2.0 Purpose and Need

The purpose of the project is to 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.

2.1. History and Background

The East San Fernando Valley Transit Corridor has been studied extensively over the past nine years. In 2000, the California State Legislature made funds available through a Traffic Congestion Relief Program (TCRP) grant, which was specifically to build a north/south bus project in the San Fernando Valley that would connect the Ventura Rapid Bus and the Burbank/Chandler alignment (Metro Orange Line (MOL)).

2.1.1. San Fernando Valley North-South Transit Corridor Regional Significant Transportation Investment Study (2003)

In May 2003, the Metro Board received and filed staff's recommendation for the advancement of the *San Fernando Valley North/South Transit Corridor's, Regional Significant Transportation Investment Study (RSTIS)*. This study found that due to the geographic width (east-west distance) of the Valley, a single north/south transit corridor project would be of limited benefit to the community. The RSTIS recommended a series of bus efficiency improvements on five north/south corridors:

- On Reseda Boulevard, Sepulveda Boulevard, Van Nuys Boulevard, and Lankershim Boulevard/San Fernando Road in the east San Fernando Valley.
- On the Canoga Avenue corridor in the west San Fernando Valley. The corridor is located on a former rail right-of-way (ROW) jointly owned by Metro and the City of Los Angeles. Metro environmentally cleared that corridor, and construction was completed on the MOL Canoga Extension Project in July 2012.

2.1.2. LADOT San Fernando Valley North/South Transit Corridors Project (2008)

In 2010, LADOT provided minor refinements to the project definition for bus speeds on the remaining four San Fernando Valley north/south corridors and from that analysis recommended a number of near, medium and long-term improvements that included in addition to a Van Nuys Rapidway project, the implementation of improvements that included: signal timing changes at various intersections, intersection widening to add new turn pockets, widening and restriping to add new lanes at various locations, and bus stops with related pedestrian crossing enhancements.

2.1.3. East San Fernando Valley North-South Rapidway Project (2012)

The 2010 study by the City of Los Angeles recommended improvements to three of the targeted corridors (Reseda, Sepulveda, and Lankershim/San Fernando). The purpose of the study was to review and refine the 2010 City recommendations and identify feasible and beneficial improvements to north-south transit operating speeds and overall trip travel times, which could benefit existing and future bus passengers. The study determined that other than those projects currently being implemented by the City that no other improvements were recommended for implementation due primarily to high cost and negligible incremental bus trip travel time savings that would be experienced by Metro passengers.

2.2 PROJECT NEEDS

What is the purpose of the project and why is it needed?

Based on an evaluation of socioeconomic, 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

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

The extent of the study area's transit dependency is supported in part by boarding and alighting data in the 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.

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.

2.2.1.1. Existing Highway Network

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.

2.2.1.2. Existing Arterial Roadways

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.

Van Nuys Boulevard Corridor

The Van Nuys Boulevard 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 that may include peak-hour 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 future lane designation.

Figure 2-1 illustrates Van Nuys Boulevard in the Civic Center area.

Figure 2-1 – Van Nuys Boulevard
(Source: KOA, 2011)

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.

Figure 2-2 illustrates Sepulveda Boulevard near Sherman Way.

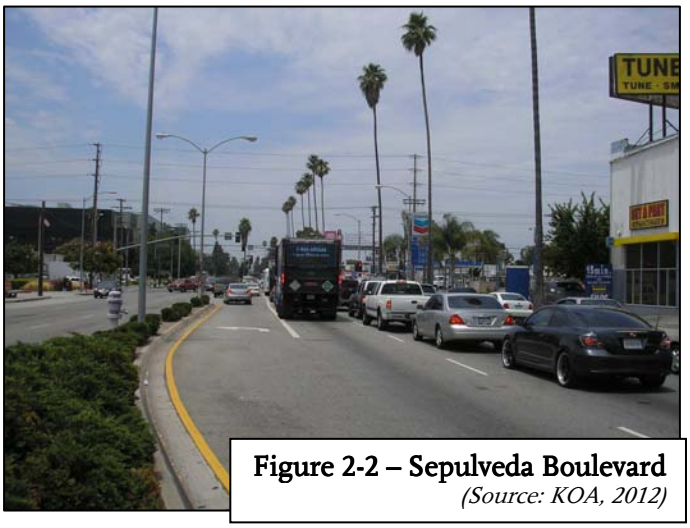


Figure 2-2 – Sepulveda Boulevard
(Source: KOA, 2012)

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. 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.

Figure 2-3 – Brand Boulevard
(Source: STV, 2012)

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.

Figure 2-3 illustrates Brand Boulevard near Noble Avenue.

San Fernando Road/Truman Street Corridor

San Fernando Road and Truman Street have narrower ROW widths compared to the Van Nuys, Sepulveda Boulevard, and Brand Boulevard 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. This corridor parallels the Metrolink Antelope Valley Line tracks. Figure 2-4 illustrates San Fernando Road at Van Nuys Boulevard.

Figure 2-4 – San Fernando Road
(Source: KOA, 2012)

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 future lane designation.

2.2.1.3. Existing Transit Network

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 stations.

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. Amtrak primarily provides intercity rail service between Los Angeles, Santa Barbara/San Luis Obispo, and San Diego.

The Metro Rapid Bus lines that operate in the area provide a core bus network that connects to local bus and shuttle services. Major bus lines include: the MOL and Metro Rapid Bus service on Van Nuys Boulevard, Sepulveda Boulevard, San Fernando Road/Truman Street, and Ventura Boulevard. Other bus lines that serve the study area 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 2-1, while Figure 2-5 illustrates transit lines within the study area.

2.2.1.4. Future Planned Projects

Future planned projects include capital improvements identified in Metro's 2009 Long Range Transportation Plan (LRTP) that will be implemented by 2035. This includes the installation of carpool lanes on the I-5 through Sun Valley, Pacoima, and Sylmar, and on the I-405 through the Sepulveda Pass.

The extension of the bicycle paths on Van Nuys Boulevard, Sepulveda Boulevard, and San Fernando Road/Truman Street corridors per the 2010 City of Los Angeles Bicycle Plan will need to be considered as part of any major modifications to the roadway.

Although the Sepulveda Pass Corridor and the California High Speed Rail projects will not likely be completed by the project buildout, these projects are discussed in the study as they would potentially link to the project thereby providing greater regional connectivity.

Table 2-1 – 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	Metro Orange Line	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 2-5 – Study Area Transit Map

Source: Metro, 2012

2.2.1.5. Highway Network Performance

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 five percent to 39 percent. Representative freeway segments in the study area are summarized in Table 2-2, 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 2-2 – 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

2.2.1.6. Arterial Roadway Performance

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 mph, (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 mph, (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 average speed on key roadway segments within the study area are summarized in Table 2-3. The increased congestion and reduction in speeds is estimated to increase the vehicle delay at intersections in the study area.

The increased congestion and reduction of speeds will add to both automobile and transit vehicle delay at intersections in the study area. The analysis indicates that the increases in average vehicle delay per vehicle 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 in 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 of delay will experience 35 seconds of delay by the year 2035.

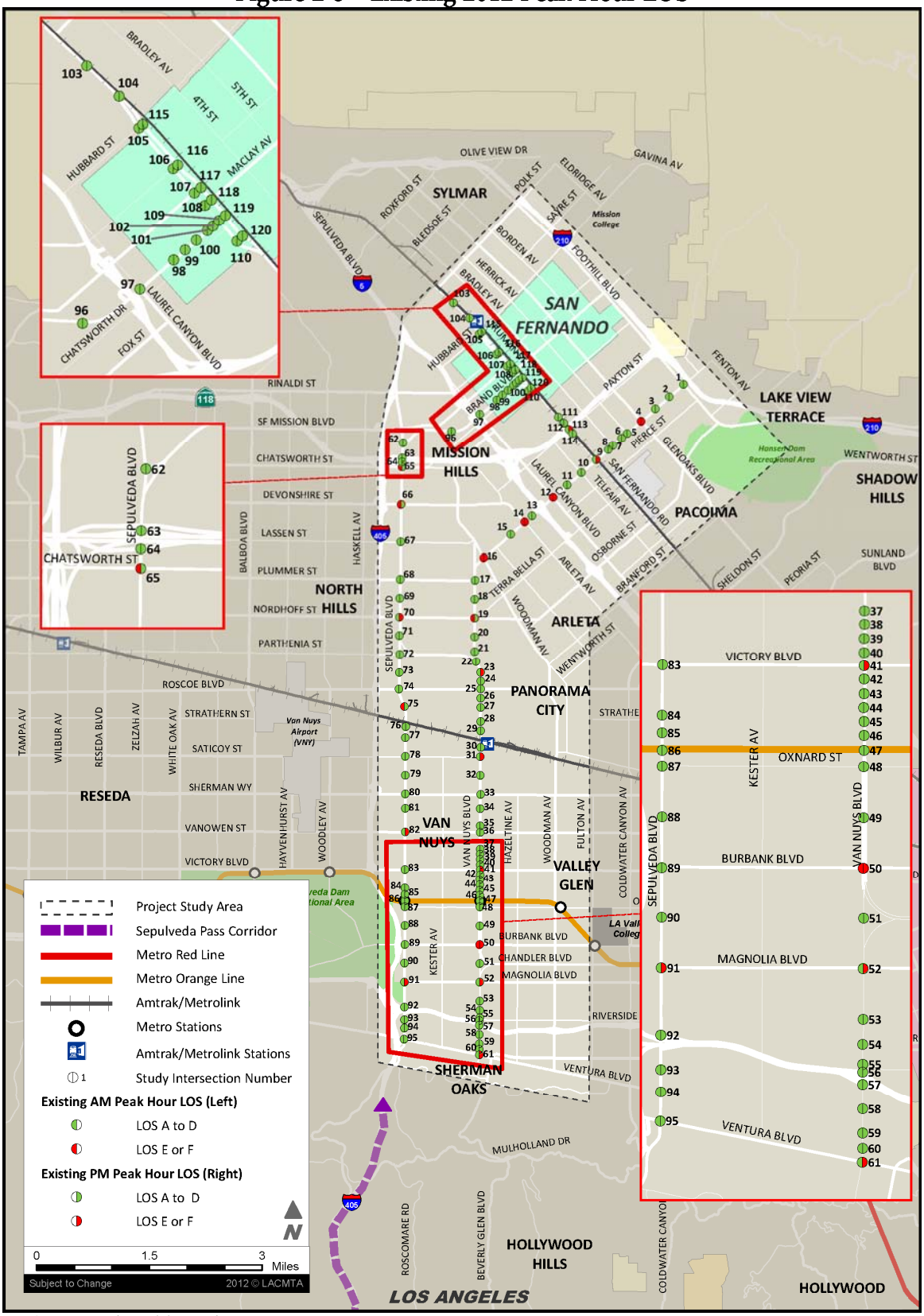
Based on travel projections from the Metro model, the number of study intersections currently operating at LOS E or F along the Van Nuys Boulevard corridor and the Sepulveda Boulevard corridor will more than double by the year 2035. Figures 2-6 and 2-7 illustrate the traffic conditions, for both existing and future buildout conditions.

Table 2-3 – 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%

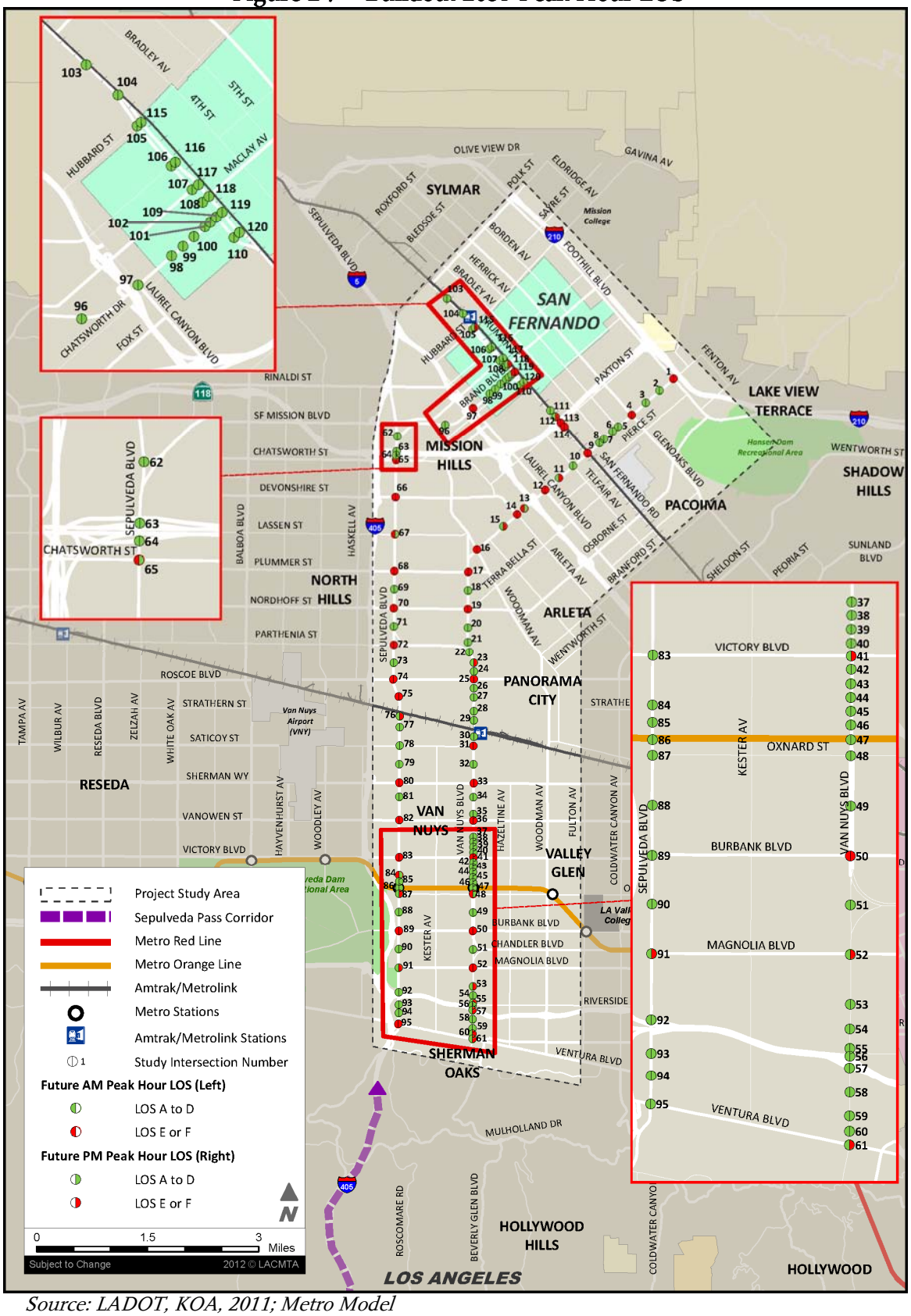
[a] AM peak period (6am-9am)
[b] PM peak period (3pm-7pm)
Source: Metro Model

Figure 2-6 – Existing 2012 Peak Hour LOS



Source: LADOT, KOA, 2011

Figure 2-7 – Buildout 2035 Peak Hour LOS



Source: LADOT, KOA, 2011; Metro Model

2.2.1.7. Transit System Performance

Based on existing Metro bus schedules and 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/Brand Boulevard, and San Fernando Road/Truman Street corridors was conducted.

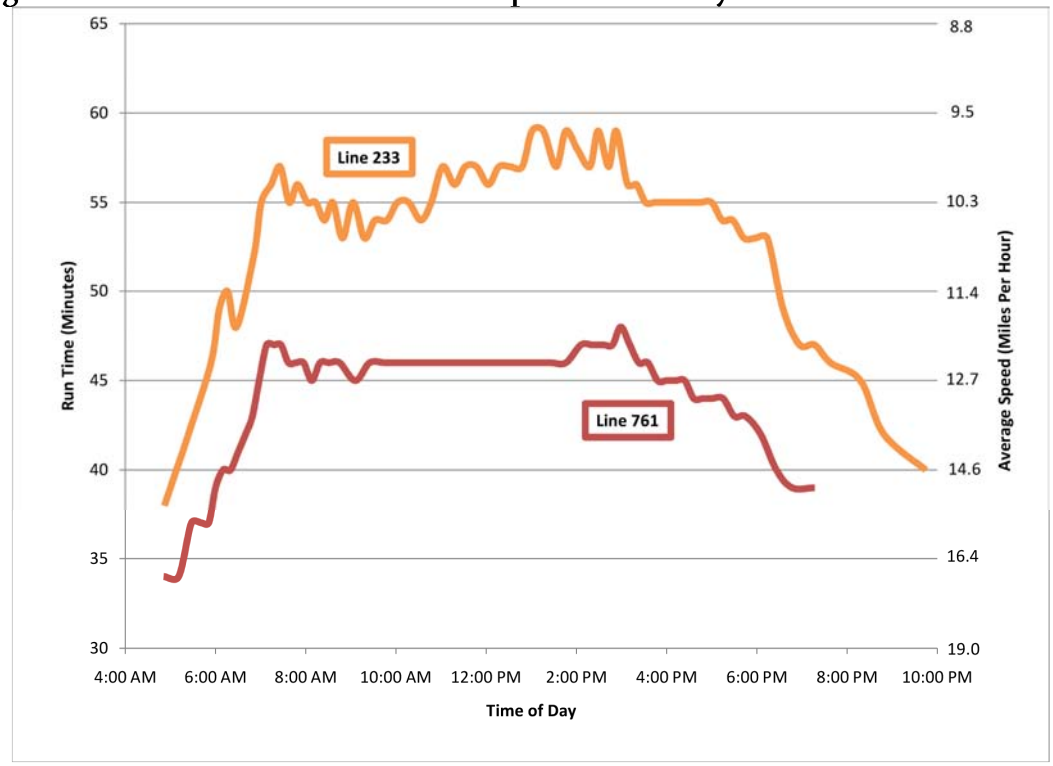
Van Nuys Boulevard

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 2-8, Rapid Line 761 operates in the southbound direction from Van Nuys Boulevard/Glenoaks Boulevard to Ventura Boulevard/Sepulveda 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 10 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 2-9, there is a similar situation northbound on Van Nuys Boulevard, with Rapid Line 761 scheduled runtimes of 10 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 under 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.

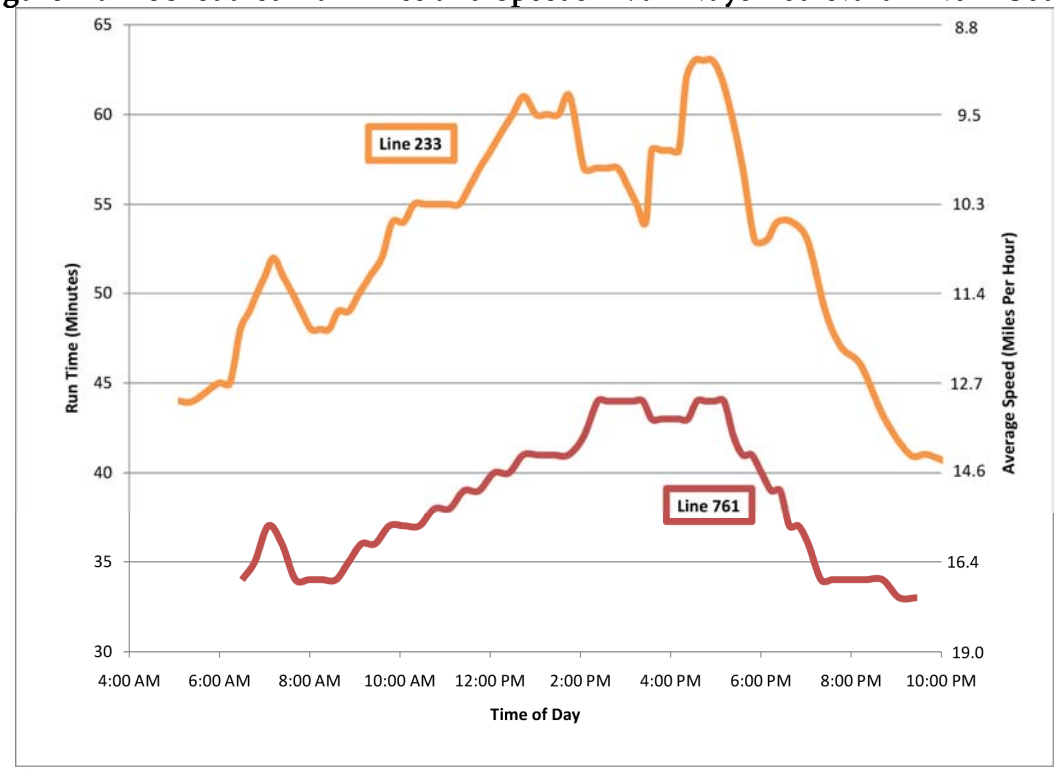
The significantly longer travel times and slower speeds during the peak hours for Metro buses along Van Nuys Boulevard support the need for a transit improvement including, but not limited to, an exclusive bus or rail guideway.

Figure 2-8 – Scheduled Runtimes and Speeds –Van Nuys Boulevard – Southbound



Source: Metro, 2011

Figure 2-9 – Scheduled Runtimes and Speeds – Van Nuys Boulevard – Northbound



Source: Metro, 2011

Sepulveda Boulevard/Brand Boulevard

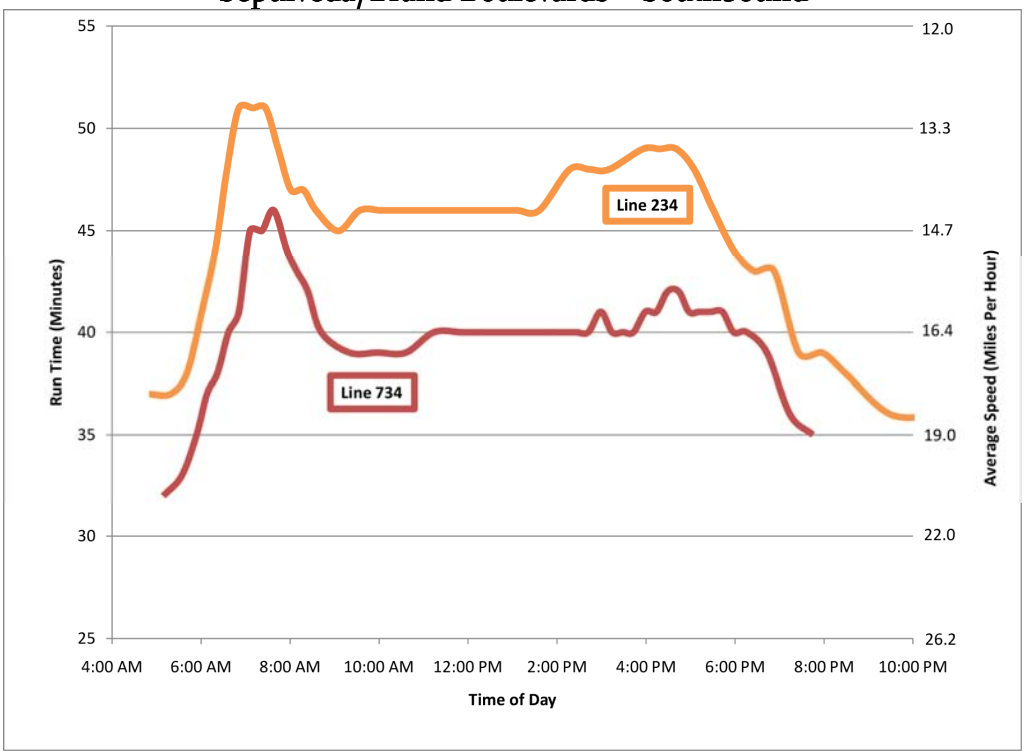
Rapid Line 734 and Local Line 234 operate the length of Brand and Sepulveda Boulevards in the San Fernando Valley from the Sylmar/San Fernando Metrolink Station (at Frank Modugno Drive and Truman Street, respectively) to Ventura Boulevard in Sherman Oaks. As is illustrated by Figure 2-10, Rapid Line 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 Line 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 Line 234 can reach speeds of nearly 20 miles per hour.

As illustrated by Figure 2-11, the Rapid Line 734 running northbound along Sepulveda and Brand Boulevards is scheduled with runtimes approximately five 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.

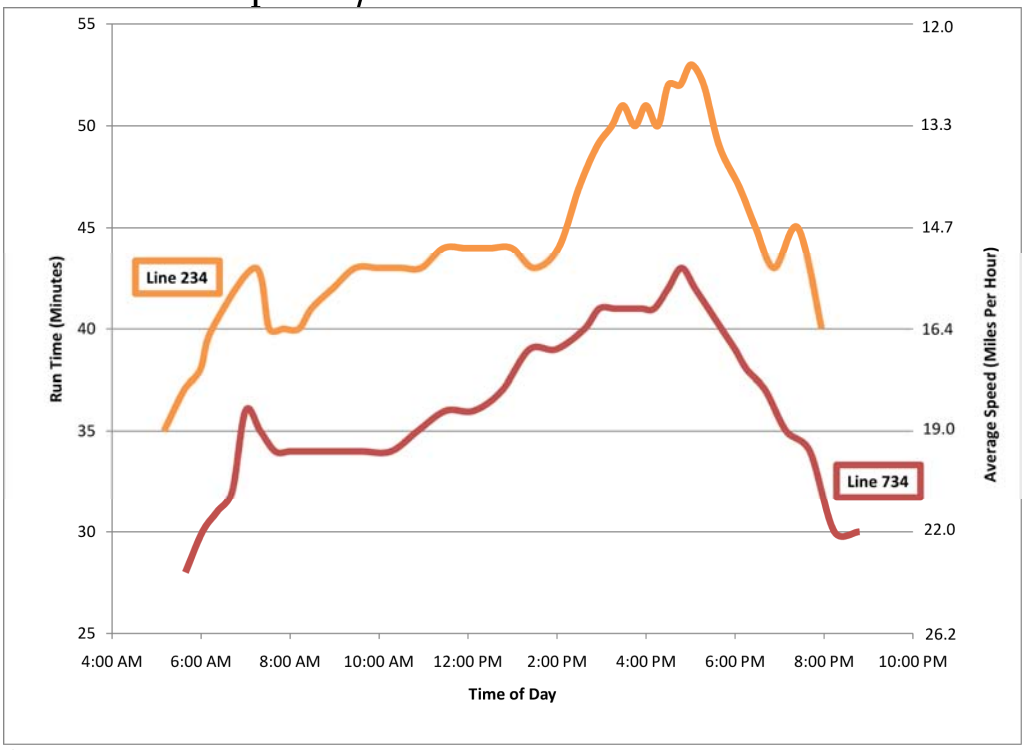
The lack of a substantial speed advantage for the Rapid Line in this corridor compared to the Local Line, and the longer travel times and slower speeds in the peak hour support the need for a transit improvement including, but not limited to, an exclusive bus or rail guideway.

Figure 2-10 – Scheduled Runtimes and Speeds – Sepulveda/Brand Boulevards – Southbound



Source: Metro, 2011

Figure 2-11 – Scheduled Runtimes and Speeds – Sepulveda/Brand Boulevards – Northbound



Source: Metro, 2011

San Fernando Road/Truman Street

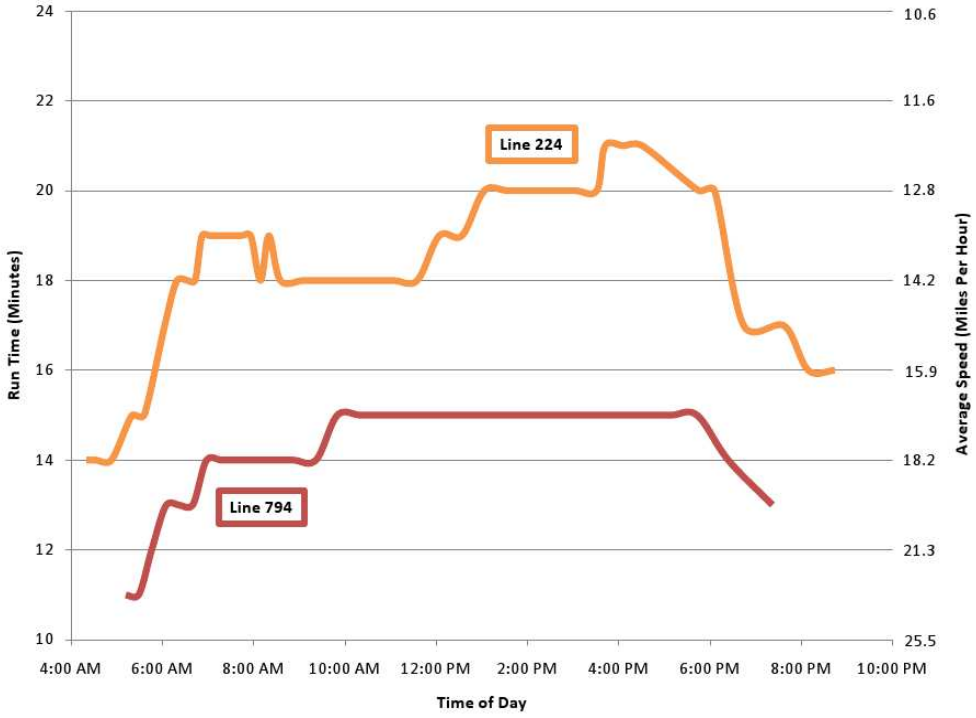
Rapid Line 794 operates along Truman Street and San Fernando Road from the Sylmar/San Fernando Metrolink Station in Sylmar. Within the study area, Rapid Line 794 is examined from Sylmar/San Fernando Metrolink Station to Osborne Street in Sun Valley. The existing Local Line 224 operates along Truman Street 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 Boulevard and Sepulveda Boulevard/Brand Boulevard – each just under five miles in length.

As illustrated by Figure 2-12, 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 10 to 15 minutes slower for a similar distance as the Rapid Line 794. Speeds along the Local Line 224 are reduced to approximately 12 miles per hour during the peak period.

As illustrated by Figure 2-13, 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.

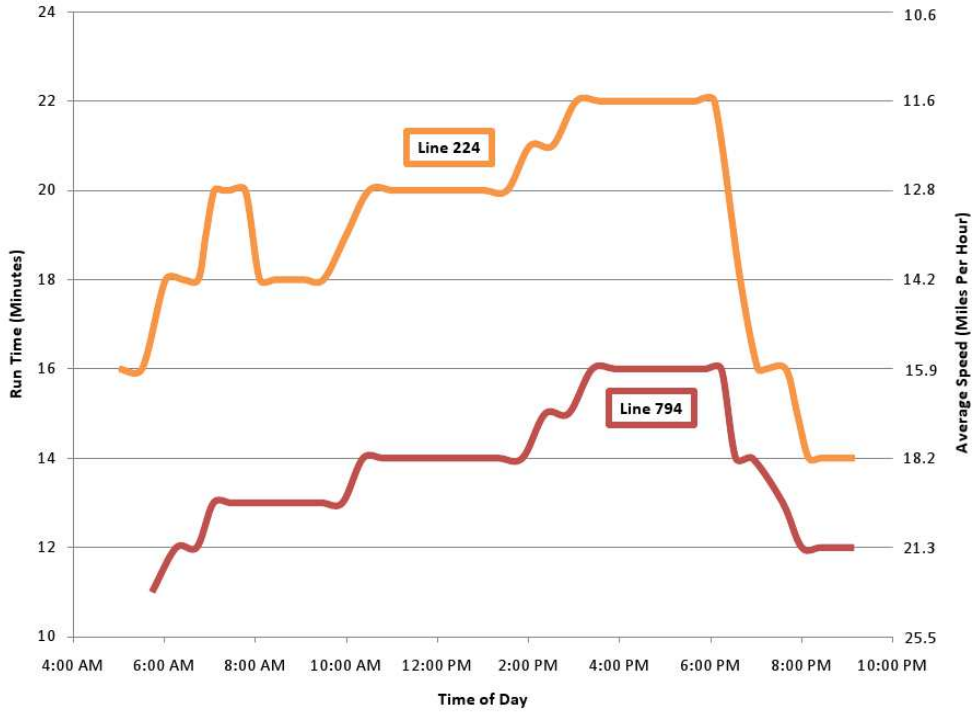
Rapid Line 794 generally has good performance along San Fernando Road, with a substantial travel time savings compared to Local Line 224 and only a small increase in runtimes during peak periods. Transit improvements including, but not limited to, bus or rail guideway would have a positive benefit for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

Figure 2-12 – Scheduled Runtimes and Speeds – San Fernando Road/Truman Street – Southbound



Source: Metro, 2011

Figure 2-13 – Scheduled Runtimes and Speeds – San Fernando Road/Truman Street – 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/Brand Boulevard, and San Fernando Road/Truman Street travelers.

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

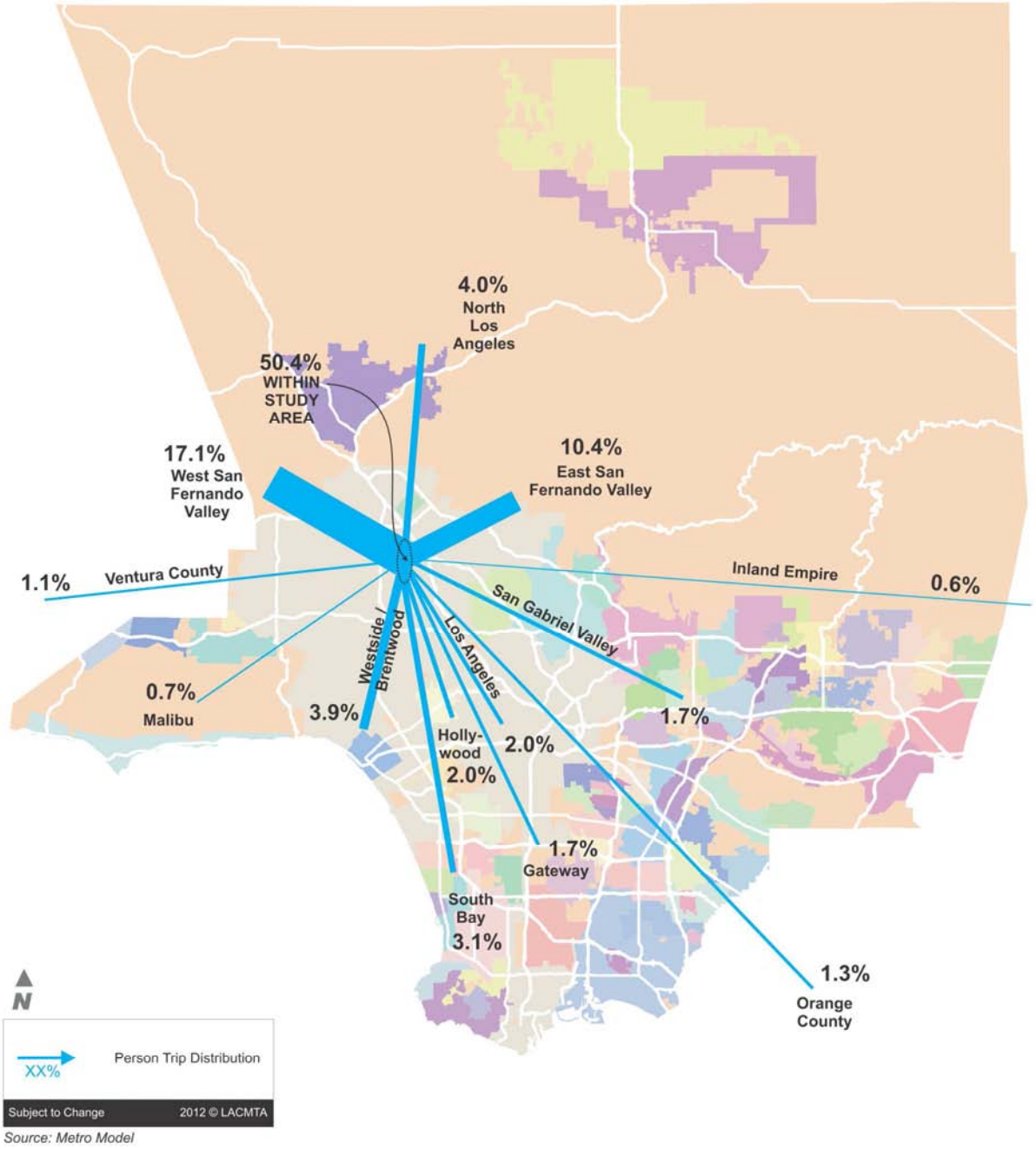
2.2.2.1. Trip Patterns

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. 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. 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. 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. Figures 2-14 through 2-17 illustrate the trip patterns on a regional and local scale.

Because of the centralized trip patterns, transit accessibility and connectivity are integral to study area resident travel needs, especially 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 LADOT bus services for work and non-work trips within the study area and the greater Los Angeles County area.

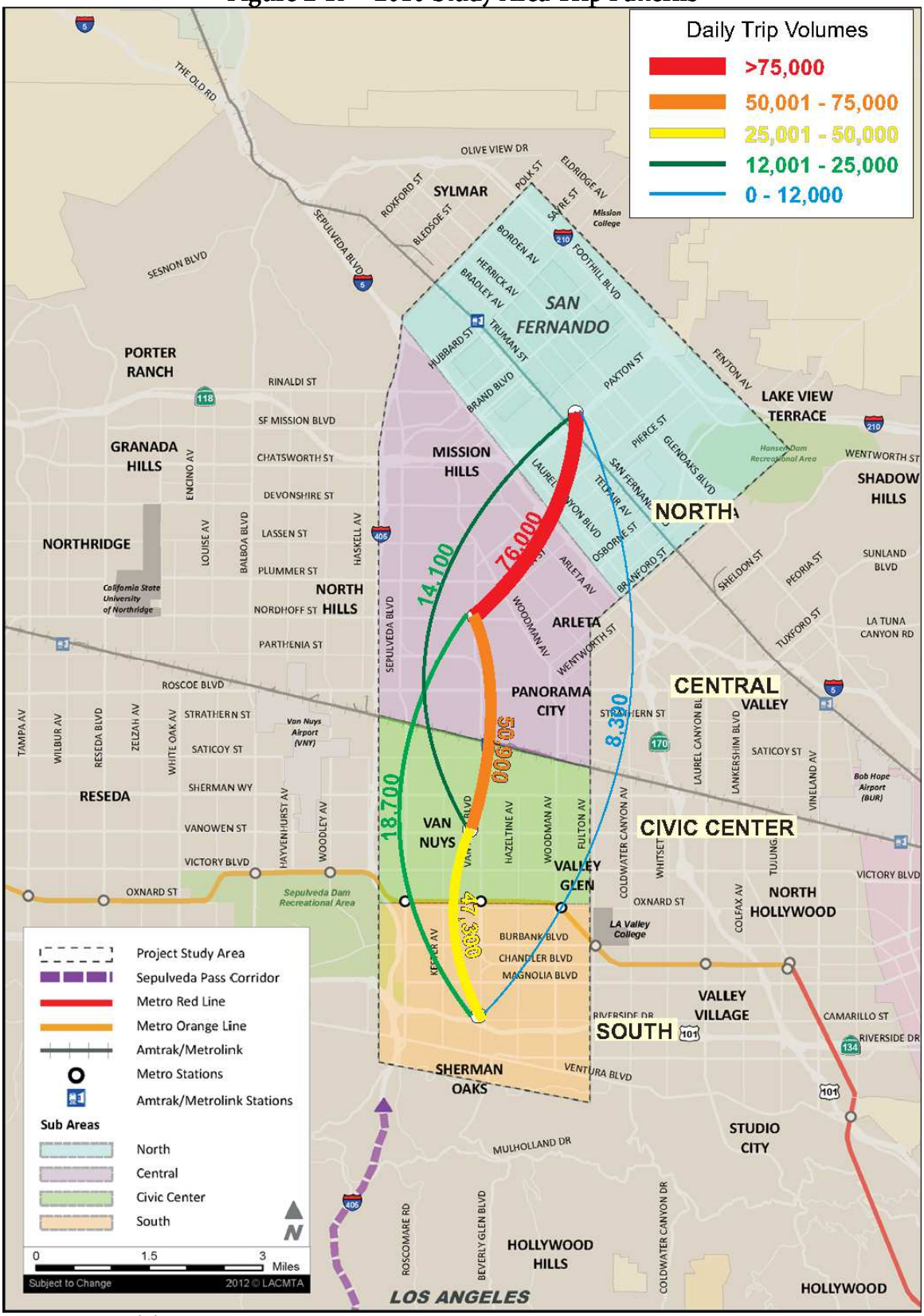
Existing Metro service boarding data generally supports these estimated trip patterns. The boarding activity is higher along the Van Nuys Boulevard corridor, at the MOL Van Nuys Station, Vanowen Street, Roscoe Boulevard, and Nordhoff Street stops. These locations are all located within the central study area and the Civic Center area. Along the Sepulveda Boulevard/Brand 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.

Figure 2-14 – 2010 Daily Trip Patterns



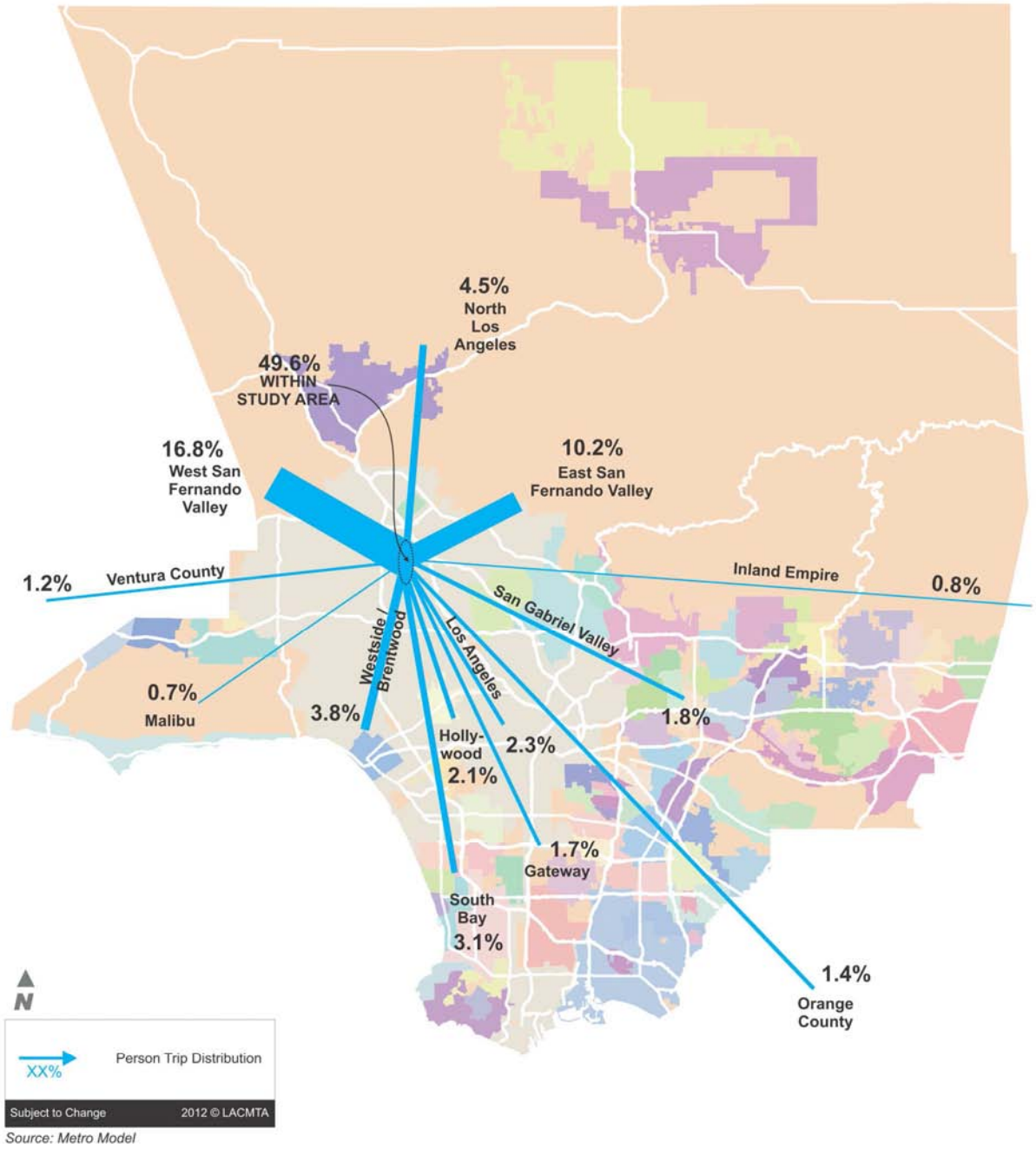
Source: Metro Model

Figure 2-15 – 2010 Study Area Trip Patterns



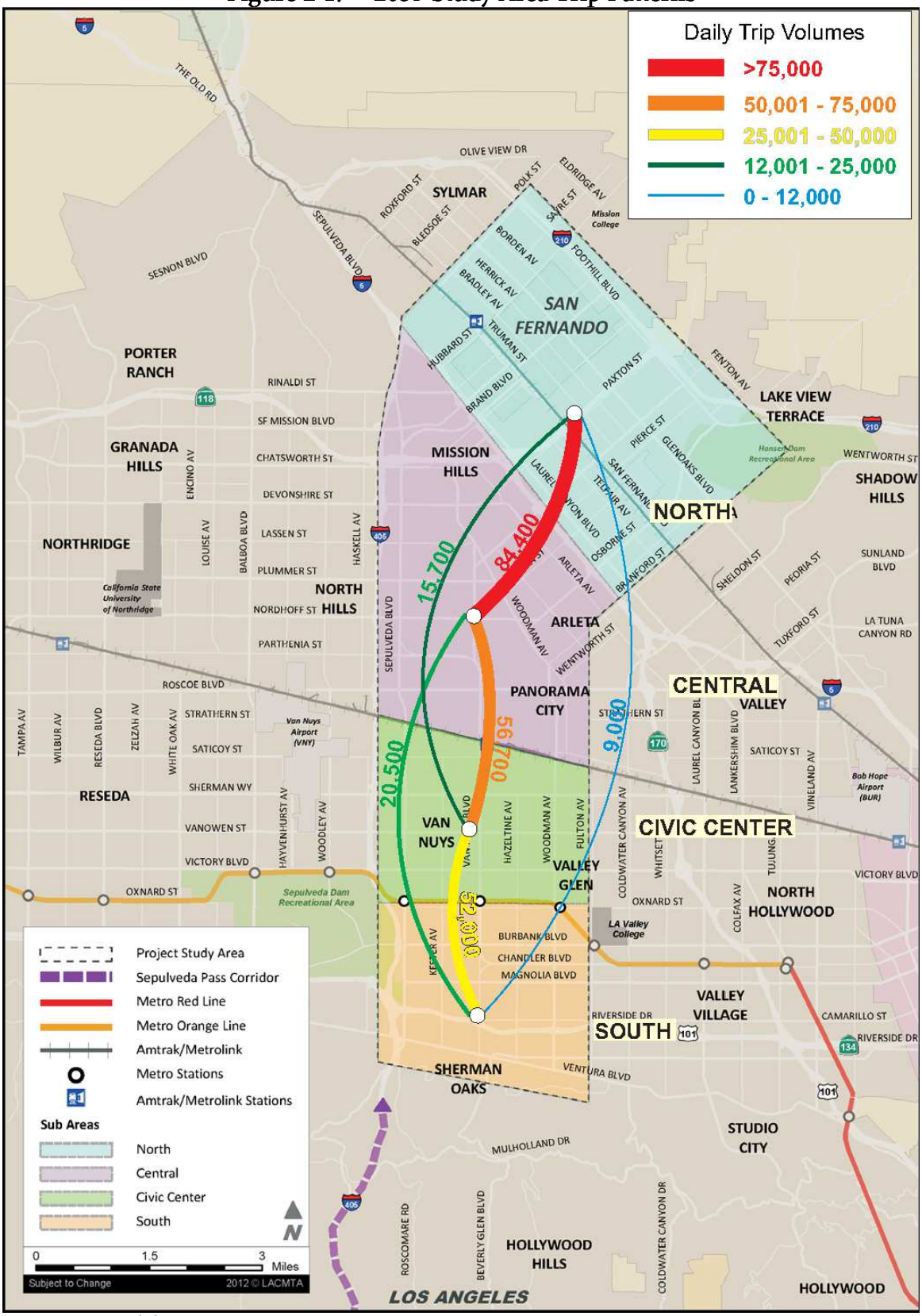
Source: Metro Model

Figure 2-16 – 2035 Daily Trip Patterns



Source: Metro Model

Figure 2-17 – 2035 Study Area Trip Patterns



Source: Metro Model

As indicated by Tables 2-4 and 2-5, 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 2-4 – 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 2-5 – 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

2.2.2.2. Activity Centers

Major activity centers are located within the Van Nuys and Sepulveda Boulevard/Brand 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 2-18 illustrates activity center locations within the study area.

Figure 2-18 – Activity Centers

Source: Metro, 2012

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

2.2.3.1. Transit Operating Performance

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 will worsen. Providing transit services that are less impacted by increasing traffic congestion will provide increased reliability.

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/Brand Boulevard corridors, there is a lack of a substantial speed advantage for the Rapid Line, as compared to the Local Line.

Rapid Line 761 and 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 69 percent in the southbound direction and 75 percent in the northbound direction. The same occurs along the length of Sepulveda Boulevard/Brand 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 Local 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/Brand Boulevard corridors.

2.2.3.2. Transit On-Time Performance and Reliability

<u>Van Nuys Boulevard</u>

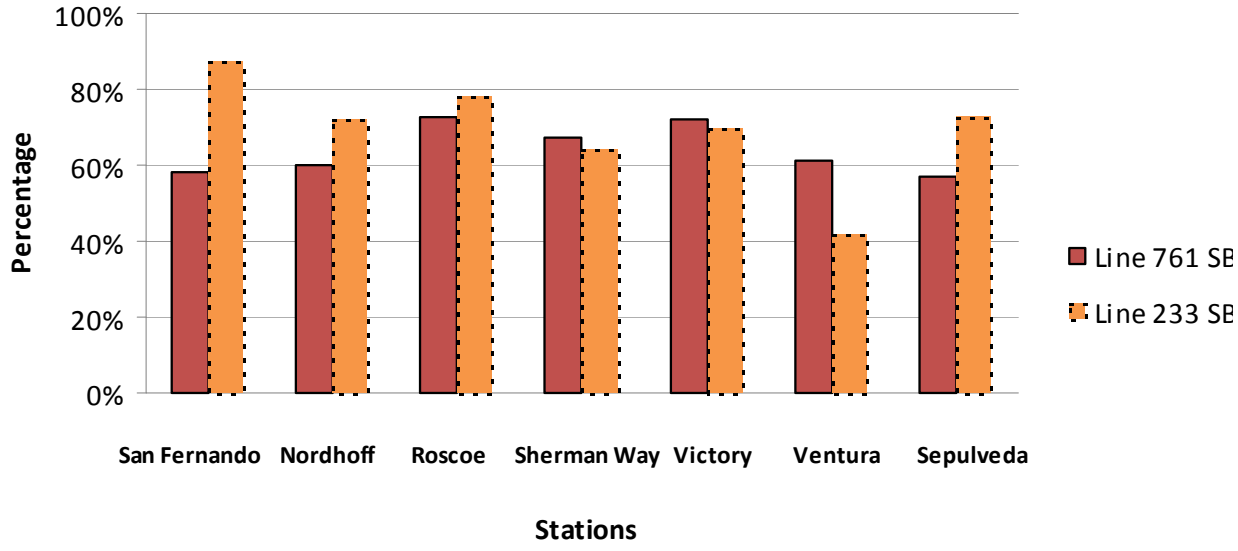
An examination of on-time performance statistics for the Rapid Line 761 and the Local Line 233 indicates that the lines are not currently meeting the on-time performance goal of 80 percent.

Figure 2-19 and Figure 2-20 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 Road in the southbound direction and Victory Boulevard 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.

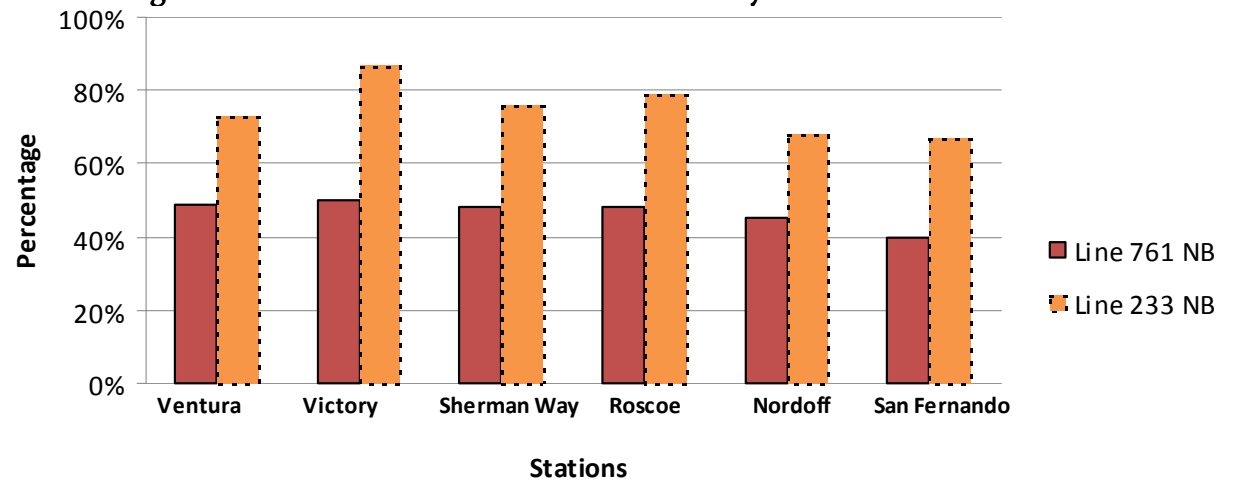
Transit service that is physically separated from auto traffic would allow for much more improved reliability of operations in this corridor, especially with the clear lack of advantage in reliability with the Rapid Bus service.

Figure 2-19 – On-Time Performance – Van Nuys Boulevard – Southbound



Source: Metro, 2011

Figure 2-20 – On-Time Performance – Van Nuys Boulevard – Northbound



Source: Metro, 2011

Sepulveda Boulevard/Brand Boulevard

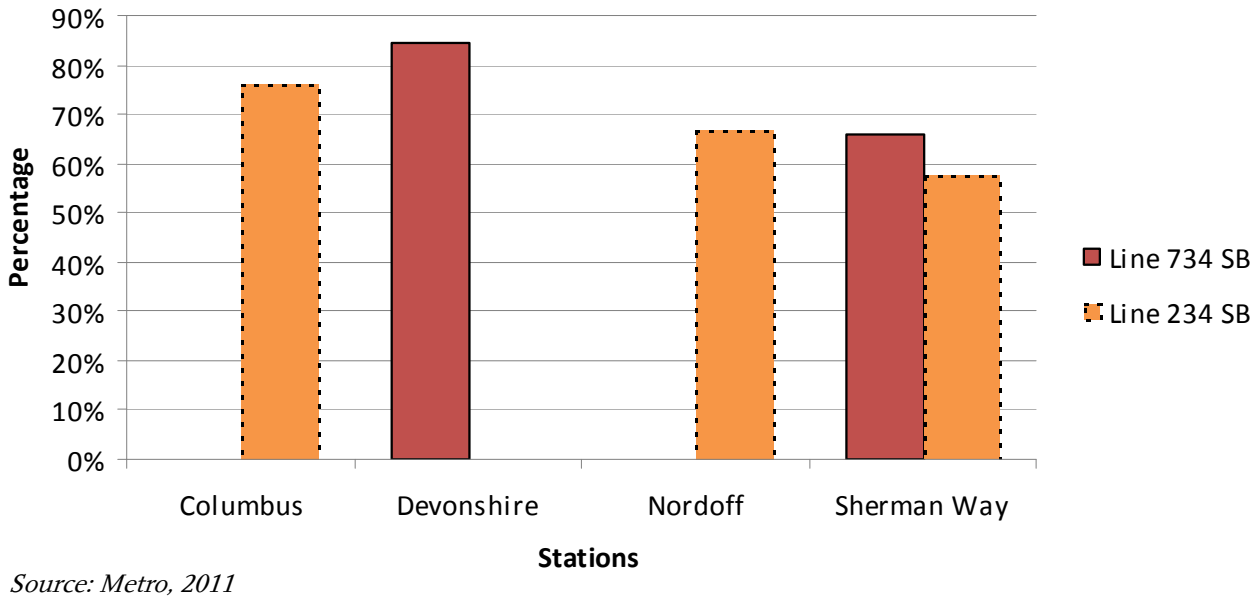
An examination of on-time performance statistics for the Rapid Line 734 and the Local Line 234 along Sepulveda and Brand Boulevards indicates that the lines are not currently meeting their on-time performance goals of 80 percent.

Figure 2-21 and Figure 2-22 below illustrate on-time performance at select service locations along Sepulveda and Brand Boulevards 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 Street in the southbound direction and Sherman Way in the northbound direction). The Local Line 234 performs particularly poorly in the southbound direction at Sherman Way, where on-time performance is just over 50 percent.

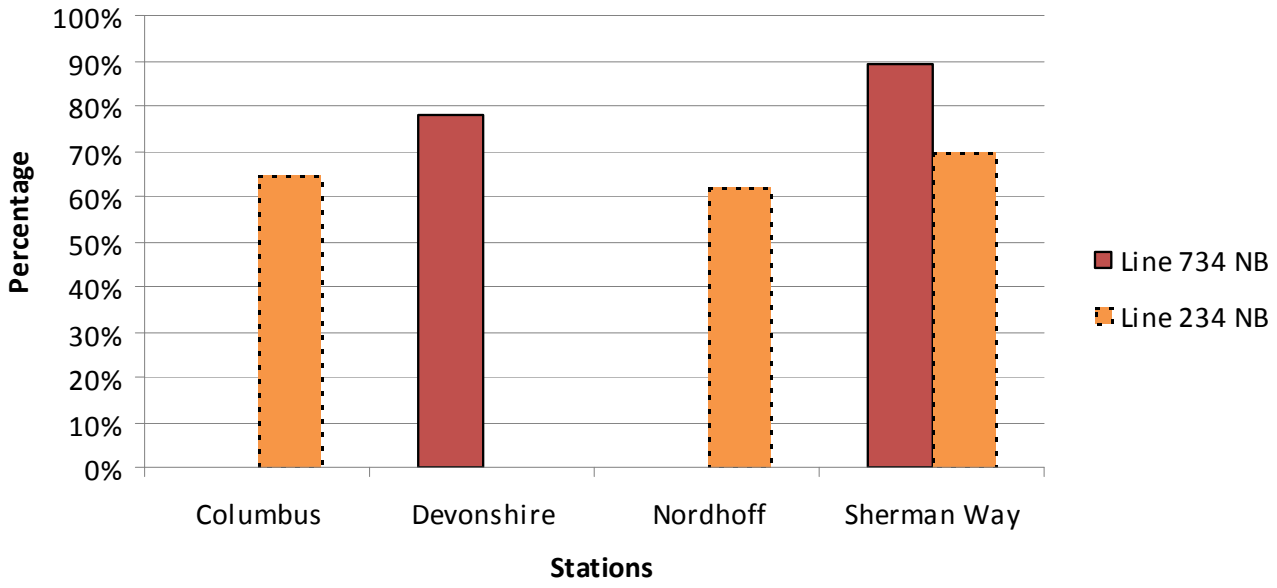
Transit service that is physically separated from auto traffic would allow for much improved reliability of operations in this corridor.

Figure 2-21 – On-Time Performance – Sepulveda/Brand Boulevards– Southbound



Source: Metro, 2011

Figure 2-22 – On-Time Performance – Sepulveda/Brand Boulevards – Northbound



Source: Metro, 2011

San Fernando Road/Truman Street

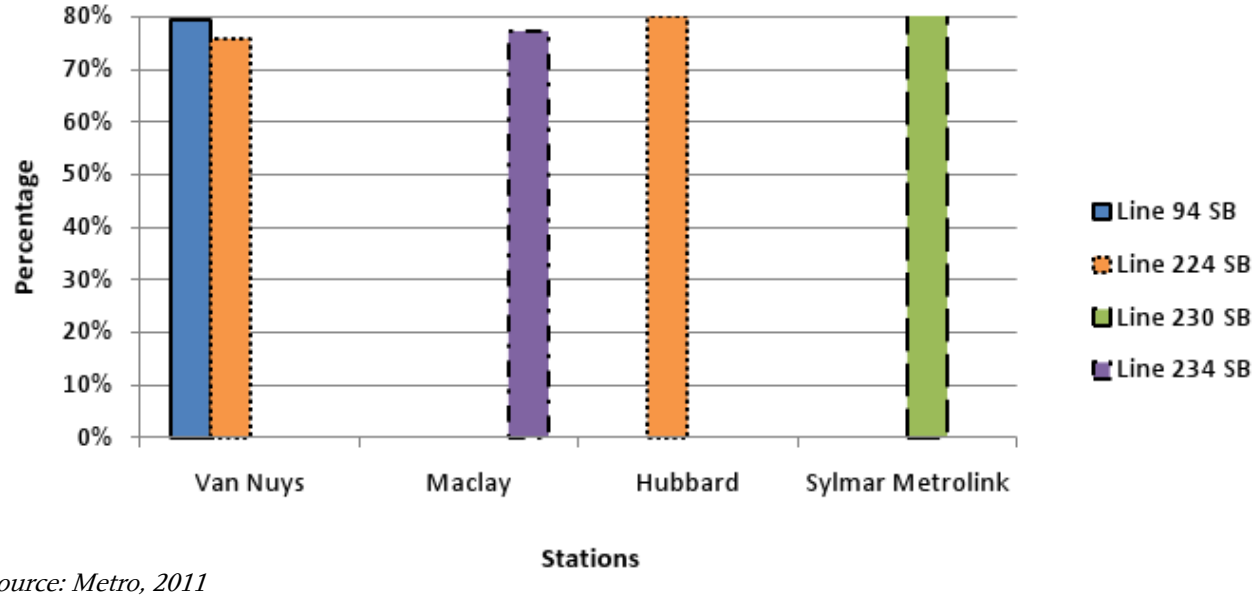
An examination of on-time performance statistics for the Local Lines 94, 224, 230 and 234 indicate that the lines are not currently meeting the on-time performance goals of 80 percent. Rapid Line 794 was not included in the evaluation due to data limitations.

Figure 2-23 and Figure 2-24 below illustrate on-time performance at select service locations along San Fernando Road and Truman Street 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.

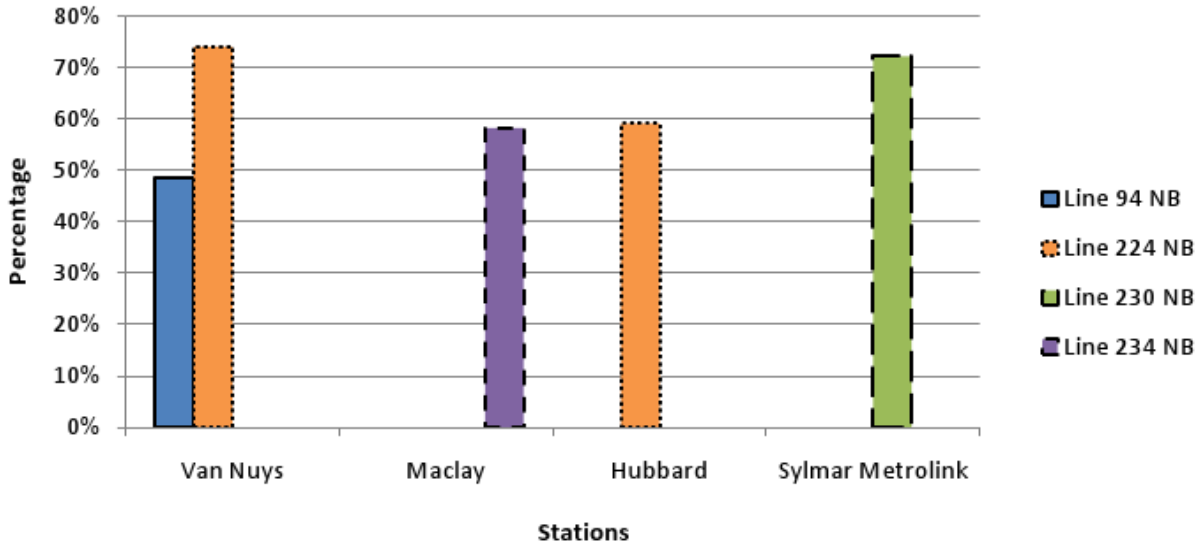
Transit service physically separated from auto traffic would allow for much improved reliability of operations in this corridor. This need supports the project purpose of transit reliability.

Figure 2-23 – On-Time Performance – San Fernando Road/Truman Street – Southbound



Source: Metro, 2011

Figure 2-24 – On-Time Performance – San Fernando Road/Truman Street – Northbound



Source: Metro, 2011

2.2.3.3. 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 2-25 through 2-27 illustrate the total loads for each bus line (northbound and southbound) that operates along Van Nuys Boulevard, Sepulveda Boulevard/Brand Boulevard, and San Fernando Road/Truman Street (the three main transit corridors in the study area). These figures also show the total combined loadings, which is a

sum of the passenger activity from all of the bus lines at each point along each of the corridors.

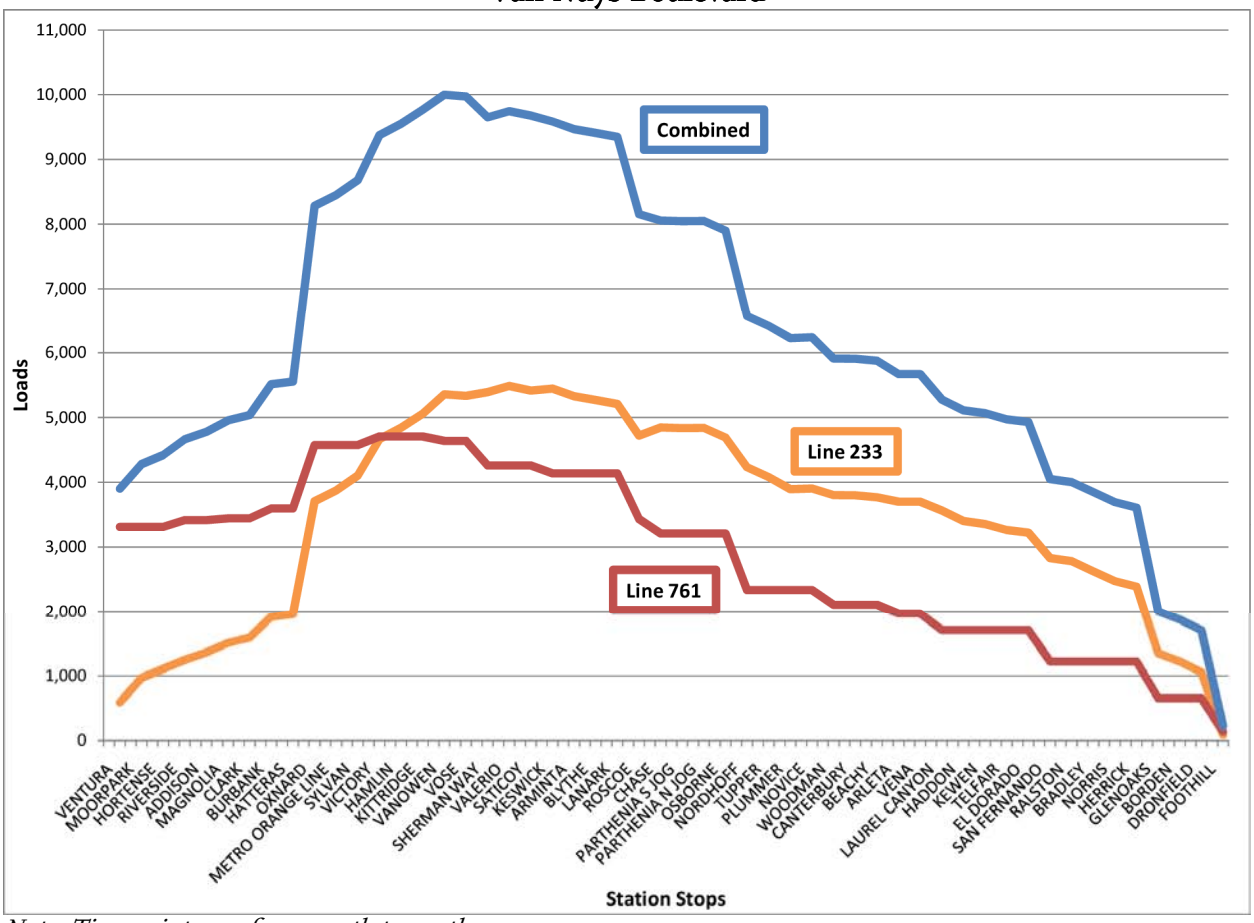
Van Nuys Boulevard

Figure 2-25 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. 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 weekday. 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 2-25 – Total Passenger Loading – Van Nuys Boulevard

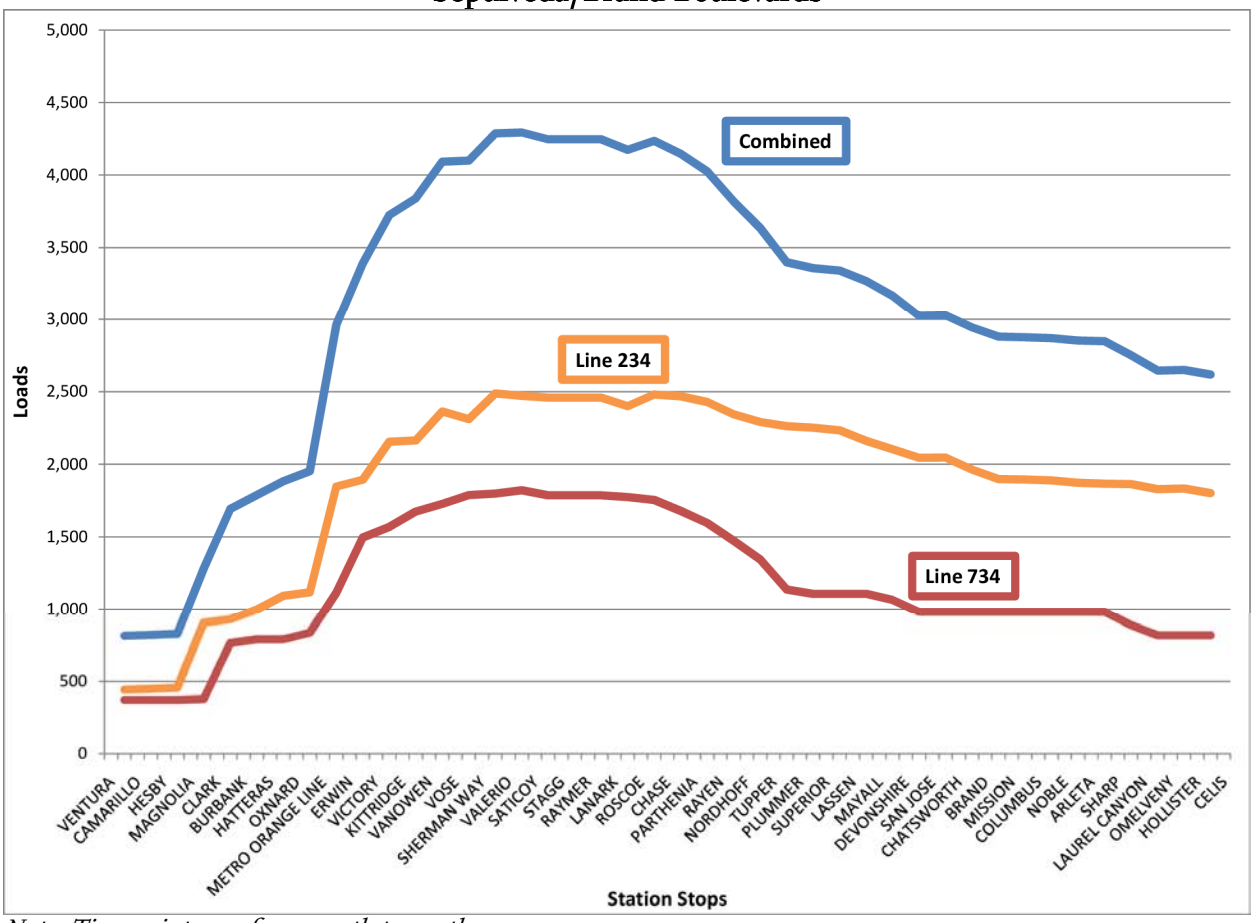


Note: Timepoints are from south to north.
Source: Metro, 2011

Sepulveda Boulevard/Brand Boulevard

Figure 2-26 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 2-26 – Total Passenger Loading – Sepulveda/Brand Boulevards



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

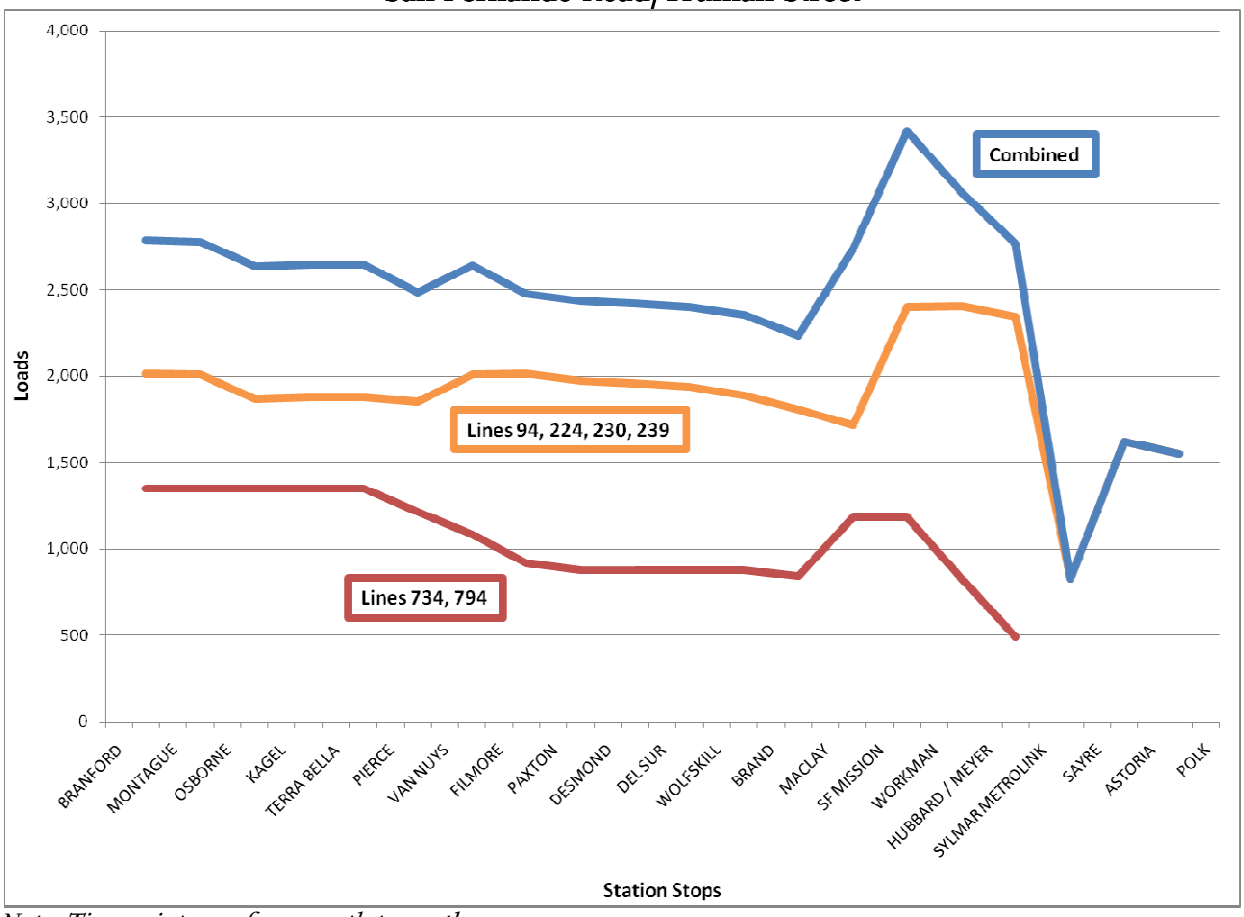
The passenger loads along the Rapid Line 734 peak to the north of the transfer point with the MOL, between the Vose and Lanark Streets stops. Although loads decline at stops to the north, they remain steady. Similar to Rapid Line 734, total loads along Local Line 234 peak north of the MOL transfer point 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 2-27 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 2-27 – Total Passenger Loading – San Fernando Road/Truman Street



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

Passenger loads on the Rapid Lines 734 and 794 remain generally consistent throughout the 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 Local 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.

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

2.3.4.1. Transit Ridership

Bus Passenger Boardings

The Van Nuys Boulevard corridor has the seventh highest total transit boardings in the Metro system. The Sepulveda Boulevard/Brand Boulevard and San Fernando Road/Truman Street corridors also have some of the highest transit boardings in the San Fernando Valley. Figure 2-28 illustrates existing transit boardings for all bus lines and the MOL within the study area.

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. 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 (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 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.

2.3.4.2. Transit Dependent Population

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.

Figure 2-28 – Existing Metro Transit Boardings

Source: Metro, 2011

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

- Within the study area, there are a total of 11,967 households without vehicles. The study area average of 0.53 zero-vehicle households per acre is 77 percent higher than the 0.30 County average. As illustrated by Figure 2-29, the heaviest concentration of transit-dependent households without vehicles is in the central study area.
- Of the population within the study area, approximately 159,868 elderly persons and youth are considered transit dependent. The study area average transit dependent population of 7.04 persons per acre is 54 percent higher than the 3.21 County average. As illustrated in Figure 2-30, the highest concentration of transit dependent populations are located in the central portion of the study area.
- The study area average of 2.26 adult persons below the poverty line per acre is over two times the 1.08 County average, as illustrated by Figure 2-31.

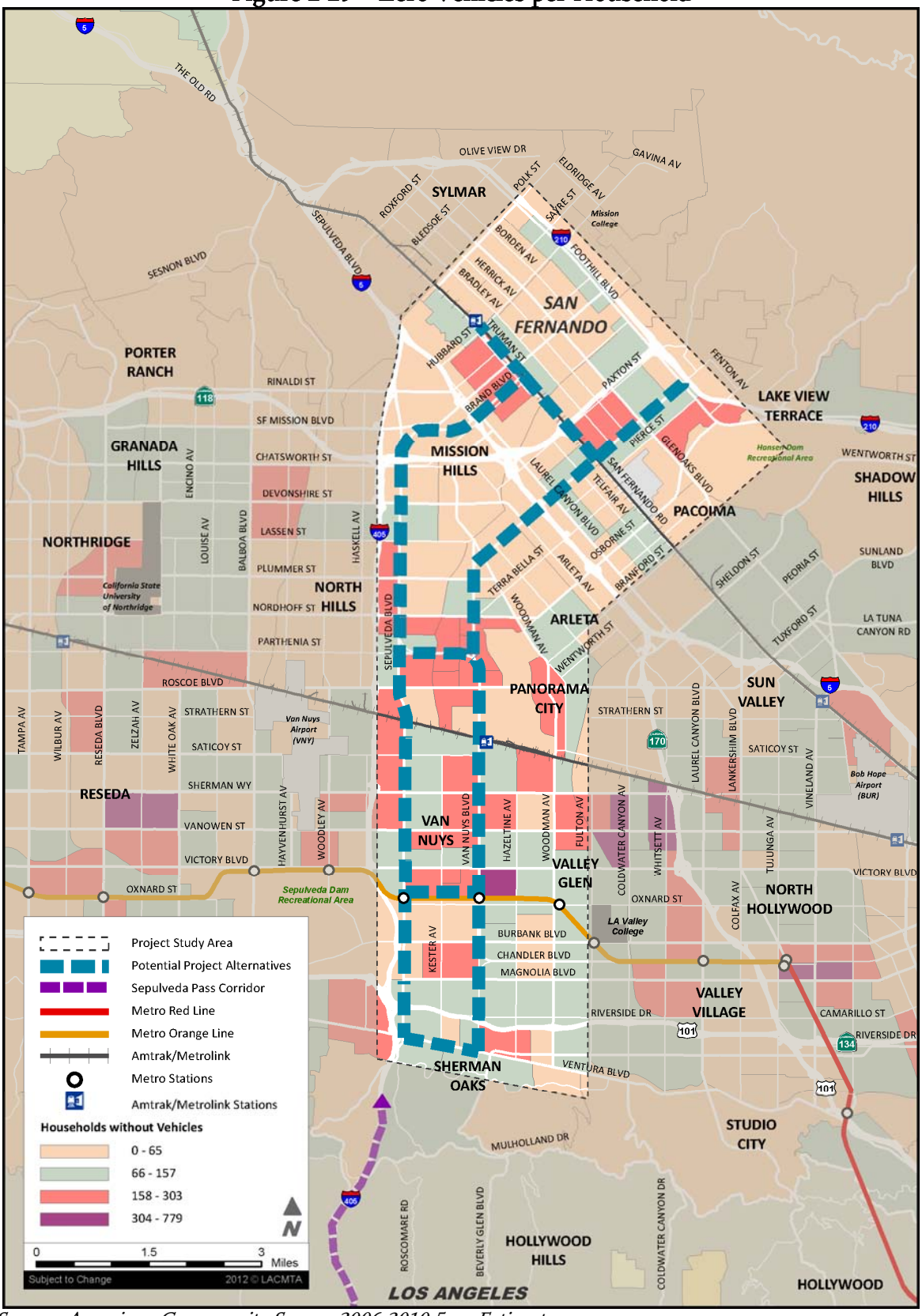
Although population density and transit dependent population characteristics are expected to stay the same or improve slightly, study area population is expected to increase by almost 12 percent by the year 2035, and area employment will increase by approximately 15 percent. With the increase in population and employment growth, it is likely that there will be an increase in bus crowding. Table 2-6 summarizes the population and employment trends.

Table 2-6 – 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%

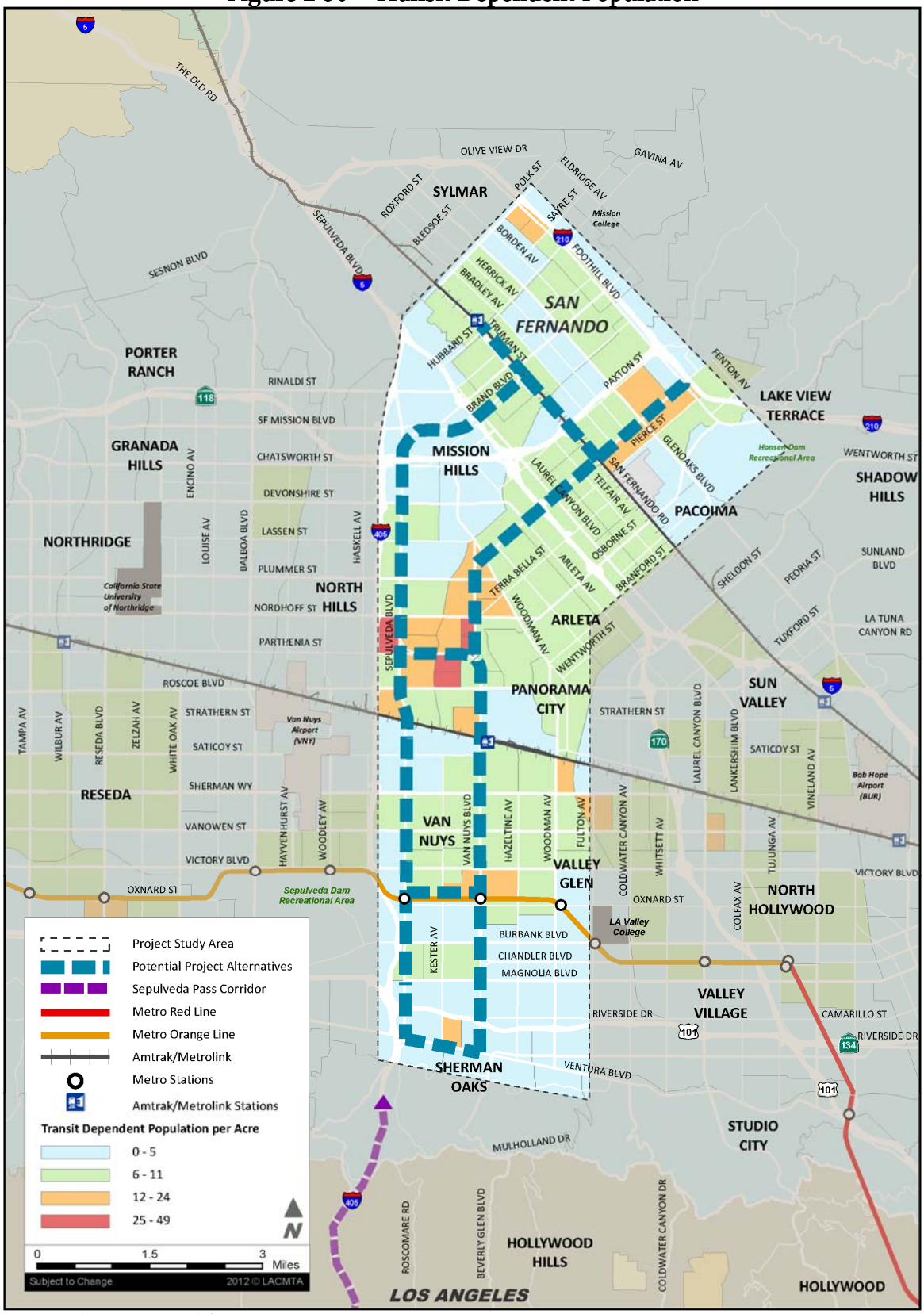
Source: 2012 RTP Model

Figure 2-29 – Zero Vehicles per Household



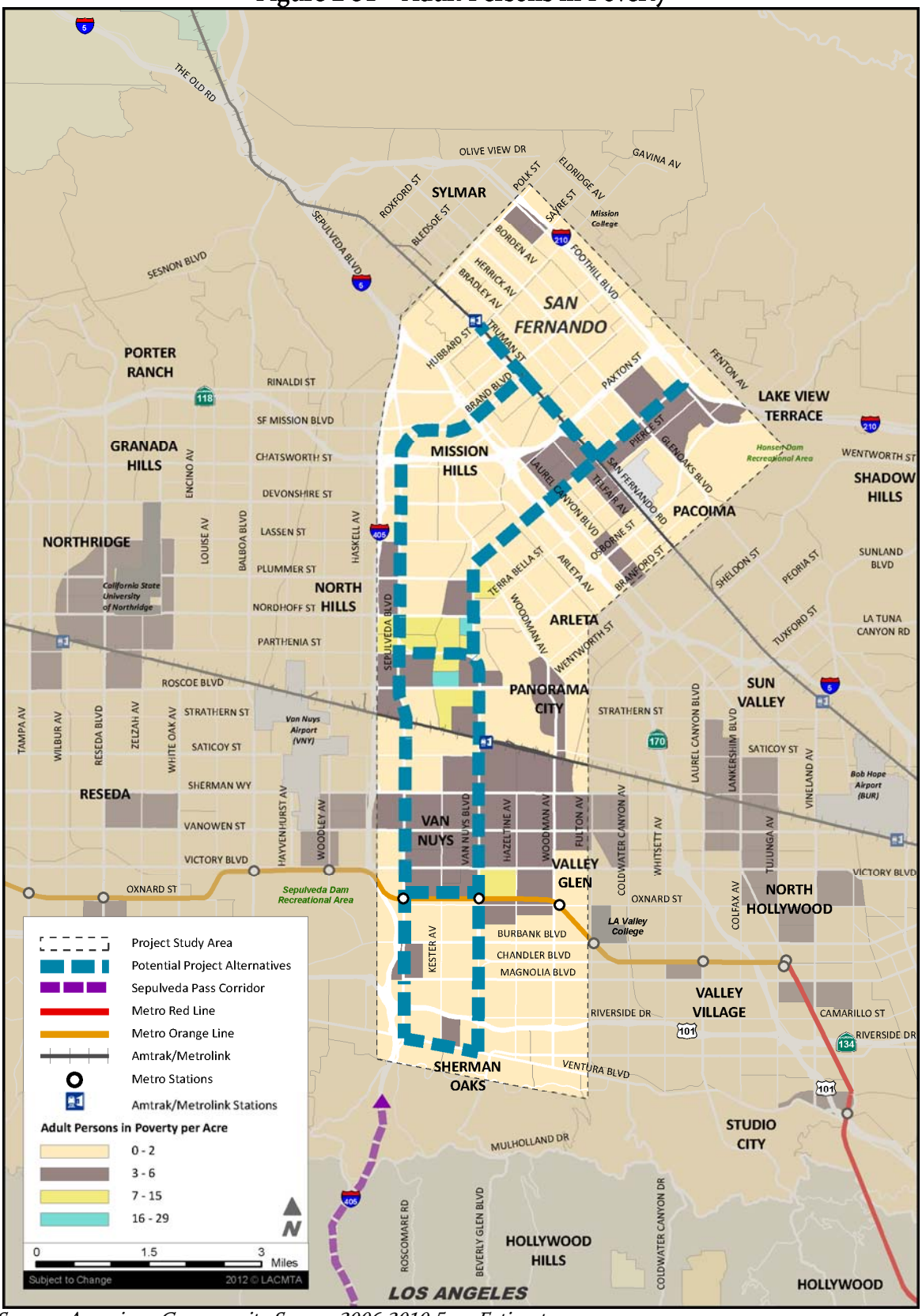
Source: American Community Survey 2006-2010 5 yr. Estimates

Figure 2-30 – Transit Dependent Population



Source: Census 2010 SF-1

Figure 2-31 – Adult Persons in Poverty



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

The large number of existing riders within the Van Nuys and Sepulveda Boulevard/Brand 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. This need supports the project purposes of transit accessibility/connectivity and the provision of service to transit dependent areas.

2.3.5. Encourage modal shift to transit in the eastern San Fernando Valley, thereby improving 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.

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.

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.

2.3.5.1 Mode Shift

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.

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.

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.