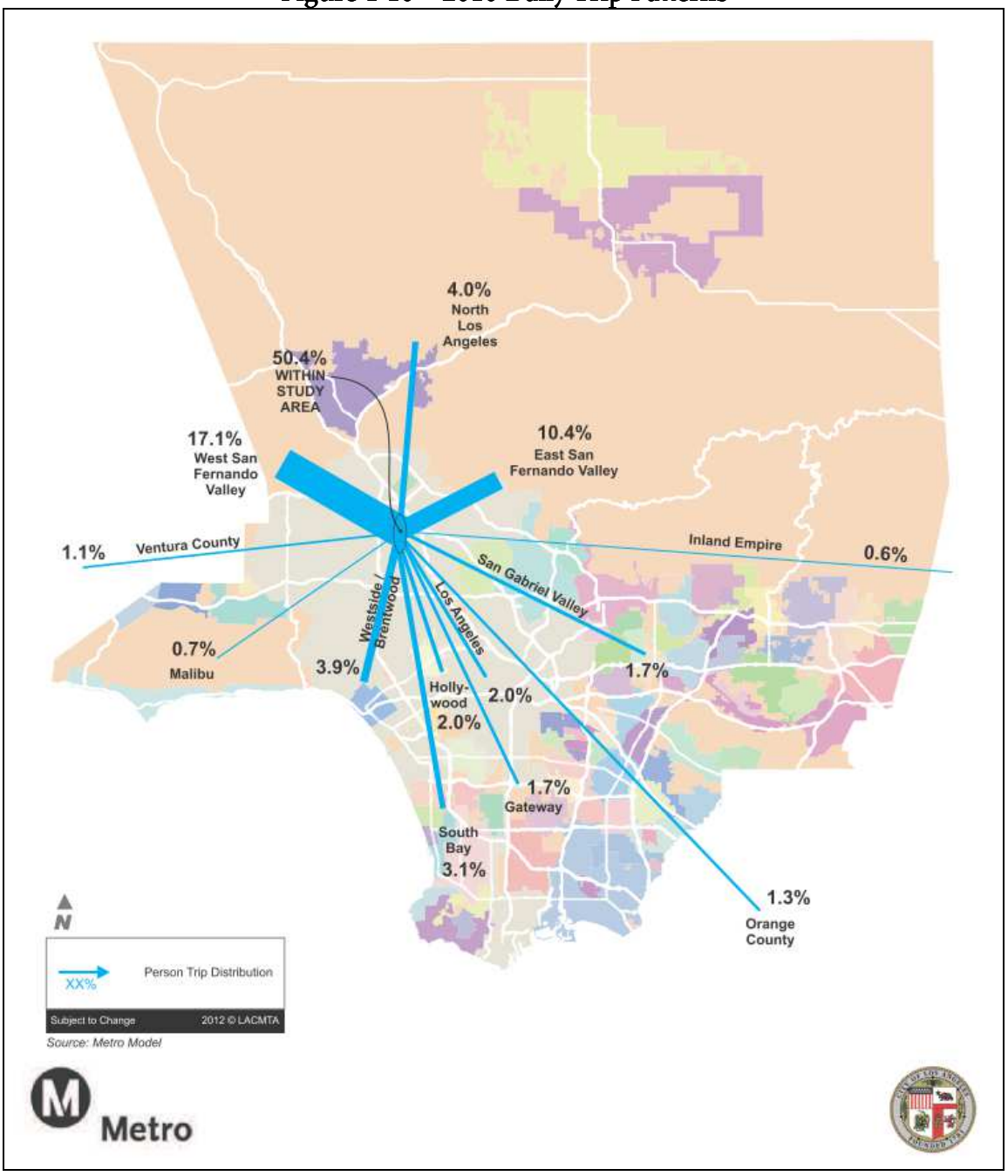
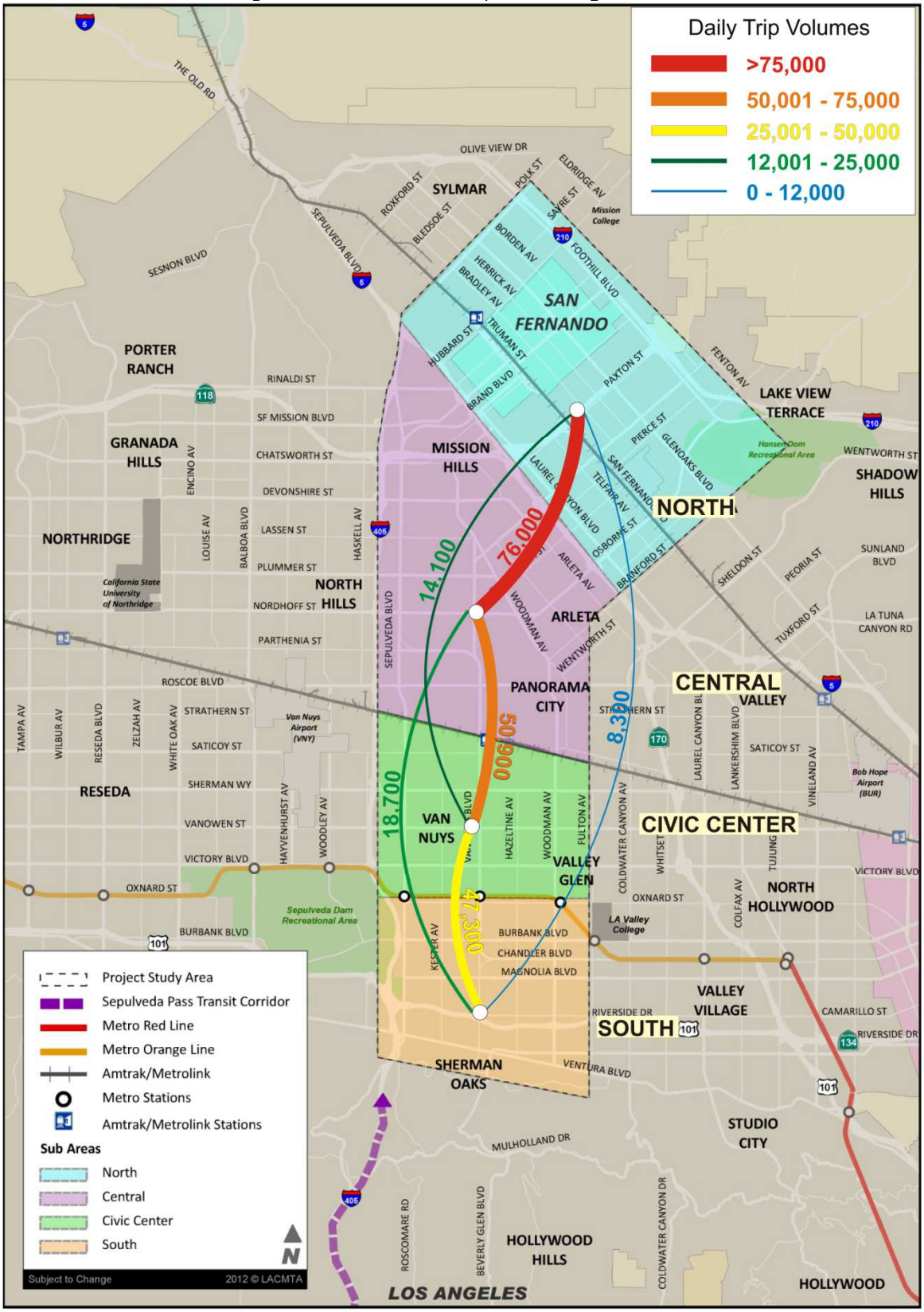


Figure 1-11 – 2010 Study Area Trip Patterns



Source: Metro Model

Figure 1-12 – 2035 Daily Trip Patterns

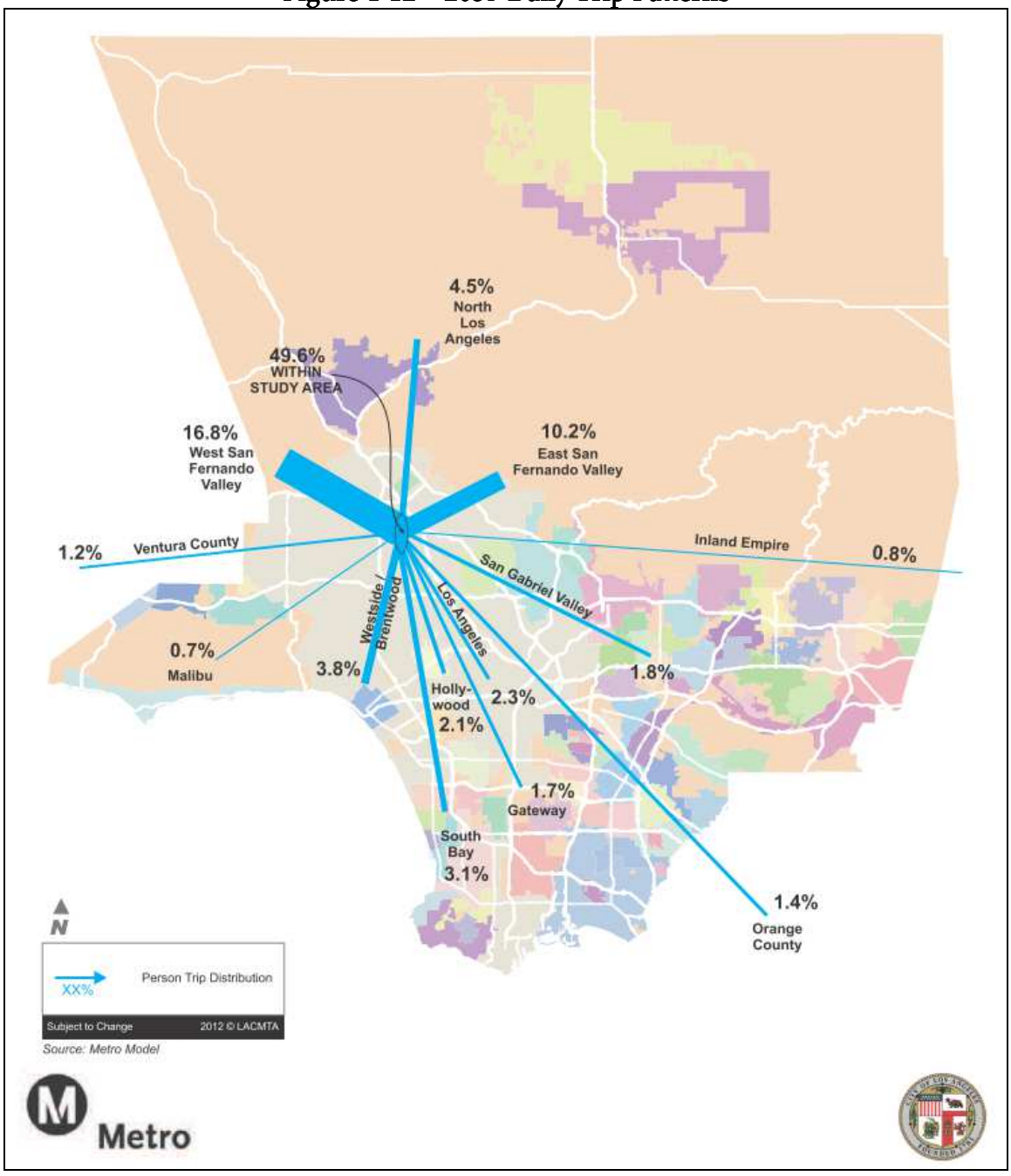
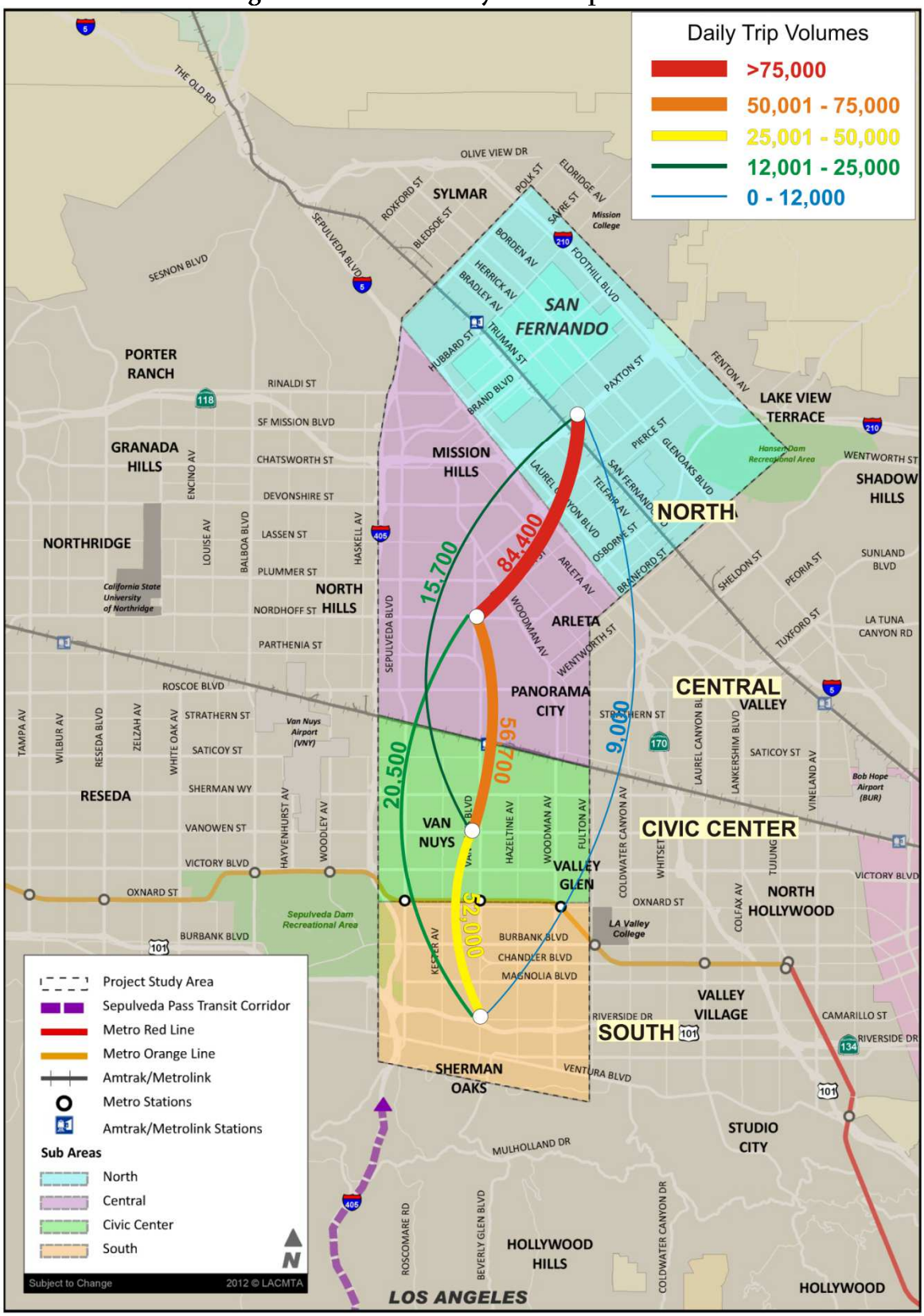


Figure 1-13 – 2035 Study Area Trip Patterns



Source: Metro Model

Trip Purpose

The 2010 and 2035 person trips from the Metro travel demand model were analyzed to determine the trip purposes for the project study area, urbanized Los Angeles County area, and the region. As indicated by Tables 1-4 and 1-5, the trip purposes for the study area and urban Los Angeles County remain fairly consistent, with primary trips being home to other destinations (these represent non-work trips to commercial centers, recreation, medical appointments, etc.). Within the study area, for the years 2010 and 2035, over 50 percent of the person trips are from home to other destinations (North – 55 percent, Central – 56 percent, Civic Center - 53 percent).

The south sub-area data, for both 2010 and 2035, indicates a lower percentage of "home-based to other" person trips, as compared to the overall study area and the urban Los Angeles County area. The south sub-area also has a higher percentage of "non-home based" person trips (i.e., starting trip somewhere other than home). The south sub-area "non-home based" person trips account for 36 (2010) to 37 (2035) percent of all the trip purposes, while the study area "non-home based" person trips accounts for 25 percent. The overall project study area and urban Los Angeles County area have similar 2010 and 2035 "home to work" person trips, accounting for approximately 20 percent of all trip purposes.

Table 1-4 – Daily 2010 Trip Purposes

Sub District	All Purposes	Home-Based Work Trips[1]	Home-Based Other Trips[2]	Non-Home-Based Trips[3]	Home-Based University Trips[4]
North	467,039	89,264	257,704	100,084	19,987
		19%	55%	21%	4%
Central	524,613	105,562	295,702	101,908	21,442
		20%	56%	19%	4%
Civic Center	321,753	59,662	169,297	82,297	10,498
		19%	53%	26%	3%
South	268,135	57,618	107,585	98,243	4,689
		21%	40%	37%	2%
Van Nuys Study Area	1,581,541	312,106	830,288	382,531	56,616
		20%	52%	24%	4%
Urban Los Angeles County	31,772,488	5,984,178	15,353,627	9,417,466	1,017,217
		19%	48%	30%	3%
2010 Total	62,902,601	12,032,028	30,507,892	18,385,312	1,977,369
		19%	49%	29%	3%

1 - Trips between home and work

2 - Miscellaneous trips between home and shopping/other

3 - Trips not based at home, such as between work and lunch

4 - Trips between home and universities/colleges

Source: Metro, PB, KOA

Table 1-5 – Daily 2035 Trip Purposes

Sub District	All Purposes	Home-Based Work Trips[1]	Home-Based Other Trips[2]	Non-Home-Based Trips[3]	Home-Based University Trips[4]
North	523,917	99,226	286,263	116,500	21,929
		19%	55%	22%	4%
Central	588,627	116,651	332,191	116,567	23,218
		20%	56%	20%	4%
Civic Center	364,566	67,524	191,519	94,303	11,219
		19%	53%	26%	3%
South	296,515	65,009	119,150	107,510	4,846
		22%	40%	36%	2%
Van Nuys Study Area	1,773,626	348,411	929,124	434,880	61,212
		20%	52%	25%	3%
Urban Los Angeles County	35,830,545	6,789,806	17,183,526	10,697,866	1,159,346
		19%	48%	30%	3%
2035 Total	79,225,010	15,207,549	38,080,530	23,513,383	2,423,548
		19%	48%	30%	3%

1 - Trips between home and work

2 - Miscellaneous trips between home and shopping/other

3 - Trips not based at home, such as between work and lunch

4 - Trips between home and universities/colleges

Source: Metro, PB, KOA

1.5.3 Regional Transportation System

The San Fernando Valley has an extensive freeway, arterial, and transit network that provides connections to the greater Southern California region. Within the study area, several major freeways, arterials, and major passenger rail and bus lines serve the study area and the surrounding communities. These are discussed below.

Potential project routes defined for the project transit and traffic analysis include the following:

- Van Nuys Boulevard, from Foothill Boulevard on the north to Ventura Boulevard on the south
- Sepulveda Boulevard, from Brand Boulevard on the north to Ventura Boulevard on the south
- San Fernando Road, from Hubbard Street and the Sylmar/San Fernando Metrolink station on the west to Van Nuys Boulevard on the east
- A segment of the MOL busway corridor, between Sepulveda Boulevard on the west to Van Nuys Boulevard on the east

1.5.3.1 Freeways

An extensive freeway network surrounds and intersects the Van Nuys Boulevard, Sepulveda Boulevard, and San Fernando Road corridors, providing regional access between the San Fernando Valley to the greater Los Angeles region. They include the following:

North-South

- The Golden State Freeway (I-5) bisects the northern portion of the study area
- The Hollywood Freeway (SR-170) parallels the southern half of the study area, to the east
- The San Diego Freeway (I-405) borders the west side of the study area
- The Foothill Freeway (I-210) borders the north side of the study area

East-West

- The Ronald Reagan Freeway (SR-118) bisects the northern portion of the study area
- The Ventura Freeway (US-101) bisects the southern portion of the study area

Van Nuys Boulevard has interchanges with the US-101 and the I-5. The US-101 interchange is configured as a diamond, with ramps allowing access in all directions. The I-5 interchange provides ramps that allow movements to and from the south only.

Sepulveda Boulevard has interchanges with the US-101, the SR-118, and the I-5. The US-101 interchange provides ramps that allow movements to and from the east only. The SR-118 interchange is configured as a diamond, with ramps allowing access in all directions. The I-5 interchange provides ramps allowing movements to and from the south only.

San Fernando Road has interchanges with SR-118 that allow access in all directions.

1.5.3.2 Arterials

The roadway system in the study area is primarily a grid-system that includes arterial, collectors, and local roads. The arterials within the study area are spaced at half-mile to one-mile distances. The Technical Appendix to this document provides more information on the roadway characteristics of the corridors described below.

Van Nuys Boulevard Corridor

The Van Nuys Boulevard right-of-way (ROW) ranges from a width of 95 to 160 feet. In general, the majority of ROW in the corridor is 100 feet. There are generally two travel lanes in each direction throughout the corridor, with left turn lanes at most intersections. Some segments have three through lanes in each direction, or have dual left-turn pockets (including the intersections with Roscoe Boulevard, Sherman Way, and the northbound US-101 on-ramp). Left turn access to driveways is provided in mid-block sections by means of a continuous two-way left-turn lane, with the exception of a few blocks in Pacoima where there are raised median islands. Parking is allowed throughout the corridor. Most segments of the corridor have hourly parking restrictions and there are metered parking spaces located in the Van Nuys Civic Center.

Van Nuys Boulevard does not currently have bicycle lanes or similar facilities. However, from the US-101 freeway to Foothill Boulevard, the roadway is designated by the 2010 City of Los Angeles Bicycle Plan, adopted by the City Council March 1, 2011, as a “Backbone

Network" with a "Lane: Future" designation. Implementation of bicycle lanes will need to be considered as part of any major modifications to the roadway.

Sepulveda Boulevard Corridor

The Sepulveda Boulevard ROW ranges from a width of 100 to 168 feet. Similar to Van Nuys Boulevard, the majority of ROW in the corridor is 100 feet. There are generally three travel lanes in each direction throughout the corridor, with left turn lanes at all intersections. Some segments have dual left-turn pockets (westbound and eastbound SR-118 on-ramps, Nordhoff Street, Roscoe Boulevard, Victory Boulevard, Burbank Boulevard, and Ventura Boulevard). Left turn access to driveways is provided in mid-block segments by means of a continuous two-way left-turn lane, with the exception of several blocks between Devonshire Street and Parthenia Place where there are raised median islands. Parking is permitted throughout the corridor and several segments have hourly parking restrictions. Metered parking spaces are provided in the southern part of the corridor, in the vicinity of the Sherman Oaks Galleria.

Bicycle lanes are not present on Sepulveda Boulevard, but are designated by the 2010 City of Los Angeles Bicycle Plan as part of the "Backbone Network" with a future lane designation between Ventura Boulevard and Rinaldi Street. Implementation of bicycle lanes will need to be considered as part of any major modifications to the roadway.

Brand Boulevard Corridor

Along Brand Boulevard, the ROW ranges from 80 to 145 feet. Two travel lanes in each direction are provided, with left-turn lanes at most intersections. Left turn access to driveways are restricted by a landscaped median that is provided along the entire length of the roadway. Parking is permitted along most of Brand Boulevard, and several segments have hourly parking restrictions. Metered parking spaces are provided near San Fernando Road. Southbound access to the I-5 freeway is provided via a westbound on-ramp. Parking is permitted along most of Brand Boulevard, and several segments have hourly parking restrictions. Metered parking spaces are provided near San Fernando Road.

Bicycle lanes are not present on Brand Boulevard. Brand Boulevard from Sepulveda Boulevard to the City of San Fernando is designated by the 2010 City of Los Angeles Bicycle Plan as part of the "Backbone Network" with a future lane designation. Implementation of bicycle lanes will need to be considered as part of any major modifications to the roadway.

San Fernando Road/Truman Street Corridor

San Fernando Road and Truman Street have narrower ROW widths compared to the Van Nuys and Sepulveda Boulevards corridors. The ROW on San Fernando Road ranges from 60 to 93 feet, while the Truman Street ROW ranges from 80 to 90 feet. San Fernando Road generally has two travel lanes in each direction throughout the study area, with left-turn lanes at major intersections. Between Fox and Hubbard Streets, Truman Street provides additional adjacent roadway capacity. Left turn access to driveways is provided in some mid-block sections by means of a continuous two-way left turn lane. Parking is allowed along some segments of San Fernando Road and Truman Street.

Bicycle facilities exist along portions of San Fernando Road. This includes a bicycle path from Roxford Street to La Rue Street. The roadway is designated by the 2010 City of Los Angeles Bicycle Plan as a bicycle path (separated, but parallel to the roadway) with a "Lane: Future" designation. The extension of the bicycle path will need to be considered as part of any major modifications to the roadway.

1.5.3.3 Regional Transit Network

The existing regional transit network consists of subway, light rail, busways, Rapid Bus and local bus services, commuter rail, and intercity rail services. Metro operates approximately 84 miles of rail service, and 40 miles of dedicated busways (the MOL and the Metro Silver Line). Regional and local bus services are operated by Metro and municipal bus transit agencies. Metrolink provides commuter rail service with total route miles that exceed 500. Metrolink provides service to the study area at the Van Nuys Station and the San Fernando/Sylmar Station. Amtrak primarily provides intercity rail service between Los Angeles, Santa Barbara/San Luis Obispo, and San Diego, and stops at the Van Nuys Station.

The rail line that provides access to the Van Nuys Station is used by Metrolink Ventura County line trains, Amtrak intercity passenger trains, and Union Pacific freight trains. The rail line that provides access to the Sylmar/San Fernando Station is used by Metrolink Antelope Valley Line trains and Union Pacific freight trains.

The Rapid Bus lines that operate in the area provide a core bus network that connects to local bus and shuttle services. The major bus lines include: the MOL Busway and Rapid Bus service on Van Nuys Boulevard, Sepulveda Boulevard, San Fernando Road/Truman Street, and Ventura Boulevard.

There are other bus lines that also serve the project study area. These include local lines, community circulators (DASH service), and non-Metro express bus service such as the City of Los Angeles Commuter Express.

The characteristics of Metro and LADOT bus services in the study area are summarized in Table 1-6. Figure 1-14 illustrates the locations of regional transit lines within the San Fernando Valley. Figure 1-15 illustrates transit lines within the study area.

Table 1-6 – Existing Transit Services in Study Area

Agency	Line	From	To	Via	Peak Frequency	Daily Ridership
Metro	**North-South Bus Service**					
	94 **	Downtown LA	Sun Valley/San Fernando	San Fernando Rd	15 to 20 minutes	6,301
	224	Universal City	Sylmar	San Fernando Rd	12 minutes	9,948
	230	Studio City	Sylmar	Laurel Canyon Blvd / San Fernando Mission Blvd / Truman St	8 minutes	5,146
	233	Sherman Oaks	Lake View Terrace	Van Nuys Blvd	10 minutes	12,141
	234	Sherman Oaks	Sylmar	Sepulveda Blvd / Ventura Blvd / Magnolia Blvd / Kester Ave / 7th St / MaClay Ave	15 minutes	6,425
	237	Encino	Granada Hills / Sherman Oaks	Van Nuys Blvd / Victory Blvd / Woodley Ave	60 minutes	N/A
	290	Sunland	Sylmar	Foothill Blvd	22 to 40 minutes	1,152
	292	Burbank	Sylmar	Glenoaks Blvd	16 to 40 minutes	2,298
	656 *	Panorama City	Hollywood	Van Nuys Blvd / Burbank Blvd	**	N/A
	734	Sherman Oaks	Sylmar	Sepulveda Blvd / Brand Blvd / Truman St / Hubbard St	10 minutes	3,790
	761	Westwood	Pacoima	Van Nuys Blvd	10 minutes	11,090
	794	Downtown LA	Sylmar	San Fernando Rd / Hill St	10 minutes	5,395
	East-West Bus Service					
	150/240	Universal City	Woodland Hills / Northridge	Ventura Blvd / Van Nuys	15 to 30 minutes	11,638
	152	Woodland Hills	North Hollywood	Roscoe Blvd / Tuxford St / Sunland Blvd / Vineland Ave	8 to 18 minutes	13,150
	154	Tarzana	Burbank	Burbank Blvd / Oxnard St	60 minutes	1,018
	155	Sherman Oaks	Burbank	Riverside Dr / Olive Ave.	30 to 60 minutes	584
	156	Hollywood	Van Nuys	Burbank Blvd / Chandler Blvd / Vineland Ave	23 to 41 minutes	1,883
	158	Sherman Oaks	Chatsworth	Devonshire St / Woodman Ave	30 to 35 minutes	2,286
	162/163	West Hills	Sun Valley	Sherman Way	20 to 22.5 minutes	10,484
	164	West Hills	Burbank	Victory Blvd	10 to 20 minutes	7,851
	165	West Hills	Burbank	Vanowen St	6 minutes	9,023
	166/364	Chatsworth	Sun Valley	Nordhoff St / Osborne St	12 to 30 minutes	6,970
	167	Studio City	Chatsworth	Plummer St / Woodman Ave / Roscoe Ave / Coldwater Canyon Ave	40 to 50 minutes	N/A
	169	West Hills	Sunland	Saticoy Ave / Van Nuys Blvd / Chase St	60 minutes	2,428
	183	Sherman Oaks	Glendale	Magnolia Blvd / San Fernando Rd	26 to 60 minutes	2,300
	353	Woodland Hills	North Hollywood	Roscoe Blvd / Lankershim Blvd	11 to 50 minutes	N/A
	750	Woodland Hills	Universal City	Ventura Blvd / Topanga Canyon Blvd	10 minutes	5,126
	901/Orange	North Hollywood	Warner Center	Orange Line Busway	5 minutes	25,485
	East-West Bus Service					
LADOT	DASH	Panorama City/Van Nuys (Circular Loop)		Van Nuys Blvd / Parthenia St / Sherman Way / Hazeltine Ave / Victory Blvd	20 minutes	N/A
	DASH	Van Nuys/Studio City (Circular Loop)		Van Nuys Blvd / Hazeltine Ave / Oxnard St	30 minutes	N/A
	CE 409	Sylmar	Civic Center	Foothill Blvd	20 to 40 minutes	N/A
	CE419	Chatsworth	USC	Devonshire St / Chatsworth St / Sepulveda Blvd / SR-118	15 to 20 minutes	N/A
	CE 549	San Fernando Valley	Pasadena	Burbank Blvd / Lankershim Blvd / Riverside Dr	30 minutes	N/A
	CE 573	Encino/Mission Hills	Westwood/Century City	Balboa Blvd / I-405 / Sepulveda Blvd	15 to 45 minutes	N/A
	CE 574	Sylmar	LAX/El Segundo	Chatsworth St / Sepulveda Blvd / Brand Blvd / Truman St/ Hubbard St	30 to 50 minutes	N/A

Source: Metro, 2012.

The 300-series Metro lines (limited service) operate during peak periods only.

** This route operates during the late-night service hours only. Therefore, peak period frequency is negligible.*

*** This route operates on San Fernando Road on the weekend only. Therefore, peak period frequency is negligible.*

Figure 1-14 – Valley Transit Map

Source: Metro, 2012

Figure 1-15 – Study Area Transit Map

Source: Metro, 2012

1.5.4 Transportation System Performance

The traffic and transit data from the Metro model and the larger SCAG travel demand model indicates that traffic conditions in the study area will become more congested and trip speeds will become slower as the region grows through the year 2035.

1.5.4.1 Highway System Demand

Half of the freeway system in LA County has segments that operate at or approaching capacity in the morning and afternoon rush hours. (A road or highway is considered by transportation engineers to be at capacity when it reaches LOS E or F). Unlike other parts of the Southern California region, highway travel patterns for Los Angeles County are highly complex because there are so many widely dispersed activity centers. This differs from what is considered the traditional suburban-to-downtown directional commute pattern found in other areas.

The annual average daily traffic (AADT) growth on the freeways in the study area, through 2035, ranges from 5 percent to 39 percent. Representative freeway segments in the study area are summarized in Table 1-7, traffic on the I-5 to the north of the SR-118 is projected to grow by 39 percent, and traffic on the I-405 to the north of the US-101 is projected to grow by 22 percent.

Table 1-7 – Forecasted Freeway ADT Volumes in Study Area

Freeway Route	Postmile	Location	AADT Year 2010	AADT Year 2035	Percent Increase
I-5	38.502	South of Van Nuys Blvd.	268,437	354,751	32%
I-5	39.361	North of SR-118	169,952	236,796	39%
SR-170	15.988	North of Burbank Blvd.	239,665	258,523	8%
I-405	39.432	North of US 101	246,509	300,900	22%
I-405	43.756	North of Roscoe Blvd.	247,288	279,583	13%
I-405	46.85	South of SR-118	240,851	276,662	15%
I-405	47.754	South of Rinaldi Street	181,345	215,856	19%
I-210	5.911	North of SR-118	122,519	169,635	38%
I-210	5.911	South of SR-118	142,640	155,123	9%
SR-118	9.805	West of I-405	226,153	262,790	16%
SR-118	14.08	East of I-210	103,302	119,992	16%
US 101	15.908	West of Van Nuys Blvd.	274,936	290,047	5%

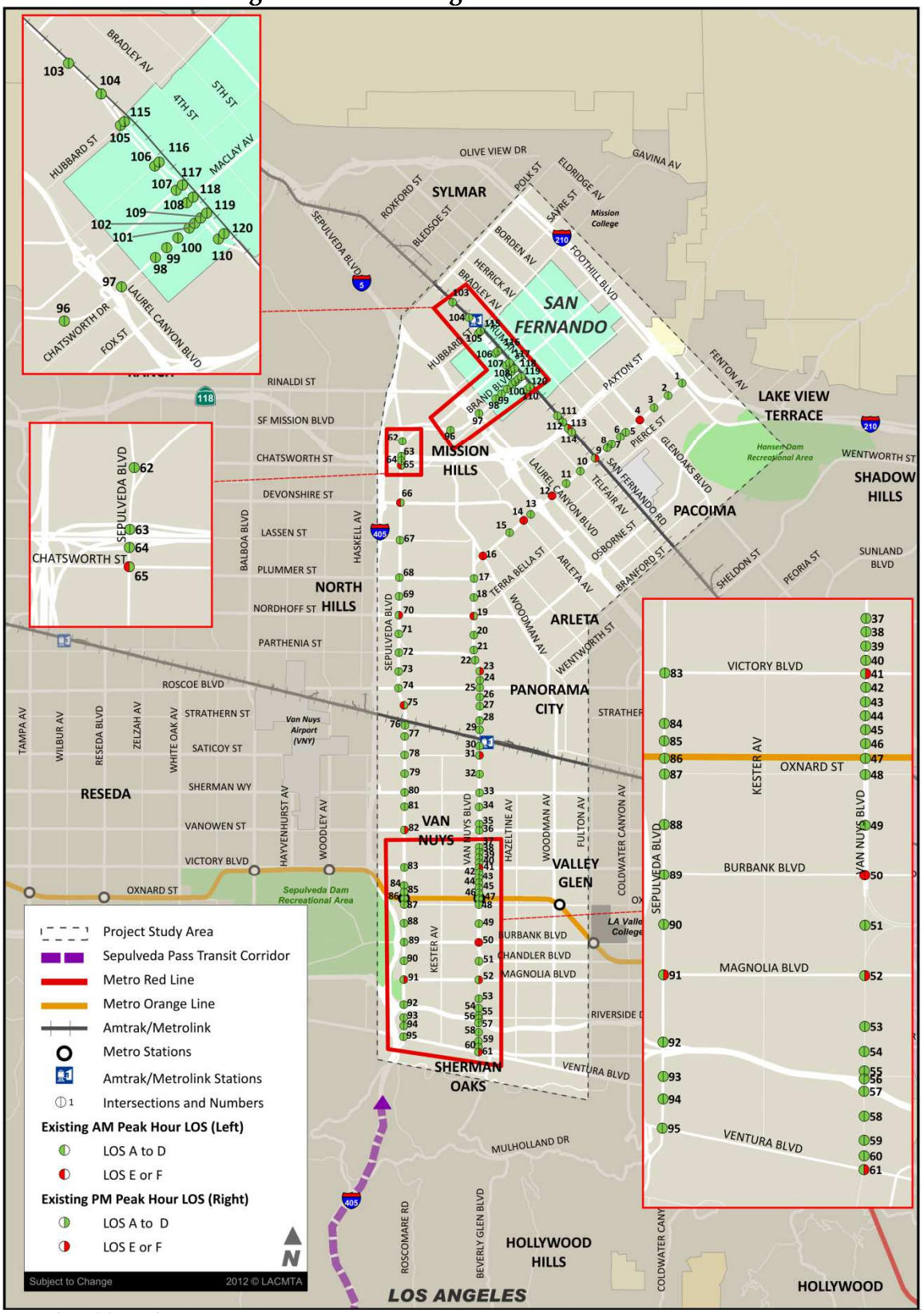
AADT = Annual Average Daily Traffic
Source: PB, Metro Model

Almost 20 percent of the arterial intersections within the County operate at LOS E and F in the morning peak period, and more than 20 percent of the intersections operate at LOS E and F in the afternoon/evening peak period. Whereas the County has seen fluctuations in congestion, these have generally involved only incremental changes in level of service.

Based on existing (2012) available traffic data, level of service values at signalized intersections within the Van Nuys Boulevard and Sepulveda Boulevard corridors were examined. Figures 1-16 and 1-17 illustrate the traffic conditions, for both existing and future buildout conditions. Future growth defined by the Metro travel demand model was used to calculate increases in traffic volumes on roadway links (representing segments between major intersections) and at the study intersections to determine the future LOS.

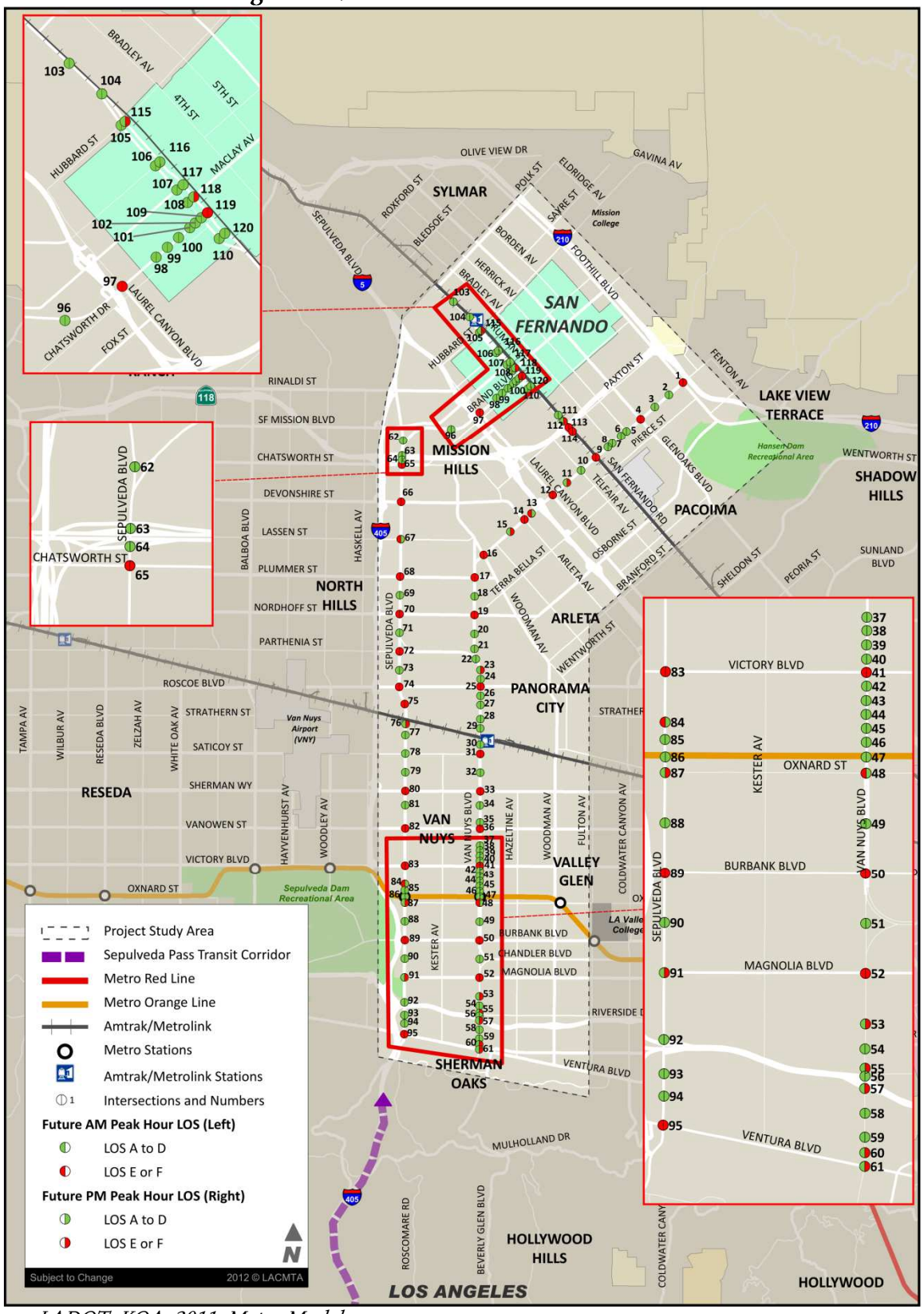
The future increases in highway and arterial roadway demand supports project purposes of mobility, transit reliability, and encouraging modal shifts to transit.

Figure 1-16 – Existing 2012 Peak Hour LOS



Source: LADOT, KOA, 2011

Figure 1-17 – Buildout 2035 Peak Hour LOS



Source: LADOT, KOA, 2011; Metro Model

1.5.4.2 Highway System Performance

Over 235 street segments were analyzed along the north-south and east-west corridors within the study area to define study area traffic conditions. The data within Table 1-8 indicates that the number of congested segments is expected to increase from 126 to 162 in the AM peak hour, a 29 percent increase, and from 103 to 159 in the PM peak hour which is a 54 percent increase. The increase in congested segments will result in slower speeds and increased delay within the study area.

Table 1-8 – Existing and 2035 Congested Segments in Study Area

		Year 2010			Year 2035				
			Number of Congested Segments [a]			Number of Congested Segments [a]		Increase in Congested Segments	
Study Area	Direction	Number of Study Locations	AM	PM	Number of Study Locations	AM	PM	AM	PM
North-South Corridor	NB	70	6	45	73	17	66	183%	47%
	SB	71	65	15	73	72	23	11%	53%
	Total	141	71	60	146	89	89	25%	48%
East-West Corridor	EB	47	23	23	47	31	40	35%	74%
	WB	47	32	20	47	42	30	31%	50%
	Total	94	55	43	94	73	70	33%	63%
	Total	235	126	103	240	162	159	29%	54%

[a] Number of congested segments with a V/C of 0.90 or higher.
Source: Metro Model

Table 1-9 provides a comparison of the average speeds from the year 2010 through the year 2035 along the Van Nuys and Sepulveda Boulevards corridors. The peak direction of travel for the AM period is southbound and this reverses for the PM period. During the AM peak period, the average speed is reduced by 17 to 45 percent along the Van Nuys Boulevard corridor and 18 to 29 percent along the Sepulveda Boulevard corridor. During the PM period, the average speed is reduced by 22 to 36 percent along the Van Nuys Boulevard corridor and 14 to 24 percent along the Sepulveda Boulevard corridor.

Based on the Metro travel forecast model, the number of congested roadway segments in the study area is expected to increase from 126 to 162, a 29 percent increase in the AM peak hour and from 103 to 159, a 54 percent increase in the PM peak hour. The increase in congested segments will result in lower vehicle speeds and increased travel delay in the study area, reducing mobility.

The forecasts also indicate that by the year 2035, peak-hour average vehicle travel speeds will decline in the Van Nuys Boulevard Corridor by about 4.6 miles per hour, a 15.6 percent decrease, from 30.1 mph to 25.4 mph in the AM peak period and by about 4.3 mph, a 14.8 percent decrease, from 28.9 to 24.6 mph in the PM peak period. In the Sepulveda Boulevard Corridor speeds are forecasted to decrease by about 3.5 miles per hour, an 11.3 percent decrease, from 30.9 mph to 27.4 mph in the AM peak period and by about 3.1 mph, a 14.8 percent decrease, from 30.7 to 27.6 mph in the PM peak period. For the study area as a

whole, speeds are forecasted to decrease by about 4.1 miles per hour, a 13.4 percent decrease, from 30.5 mph to 26.4 mph in the AM peak period and by about 3.7 mph, a 14.8 percent decrease, from 29.8 to 26.1 mph in the PM peak period. The reduction of speed indicates that congestion, gas consumption, and vehicle emissions will increase within the study area. Upgrades to the transit system could provide an opportunity to reduce traffic congestion through mode shifts.

Table 1-9 – 2010 and 2035 Average Speed on Key Roadways in Study Area

Study Locations	Direction	2010 Average Speed		2035 Average Speed		Percent Reduction Average Speed	
		AM [a]	PM [b]	AM [a]	PM [b]	AM [a]	PM [b]
Van Nuys Blvd.							
East of Laurel Canyon Blvd.	EB WB	34.5 33.8	32.6 33.0	33.3 21.7	20.8 30.0	-3% -36%	-36% -9%
North of Nordhoff St.	NB SB	34.5 29.7	30.3 33.0	34.1 22.7	21.9 30.6	-1% -24%	-28% -7%
North of Roscoe Blvd.	NB SB	33.3 15.6	16.4 29.3	31.6 8.6	9.4 28.6	-5% -45%	-43% -2%
North of Sherman Way	NB SB	35.2 24.3	23.2 34.0	34.8 15.8	16.5 32.6	-1% -35%	-29% -4%
North of Victory Blvd.	NB SB	34.9 26.3	25.9 33.7	34.5 19.4	19.6 33.0	-1% -26%	-24% -2%
South of Burbank Blvd.	NB SB	35.2 28.7	24.4 33.0	33.0 19.7	19.1 30.0	-6% -31%	-22% -9%
North of Ventura Blvd.	NB SB	29.4 25.6	26.5 29.4	25.6 21.2	25.1 27.1	-13% -17%	-5% -8%
Sepulveda Boulevard							
South of Devonshire Blvd.	NB SB	35.0 30.9	32.0 35.0	35.0 21.8	25.3 34.6	0% -29%	-21% -1%
North of Nordhoff St.	NB SB	34.9 31.2	32.6 34.9	34.9 22.2	24.8 34.5	0% -29%	-24% -1%
North of Roscoe Blvd.	NB SB	35.0 33.0	34.2 35.0	35.0 23.9	27.0 35.0	0% -28%	-21% 0%
North of Sherman Way	NB SB	35.1 29.2	29.7 35.1	35.1 23.8	25.0 35.1	0% -18%	-16% 0%
North of Victory Blvd.	NB SB	34.9 23.6	26.1 34.5	34.5 18.0	19.0 34.1	-1% -24%	-27% -1%
South of Burbank Blvd.	NB SB	34.1 25.9	22.1 34.5	34.5 18.9	19.1 33.7	1% -27%	-14% -2%
North of Ventura Blvd.	NB SB	30.7 19.7	14.5 29.3	32.3 14.2	11.8 28.0	5% -28%	-19% -4%

[a] AM peak period (6am-9am)
[b] PM peak period (3pm-7pm)
Source: Metro Model

The increased congestion and reduction in speeds is estimated to increase the vehicle delay at intersections in the study area. Table 1-10 provides the estimated increases in average vehicle delay per vehicle and increase in the total driver delay at key study area intersections.

The intersection approach delay for each vehicle is expected to increase by at least 30 seconds and as much as 2.8 minutes for several study intersections during the AM and PM peak hours.

Table 1-10 – Intersection Vehicle Approach Delay Increase from 2011 to 2035

	Study Intersection	Increase in Per Vehicle Delay (seconds) AM	Increase in Per Vehicle Delay (seconds) PM	Increase in Intersection Total Driver Delay (hours) AM	Increase in Intersection Total Driver Delay (hours) PM
Van Nuys Boulevard					
1	Foothill Blvd & Van Nuys Blvd	13.2	35.2	20.1	46.7
4	Glenoaks Blvd & Van Nuys Blvd	70.5	100.6	137.1	234.7
9	San Fernando Rd & Van Nuys Blvd	27.1	53.6	52.4	114.3
12	Laurel Canyon Blvd & Van Nuys Blvd	139.8	169.5	315.4	423.0
17	Van Nuys Blvd & Plummer St	36.7	44.3	53.9	64.4
19	Van Nuys Blvd & Nordhoff St	9.8	6.5	21.0	19.3
25	Van Nuys Blvd & Roscoe Blvd	3.3	7.2	14.2	23.9
41	Van Nuys Blvd & Victory Blvd	37.3	26.8	81.5	67.3
50	Van Nuys Blvd & Burbank Blvd	60.5	38.7	123.6	83.1
52	Van Nuys Blvd & Magnolia Blvd	20.4	31	35.4	52.7
Sepulveda Boulevard					
63	Sepulveda Blvd & SR-118 EB Ramps	19.9	120.8	33.2	199.5
65	Sepulveda Blvd & Roscoe Blvd	20.3	54.9	55.2	124.3
69	Sepulveda Blvd & Sherman Way	11.3	57.6	33.1	126.8
72	Sepulveda Blvd & Victory Blvd	16	53	44.6	130.2
76	Sepulveda Blvd & Burbank Blvd	7.4	14	26.8	46.8

Source: Metro Model, KOA

The overall cumulative total driver delay at the study intersections is expected to increase by 40 percent. This increase in delay is expected to increase vehicle emissions and fuel consumption within the study area.

These needs support the project purposes of mobility, transit reliability, and encouraging modal shifts to transit.

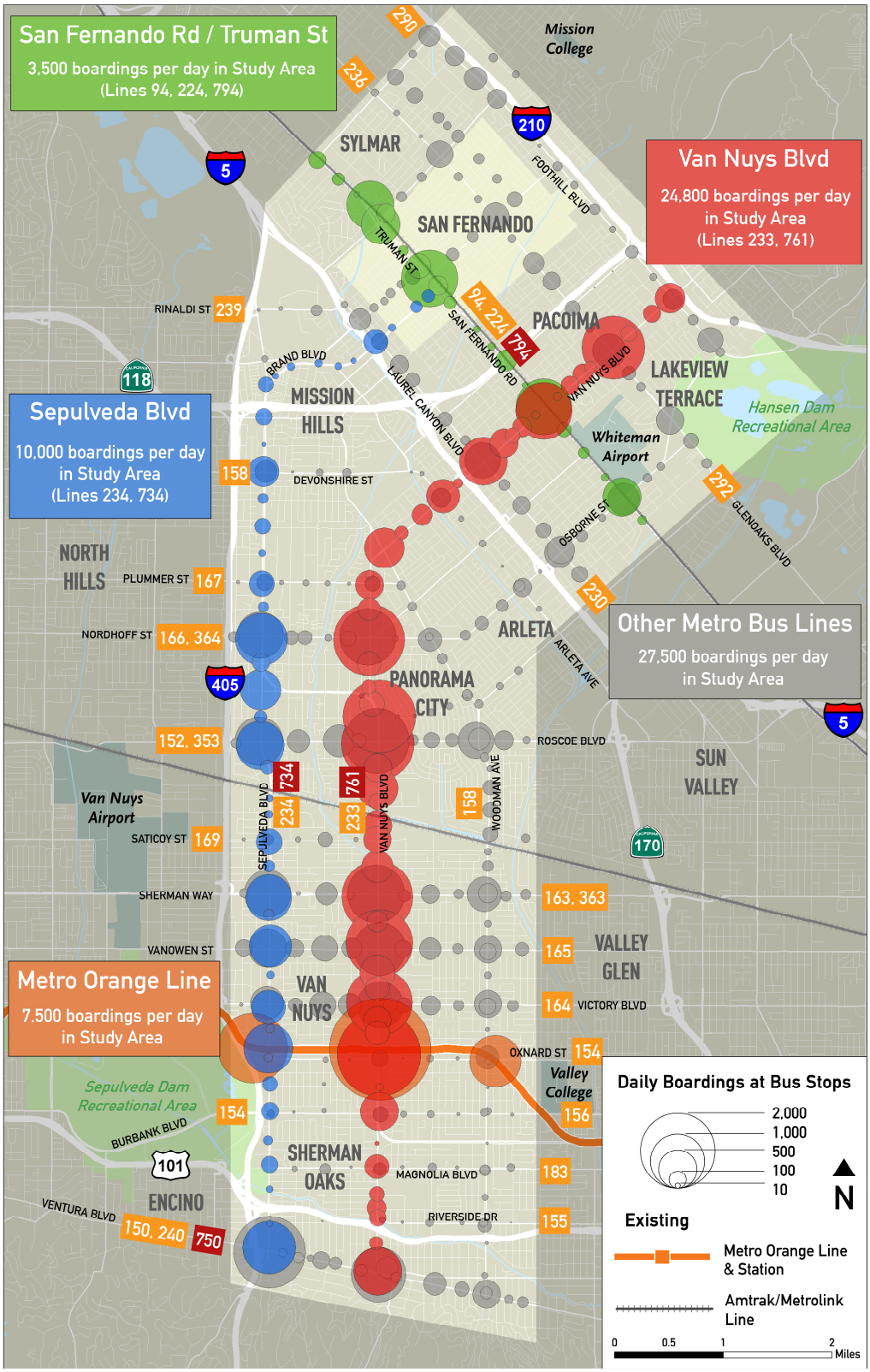
1.5.4.3 Transit System Performance

Passenger Activity

Bus Passenger Boardings

The Van Nuys Boulevard corridor has the seventh highest total transit boardings in the Metro system. The Sepulveda Boulevard and San Fernando Road corridors also have some of the highest transit boardings in the San Fernando Valley. Figure 1-18 illustrates existing transit boardings for all bus lines and the MOL within the study area.

Figure 1-18 – Existing Transit Boardings



Source: Metro, 2011

Boardings and alightings in the study area are generally highest along the MOL (7,500 per day) and along Van Nuys Boulevard between Nordhoff Street and the MOL Busway. Van Nuys Boulevard north of Nordhoff Street also has higher boardings, especially between Laurel Canyon Boulevard and Glenoaks Boulevard. Sepulveda Boulevard also has substantial boardings between Nordhoff Street and the MOL. The San Fernando Road and Truman Street corridors do not have high boardings and alightings, in comparison to the overall study area.

Existing transit boardings on Van Nuys Boulevard are some of the highest in the Metro system, when compared to other higher-density areas of the region. The Van Nuys Boulevard corridor has the second-highest boardings total in the San Fernando Valley (about 24,800 per day), just behind the MOL Busway (about 25,500 per day). Local Line 233 has higher boardings than Rapid Line 761, due to the number of stops (supporting shorter trips and higher throughput of passengers per mile) served by the local service.

Rail Passenger Boardings

Based on Metrolink data from 2011, the Antelope Valley Line has an average weekday boardings total of 5,885, of which 509 occur at the Sylmar/San Fernando Metrolink Station. The Ventura County Line has an average weekday boardings total of 4,141, of which 184 boardings occur at the Van Nuys station.

According to Amtrak, the Pacific Surfliner route is the second busiest corridor in the United States, with approximately 200 daily boardings at the Van Nuys Station, in addition to those accessing Metrolink at this location. This need supports the project purpose of transit accessibility/connectivity.

Bus Crowding Issues

Bus overcrowding is defined by Metro as passenger demand that exceeds bus seating capacity for a particular trip by 30 percent (equivalent to a "passenger load factor" of 1.30 or greater). Overcrowding is measured by peak and average trips across a day, month, or longer time period. Data analyzed are monthly averages and peak-trip numbers for a single month.

During peak periods passengers must stand on many buses. This is acceptable as long as Metro's overcrowding standard is not exceeded. Fourteen bus lines in the study area currently have standing passengers during peak times, and as passenger travel demands increase in the future, the load factor standard could be exceeded on many trips.

Since population and employment are forecast to grow, this is expected to result in increases in boardings, resulting in bus overcrowding, as the load factor standard will likely exceeded on many trips. This need supports the project purpose of the provision of transit service to transit dependent areas.

Passenger Loads

Passenger loading is a measure of how many patrons are using a transit service at any point along a designated route. The data presented here is an average of all weekday trips within a month of service. Figures 1-19 through 1-21 illustrate the total loads for each bus line (northbound and southbound) that operates along Van Nuys Boulevard, Sepulveda Boulevard and San Fernando Road (the three main transit corridors in the study area). These figures also show the total combined loading, which is a sum of the passenger activity from all of the bus lines at each point along each of the corridors.

Van Nuys Boulevard

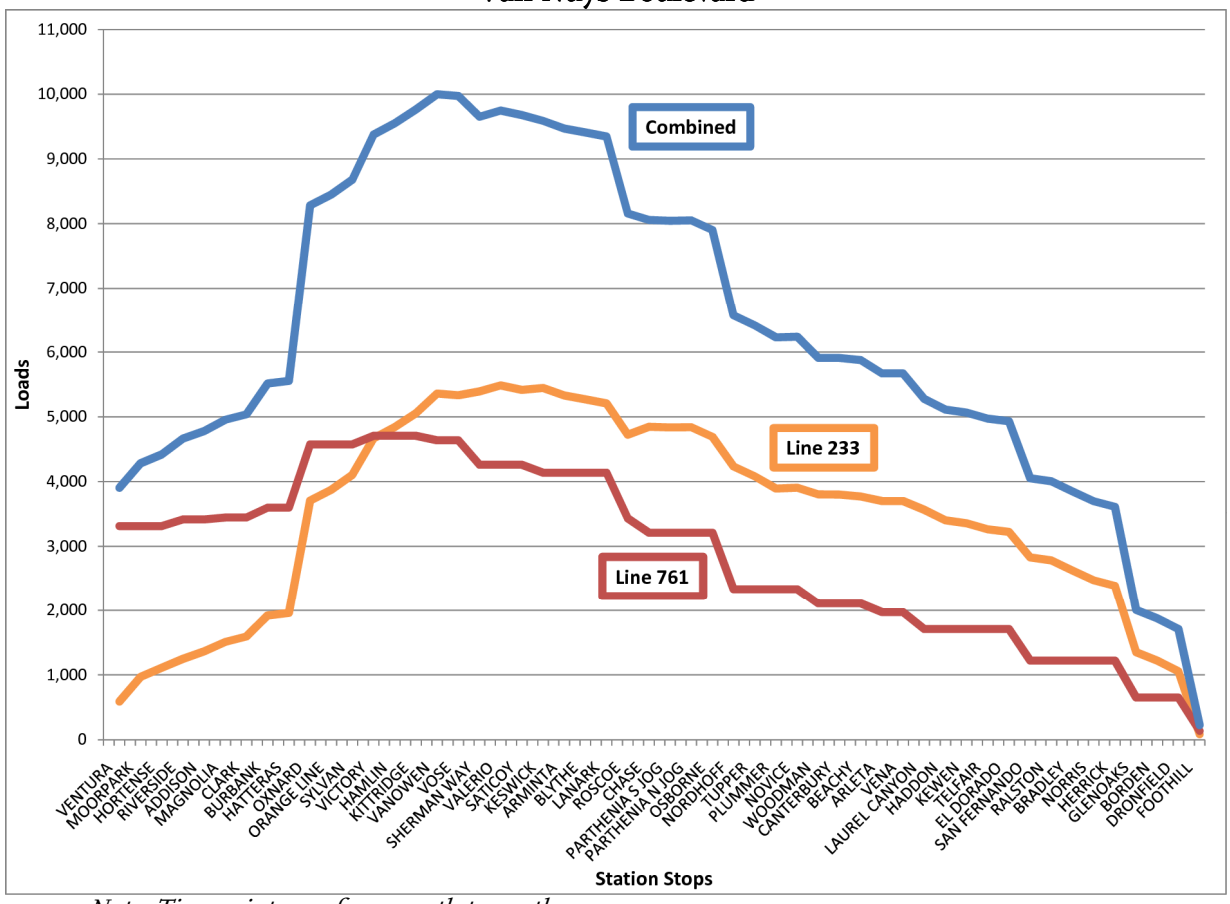
Figure 1-19 illustrates the total passenger loading (northbound and southbound) for Rapid Line 761 and Local Line 233 along Van Nuys Boulevard. The combined total is the sum of these two lines at each point along Van Nuys Boulevard.

Passenger loads on Rapid Line 761 peak between the MOL and Sherman Way in the Van Nuys Civic Center area. Passenger loading near Ventura Boulevard is high because the Rapid Line 761 provides service into and out of the San Fernando Valley, with a southern terminus at the major activity center of Westwood.

Total passenger loads on Local Line 233 tend to peak north of the MOL transfer point, particularly in the vicinity of Valerio, Saticoy and Keswick Streets.

For both lines, passenger loads decline as they approach their northern termini in the vicinity of Van Nuys Boulevard and Foothill Boulevard. A substantial number of passengers – nearly 10,000 at the combined total peak load – are using transit service along the more southern portion of Van Nuys Boulevard corridor during an average day. Transit improvements in the Van Nuys Boulevard corridor (especially between the MOL and Panorama City) should realize substantial increases in discretionary riders, while providing benefits for the high number of existing riders, which includes a high concentration of transit dependent populations, on Metro bus lines.

Figure 1-19 Total Passenger Loading – Van Nuys Boulevard

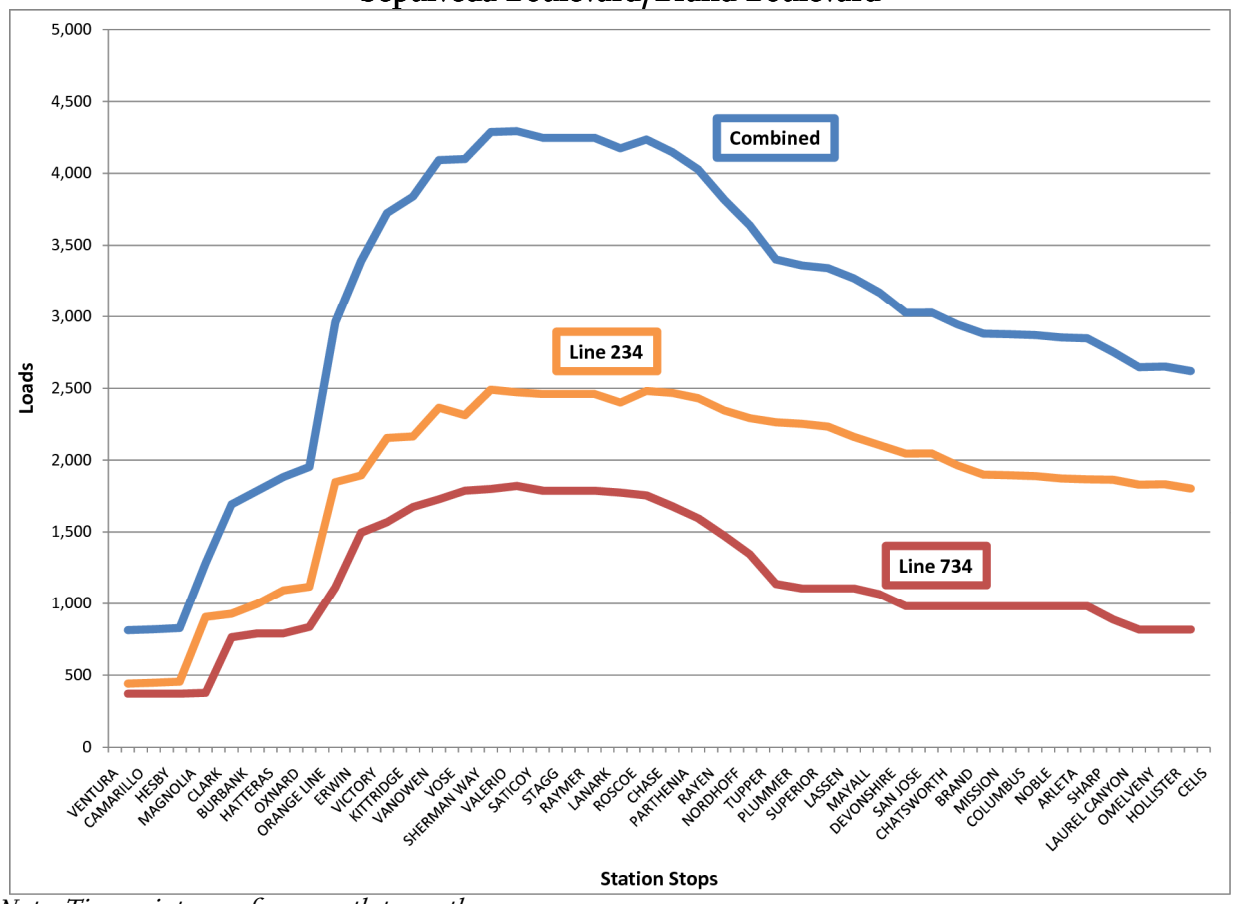


Note: Timepoints are from south to north.
Source: Metro, 2011

Sepulveda Boulevard

Figure 1-20 illustrates the total passenger loading (northbound and southbound) for the Rapid Line 734 and the Local Line 234 along Sepulveda Boulevard and Brand Boulevard. The combined total is the sum of the loads on both lines for each stop.

Figure 1-20 Total Passenger Loading – Sepulveda Boulevard/Brand Boulevard



Note: Timepoints are from south to north.
Source: Metro, 2011

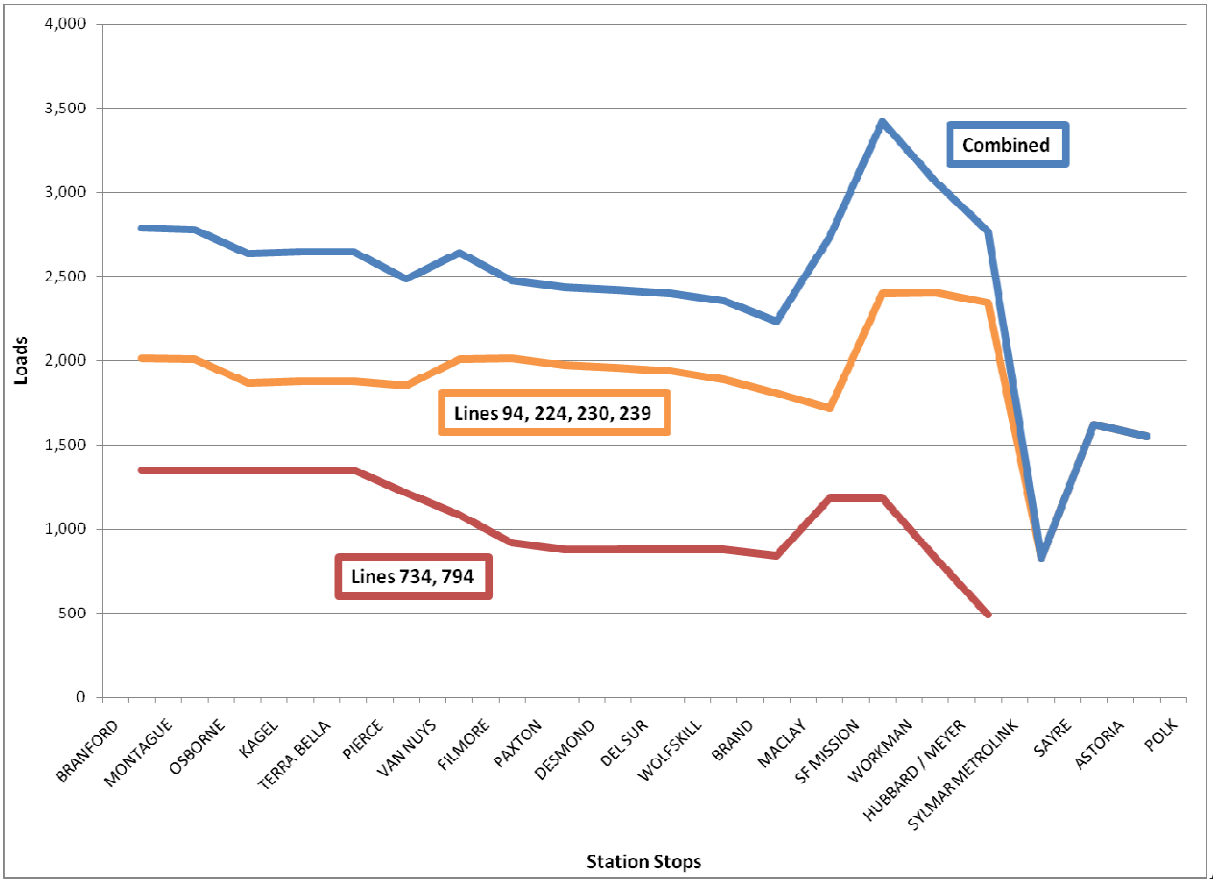
Figure 1-20 illustrates that the passenger loads along the Rapid Line 734 peak to the north of the transfer point with the MOL, between the Vose and Lanark Street stops. Although loads decline at stops to the north, they remain steady. Similar to Rapid Line 734, total loads along Local Line 234 peak north of the MOL transfer point in the vicinity of Vose and Valerio Streets and then decline, but also remain steady.

Nearly 4,500 transit patrons at the combined total peak load are using transit service along the central portion of Sepulveda Boulevard. This number is approximately half of the peak load along the Van Nuys Boulevard corridor.

San Fernando Road/Truman Street

Figure 1-21 illustrates the total loads (northbound and southbound) for the numerous lines that operate along San Fernando Road and Truman Street. The combined total is the sum of the loads on these lines at each point.

Figure 1-21 Total Passenger Loading – San Fernando Road



Note: Timepoints are from south to north.
Source: Metro, 2011

Figure 1-21 illustrates that passenger loads on the Rapid Lines 734 and 794 remain generally consistent throughout the San Fernando Road corridor, although loads decrease north of the San Fernando Mission Boulevard stop. Loads on the Local Lines 94 and 224 also remain steady for the length of the corridor until they peak between the San Fernando Mission Boulevard stop and Sylmar/San Fernando Metrolink Station, as Local Lines 230 and 239 serve this segment of the corridor, which is within the downtown area of the City of San Fernando. Loads on these local lines then drop off dramatically to the north of the Metrolink station stop, where only Line 224 continues north along San Fernando Road. A combined peak load of 3,400 transit patrons near the Sylmar/San Fernando Metrolink Station and downtown San Fernando makes this a very good area to improve transit service and secure better connections to these existing transit hubs. This need supports the project purposes of transit accessibility/connectivity and the provision of transit service to transit dependent areas.

Existing Bus Speeds and Level of Service

Congestion Effects on Bus Speeds

Based on existing Metro bus schedules and recent monthly summary data (May 2011) provided by Metro Bus Operations, an analysis of existing bus schedule runtimes and bus speeds on the Van Nuys Boulevard, Sepulveda Boulevard and San Fernando Road/Truman Street corridors was conducted.

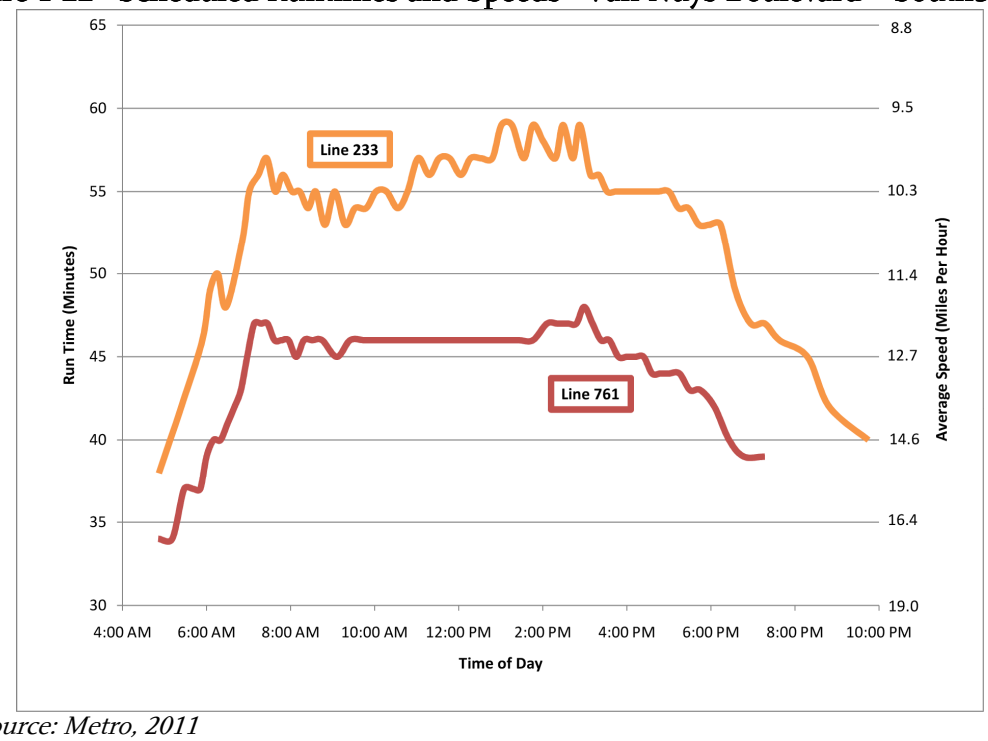
Van Nuys Boulevard

The existing Rapid Line 761 and Local Line 233 operate the length of Van Nuys Boulevard from Foothill Boulevard in Pacoima to Ventura Boulevard in Sherman Oaks. As illustrated by Figure 1-22, Rapid Line 761 operates in the southbound direction from Van Nuys/Glenoaks to Ventura/Sepulveda with a runtime of less than 40 minutes in the early morning hours and a runtime of over 50 minutes during the morning peak period. Likewise, speeds in the early morning can reach close to 15 miles per hour, but then slow to just over 10 miles per hour in the peak period. The southbound trips of Local Line 233 have runtimes of five to ten minutes longer to travel a distance similar to that of the Rapid Line due to more frequent stops, with speeds slowing to less than 10 miles per hour.

As illustrated by Figure 1-23, there is a similar situation northbound on Van Nuys Boulevard, with Rapid Line 761 scheduled runtimes of ten to 15 minutes less to cover the route from Ventura Boulevard to Foothill Boulevard in the peak period than Local Line 233. Similar to the southbound direction of travel, the Local Line 233 averages speeds fewer than 10 miles per hour in the peak, while the Rapid Line 761 averages speeds closer to 12 miles per hour. Where the lines deviate near termini points, the relevant data has been excluded on the graphs in order to illustrate equal comparisons of operations within shared corridors.

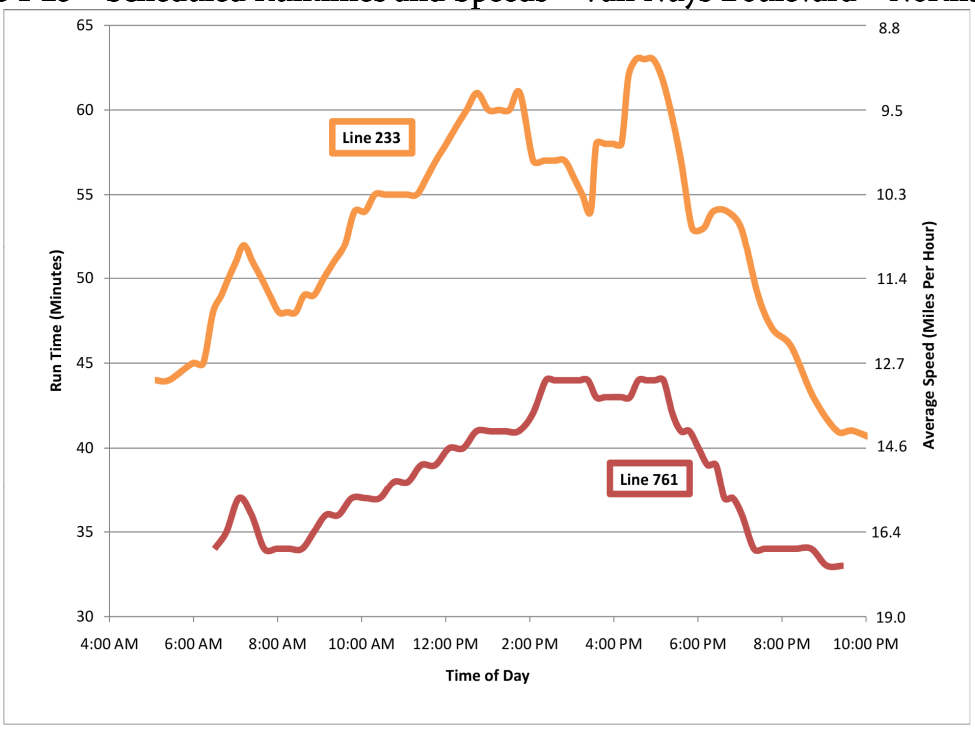
The significantly longer travel times and slower speeds during the peak hours for Metro buses along Van Nuys Boulevard support the need for a transit improvement including, but not limited to, an exclusive bus or rail guideway.

Figure 1-22– Scheduled Runtimes and Speeds –Van Nuys Boulevard – Southbound



Source: Metro, 2011

Figure 1-23 – Scheduled Runtimes and Speeds – Van Nuys Boulevard – Northbound



Source: Metro, 2011

Sepulveda Boulevard

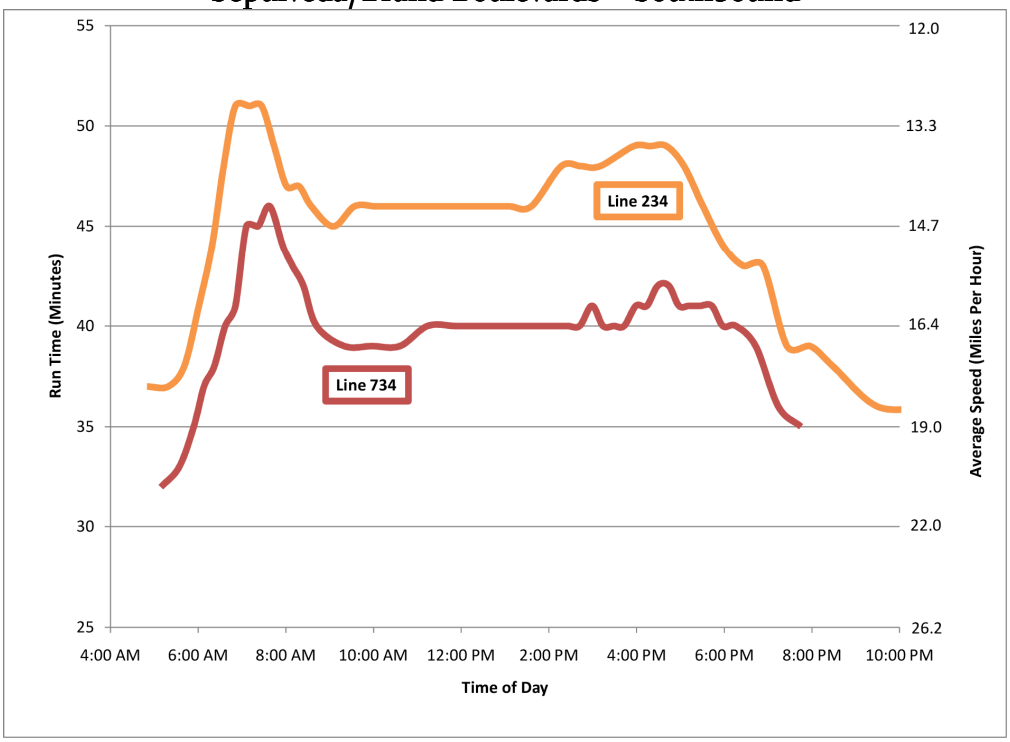
The existing Rapid Line 734 and Local Line 234 operate the length of Brand and Sepulveda Boulevards in the San Fernando Valley from the Sylmar/San Fernando Metrolink Station (at Frank Modugno Drive and Truman Street, respectively) to Ventura Boulevard in Sherman Oaks. As is illustrated by Figure 1-24, Rapid Line 734 is scheduled to run the length of Brand and Sepulveda Boulevards in the southbound direction with a runtime of less than 35 minutes in the early morning hours, but this same trip has a runtime of over 45 minutes during the morning peak period.

Likewise, speeds in the early morning can reach close to 15 miles per hour, but then slow to just over 12 miles per hour in the peak period. Scheduled southbound runtimes for the Local Line 234 are similar to the Rapid 734 throughout the day. The Local Line 234 is scheduled with the quickest runtime in the late night hours – approximately 35 minutes. At this time, the Local 234 can reach speeds of nearly 20 miles per hour.

As illustrated by Figure 1-25, the Rapid Line 734 running northbound along Sepulveda and Brand Boulevards is scheduled with runtimes approximately 5 minutes faster to cover the route from Ventura Boulevard to Sylmar/San Fernando Metrolink Station in the peak period compared to the Local Line 234. Speeds decrease by about five miles per hour in the peak period compared to the off-peak period.

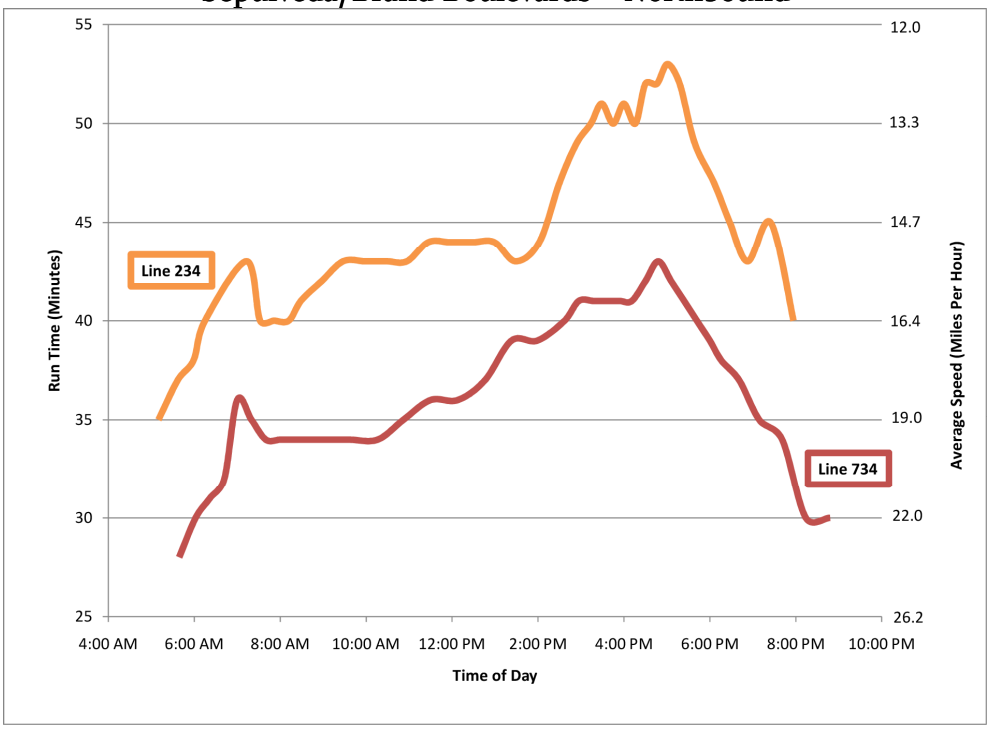
The lack of a substantial speed advantage for the Rapid Line in this corridor compared to the Local Line, and the longer travel times and slower speeds in the peak hour support the need for a transit improvement including, but not limited to, an exclusive bus or rail guideway.

Figure 1-24– Scheduled Runtimes and Speeds – Sepulveda/Brand Boulevards – Southbound



Source: Metro, 2011

Figure 1-25 – Scheduled Runtimes and Speeds – Sepulveda/Brand Boulevards – Northbound



Source: Metro, 2011

San Fernando Road/Truman Street

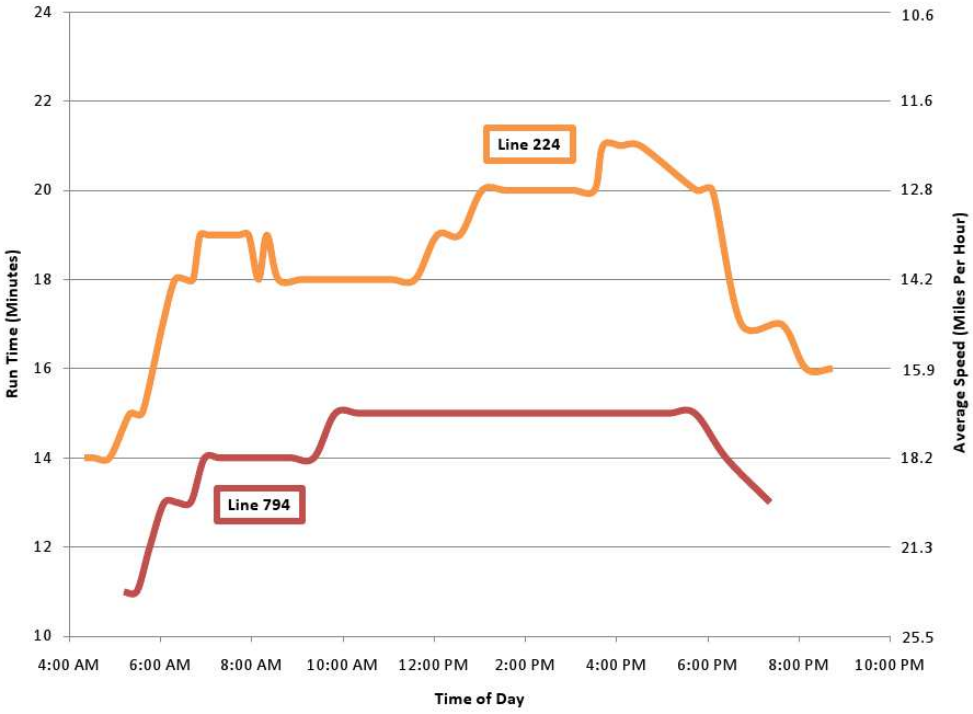
The existing Rapid Line 794 operates along Truman Street and San Fernando Road from the Sylmar/San Fernando Metrolink Station in Sylmar, to Figueroa Street in Glassell Park. Within the study area, Rapid Line 794 is examined from Sylmar/San Fernando Metrolink Station to Osborne Street in Sun Valley. The existing Local Line 224 operates along Truman Street and San Fernando Road from Polk Street in Sylmar to Branford Street in Sun Valley. The analyzed portions of these routes are about half the length of the bus routes analyzed for Van Nuys and Sepulveda Boulevard/Brand Boulevard – each just under five miles in length.

As illustrated by Figure 1-26, the Rapid Line 794 has a runtime along San Fernando Road/Truman Street in the southbound direction from the Sylmar/San Fernando Metrolink Station to Osborne Street that is just over 10 minutes in the early morning hours, but this same trip is scheduled with a runtime of nearly 15 minutes during the morning peak period. Likewise, speeds in the early morning can reach 23 miles per hour while speeds are closer to 18 miles per hour during the peak period. The southbound Local Line 224 has a runtime that is ten to 15 minutes slower for a similar distance as the Rapid Line 794. Speeds along the Local Line 233 are reduced to approximately 12 miles per hour during the peak period.

As illustrated by Figure 1-27, there is a similar situation traveling northbound on San Fernando Road and Truman Street, with the Rapid Line 794. This line has a runtime that is five minutes more to cover the route from Osborne Street to the Sylmar/San Fernando Metrolink Station in the peak period. In the southbound direction of travel, the Local Line 224 has a runtime that is almost 10 minutes higher than the Rapid Line 794 in the northbound direction, and speeds are reduced to just over 10 miles per hour.

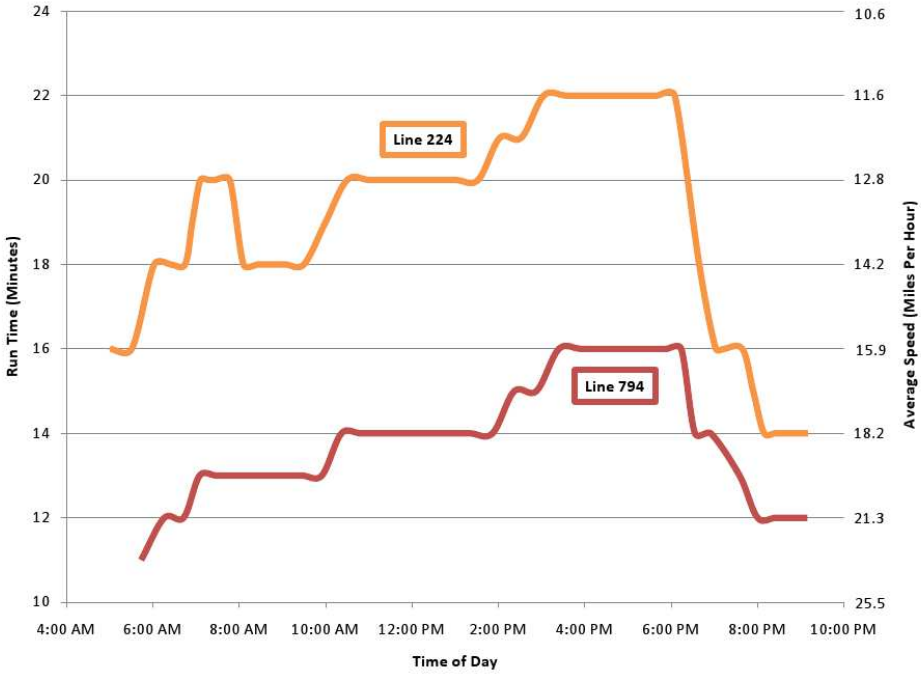
Metro Rapid Line 794 generally has good performance along San Fernando Road, with a substantial travel time savings compared to Metro Local Line 224 and only a small increase in runtimes during peak periods. Transit improvements including, but not limited to, bus or rail guideway would have a positive benefit for riders

Figure 1-26– Scheduled Runtimes and Speeds – San Fernando Road – Southbound



Source: Metro, 2011

Figure 1-27 – Scheduled Runtimes and Speeds – San Fernando Road – Northbound



Source: Metro, 2011

Overall, the large differences between peak and off-peak scheduled runtimes (ranging from approximately 25 percent to 50 percent) and speeds (ranging from approximately 33 percent to 50 percent) show that separating transit and auto traffic may have a significant benefit for Van Nuys Boulevard, Sepulveda Boulevard and San Fernando Road travelers.

Transit On-Time Performance and Reliability

Van Nuys Boulevard

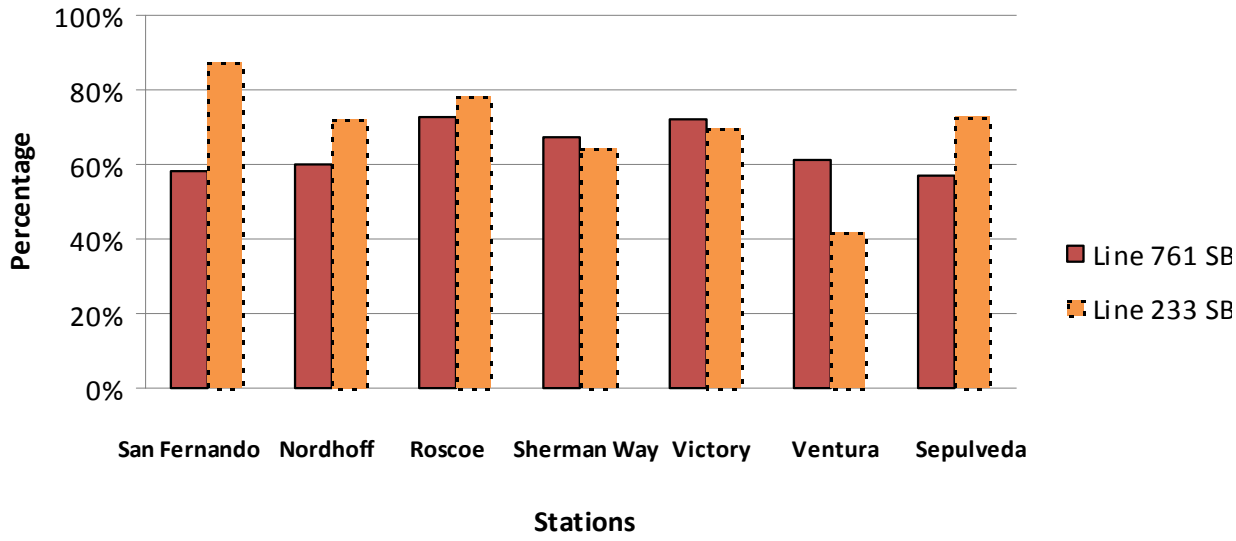
An examination of on-time performance statistics for the Rapid Line 761 and the Local Line 233 indicates that the lines are not currently meeting the on-time performance goal of 80 percent.

Figure 1-28 and Figure 1-29 below illustrate on-time performance at select service locations along the Van Nuys Boulevard corridor in both the north and southbound directions.

The Local Line 233 performs better than the Rapid Line 761, but the Local Line 233 still rates below 80 percent on-time performance at almost every time-point examined (excluding San Fernando in the southbound direction and Victory in the northbound direction). The Rapid Line 761 performs particularly poorly in terms of reliability in the northbound direction, where on-time performance is less than 50 percent at all time-points examined.

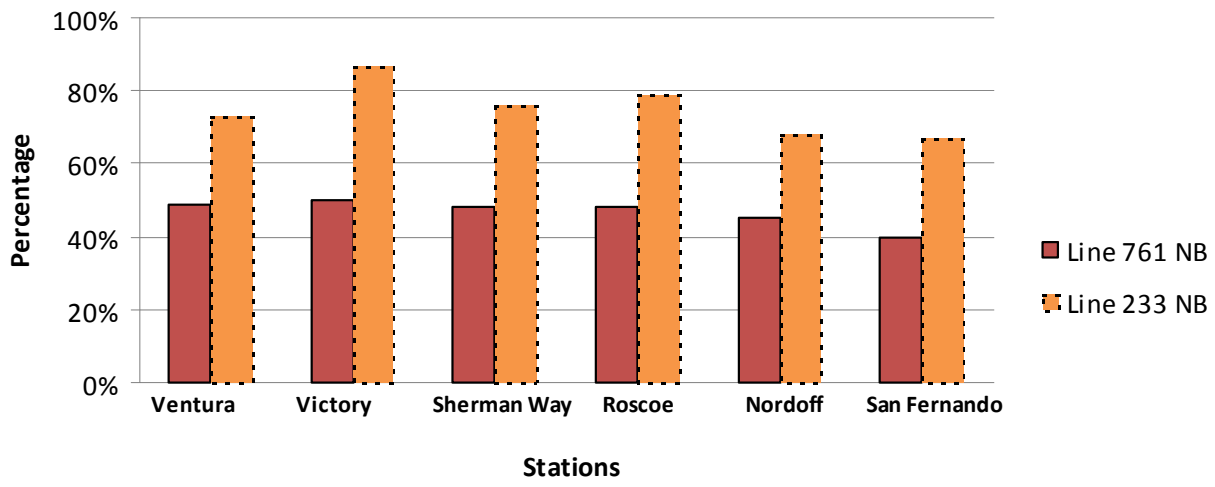
Transit service that is physically separated from auto traffic would allow for much more improved reliability of operations in this corridor, especially with the clear lack of advantage in reliability with the Rapid Bus service.

Figure 1-28 – On-Time Performance – Van Nuys Boulevard – Southbound



Source: Metro, 2011

Figure 1-29 – On-Time Performance – Van Nuys Boulevard – Northbound



Source: Metro, 2011

Sepulveda Boulevard

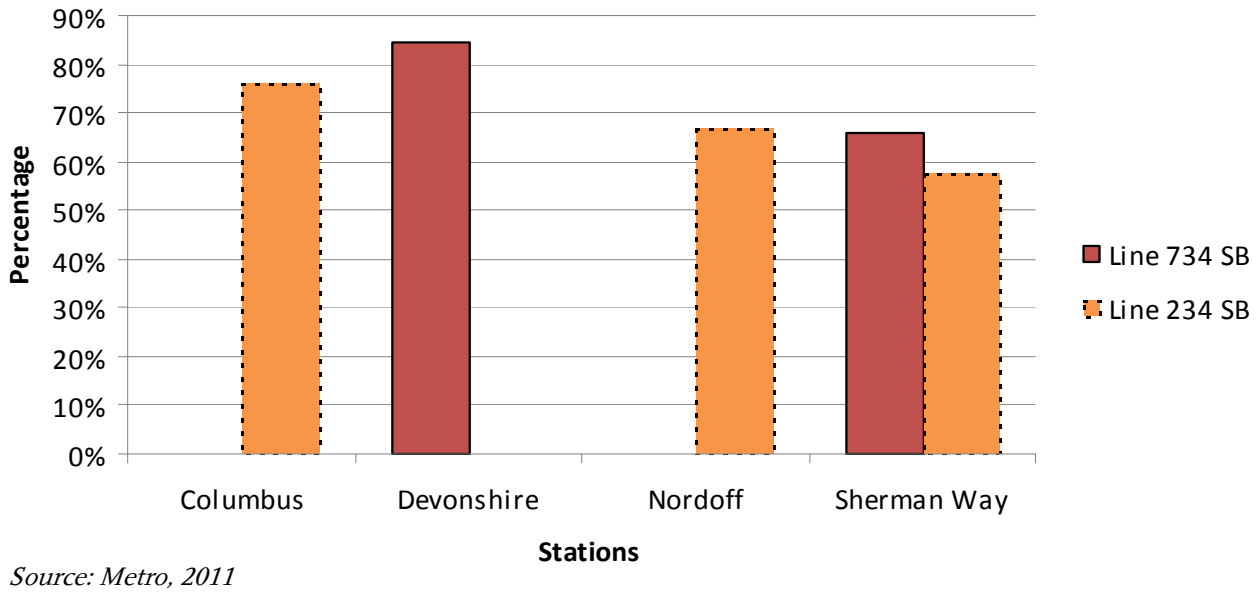
An examination of on-time performance statistics for the Rapid Line 734 and the Local Line 234 along Sepulveda Boulevard and Brand Boulevard indicates that the lines are not currently meeting their on-time performance goals of 80 percent.

Figure 1-30 and Figure 1-31 below illustrate on-time performance at select service locations along Sepulveda Boulevard/Brand Boulevard in both the north and southbound directions.

Metro Rapid Line 734 generally has better on-time performance than does Local Line 234, but Rapid Line 734 still operates below the goal at almost every time-point examined (excluding Devonshire in the southbound direction and Sherman Way in the northbound direction). The Local Line 234 performs particularly poor in the southbound direction at Sherman Way, where on-time performance is just over 50 percent.

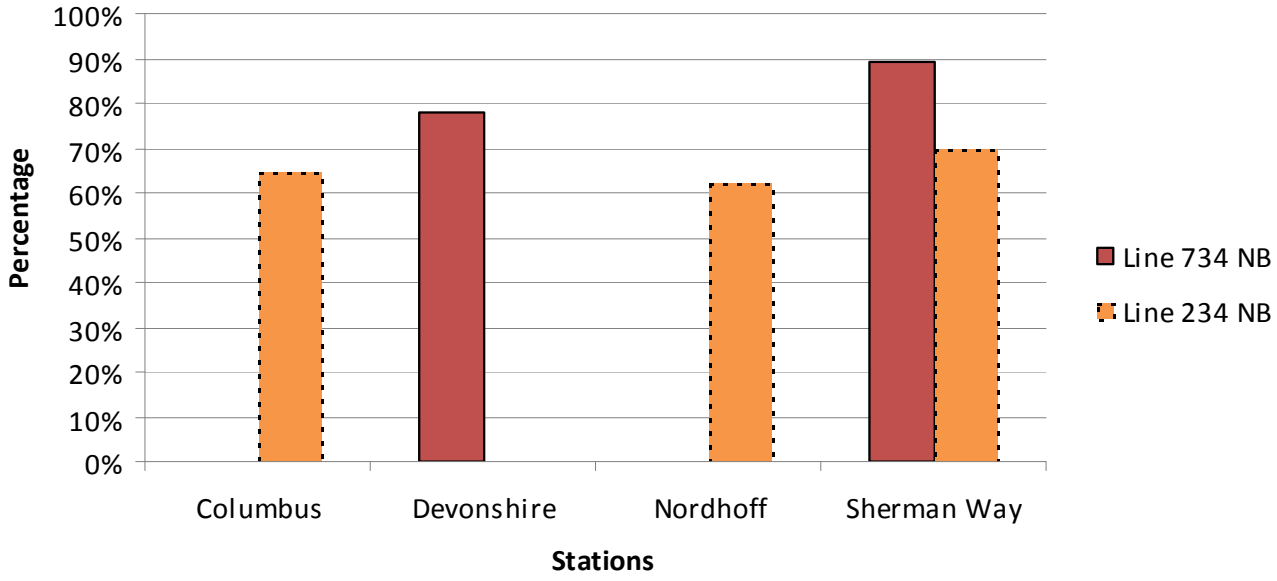
Transit service that is physically separated from auto traffic would allow for much improved reliability of operations in this corridor.

Figure 1-30 – On-Time Performance – Sepulveda Boulevard Corridor– Southbound



Source: Metro, 2011

Figure 1-31 – On-Time Performance – Sepulveda Boulevard Corridor– Northbound



Source: Metro, 2011

San Fernando Road

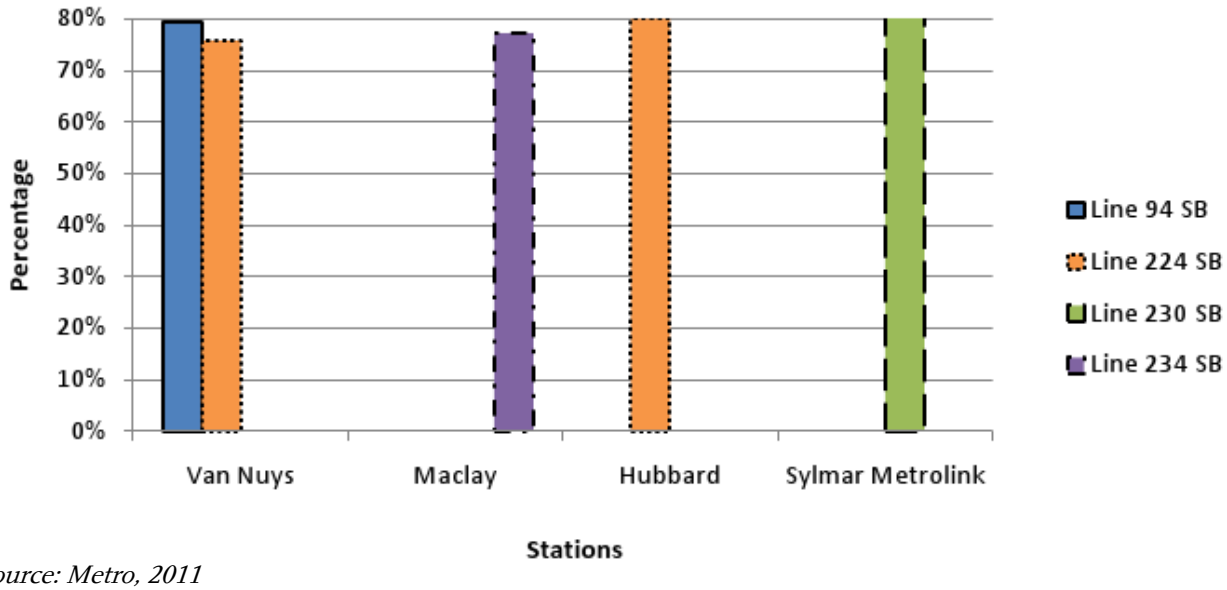
An examination of on-time performance statistics for the Local Lines 94, 224, 230 and 234 indicate that the lines are not currently meeting the on-time performance goals of 80 percent.

Figure 1-32 and Figure 1-33 below illustrate on-time performance at select service locations along San Fernando Road in both the northbound and southbound directions.

The Local Lines 94, 224, 230 and 234 generally perform better in the southbound direction, although on-time performance is still below 80 percent for most lines in this direction. Local Lines 94, 224 and 234 perform especially poorly in the northbound direction, with on-time performance below 60 percent. The Local Line 94 in the northbound direction performs particularly poorly, where on-time performance is under 50 percent.

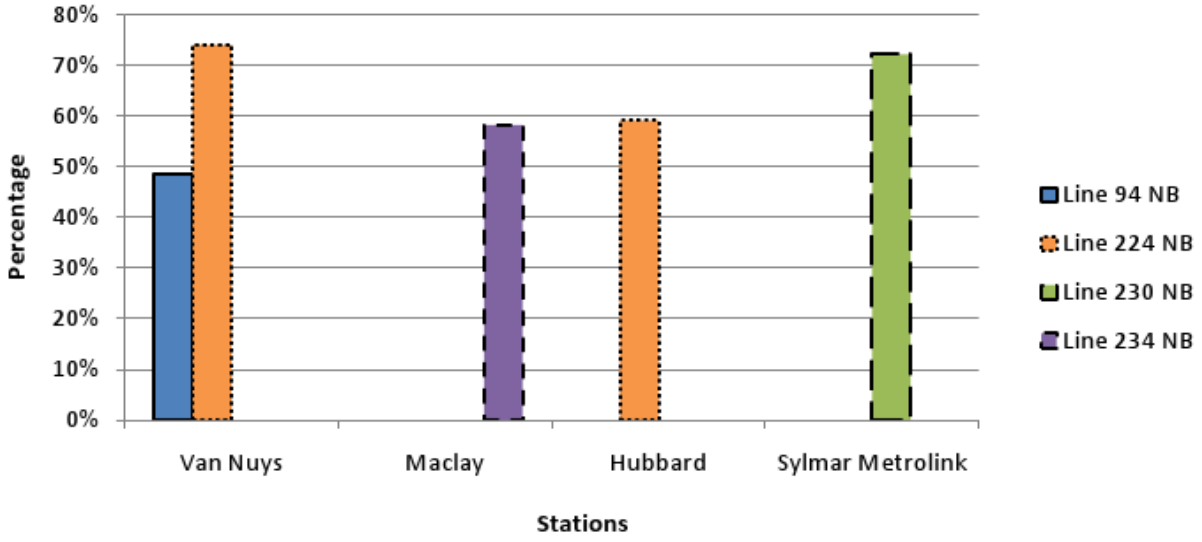
Transit service physically separated from auto traffic would allow for much improved reliability of operations in this corridor. This need supports the project purpose of transit reliability.

Figure 1-32 – On-Time Performance – San Fernando Road – Southbound



Source: Metro, 2011

Figure 1-33 – On-Time Performance – San Fernando Road – Northbound



Source: Metro, 2011

1.5.5 Regional Air Quality

The East San Fernando Valley Transit Corridor is located within the Los Angeles County portion of the South Coast Air Basin (Basin), which has among the worst air quality in the nation. Mobile source emissions from vehicles are the single largest contributor to air quality problems.

The use of fossil fuels for transportation generates large amounts of GHG emissions, including carbon dioxide (CO2), nitrous oxide (N2O) and methane (CH4) which impact air quality in the area. The primary strategies for reducing emissions from transportation sources include transportation system improvements and operations efficiencies, and achieving reduction in the growth rate of vehicle miles traveled (VMT) as California's population continues to grow.

The East San Fernando Valley Transit Corridor project would provide transportation and transit improvements that could potentially include BRT, streetcar, and LRT. Each of these transit modes could provide the study area with improved mobility thereby inducing new riders to transit. Therefore, any of these transit modes along the project corridor could contribute to reductions in regional vehicle miles travelled (VMT) and related air quality issues.

The proposed project could also contribute to local and regional congestion relief, which is another important GHG emissions reduction strategy. Since the highest levels of mobile-source air quality issues occur at stop-and-go speeds (i.e., 0-25 miles per hour), the extent to which the proposed project can relieve congestion by enhancing overall transportation system efficiency, would assist in improving air quality. This need supports the project purpose of encouraging model shifts to transit.

1.5.6 COMMUNITY INPUT

1.5.6.1 Elected Officials Input

Metro and the City of Los Angeles conducted three San Fernando Valley Elected Officials' Staff Briefings to introduce the project, and to solicit feedback. Elected official staff members indicated their respective offices were supportive of improved public transit opportunities in the Valley and offered assistance in engaging their constituents at community events, public meetings, and their regular outreach process. Metro also conducted and will continue ongoing discussions with elected officials throughout the study.

1.5.6.2 Public Input

Metro and the City of Los Angeles conducted outreach on a multitude of levels – postcard mailers, stakeholder e-mail blasts, take-ones, online media channels, social media channels such as Facebook and Twitter, newspapers, a project website, community events, farmers markets, neighborhood council meetings, and neighborhood organizations – to reach out to the larger community regarding planned community meetings along Van Nuys Boulevard and Sepulveda Boulevard corridors and to gain community input on the project. Metro staff also briefed representatives from the offices of federal, state, and local elected officials.

Eleven community meetings were hosted by Metro and the City of Los Angeles to solicit feedback from the public regarding potential alternatives. These meetings were structured in an open house format, which allowed participants the flexibility of walking around to various stations to ask questions or provide comments. Materials, which included the fact sheet, contact card, comment sheet, project video, and on-screen presentation, were provided in both English and Spanish.

Van Nuys Boulevard

The three meetings were held on October 26, 2011 at Panorama High School, October 27, 2011 at Pacoima Neighborhood City Hall, and October 28, 2011 at Van Nuys Civic Center. A total of 150 attendees signed-in over the course of the three meetings and over 400 comments were received regarding the project.

At the first round of community meetings, participants were shown the different transportation options that were being considered along the Van Nuys Boulevard corridor. These included no-build, transportation systems management, bus rapid transit, streetcar, and light rail transit. A total of 317 comments were submitted with regard to the type of transportation improvement that the community preferred. Approximately 82 comments were related to bus system/service operations improvements, 73 comments were in support of light rail transit, and 24 comments were in support of bus rapid transit.

In addition to the type of transportation improvement the community preferred, interest was expressed in tying transportation improvements along the corridor to a future transportation

project along the Sepulveda Pass corridor as well as support for extending improvements in the corridor to the Sylmar/San Fernando area.

Expanded Study Area Including Sepulveda Boulevard

The second round of community outreach meetings was held to solicit input on the expansion of the study area to include the Sepulveda Boulevard corridor. The community meetings were on April 12, 2012 at the City of San Fernando Regional Pool Facility, on April 17, 2012 at the Cathedral of St. Mary Byzantine Catholic Church, on April 18, 2012 at the Valley Presbyterian Hospital, and on May 1, 2012 at the Mission Community Police Station. A total of 138 attendees signed-in over the course of the four meetings and nearly 400 comments were received regarding the project.

At the second round of community meetings, participants were shown the different transportation options that were being considered in the east San Fernando Valley. A total of 574 comments were submitted with regard to the type of transportation improvement the community preferred. Approximately 18 comments were related to bus system/service operations improvements, 65 comments were in support of light rail transit, and 23 comments were in support of bus rapid transit. In addition to the type of transportation improvement the community preferred, interest was expressed in tying transportation improvements along the corridor to a future transportation project along the Sepulveda Pass corridor and linking the transit services to schools, hospitals, and major employment centers. A large number of comments focused on considering a project on Van Nuys Boulevard.

Alternatives Under Consideration

The third round of community outreach meetings was held to provide an update about the project and process. The meetings presented eight potential alternatives for review and comment. The stakeholders were also provided a survey to rate the alternatives. The community meetings were on October 2, 2012 at Sepulveda Middle School in Mission Hills, on October 4, 2012 at San Fernando High School in San Fernando, on October 6, 2012 at Panorama High School in Panorama City, and on October 9, 2012 at Marvin Braude Civic Center in Van Nuys. A total of 175 attendees signed-in over the course of the four meetings and nearly 375 comments were received regarding the project.

At the third round of community meetings, participants were shown eight potential alternatives that were being considered in the east San Fernando Valley. There were approximately 137 comments submitted with regard to the type of transportation mode, and of those, the majority were related to LRT. Of the surveys completed, approximately 100 comments were related to LRT alternatives, with LRT-2 being favored over LRT-1. Approximately 59 surveys focused on BRT alternatives, with BRT-1 and BRT-3 being favored the most, followed by BRT-2 and BRT-4. In addition to the type of alternatives the community preferred, interest was bicycles and bike lanes, with a general preference for bicycle lanes instead of parking.