Chapter 3
Transportation, Transit, Circulation, and Parking

3.1 Regulatory Framework and Methodology

3.1.1 Regulatory Framework

The applicable federal, state, and local regulations that are relevant to an analysis of the proposed project's transportation impacts are listed below. For additional information regarding these regulations, please see the Transportation Impacts Report in Appendix G of this Draft EIS/EIR.

3.1.1.1 Federal

There are no federal regulations applicable to an analysis of the proposed project's transportation impacts.

3.1.1.2 State

There are no specific state regulations that are applicable to an analysis of the proposed project's transportation impacts.

3.1.1.3 Local

- SCAG
  - Regional Transportation Plan/Sustainable Communities Strategy (2012)
  - Regional Comprehensive Plan (2008)
  - Compass Blueprint Growth Vision (2004)
- Metro
  - Long Range Transportation Plan (2009)
  - Short Range Transportation Plan (2014)
  - Grade Crossing Safety Policy for Light Rail Transit (2010)
  - Congestion Management Program (2010)
  - Bicycle Transportation Strategic Plan (2006)
- Los Angeles County
  - General Plan (2014)
- City of Los Angeles
  - General Plan Framework (Readopted 2001)
  - Bicycle Plan (2011)
  - Mobility Plan 2035 (2015)

  - Community Plan Areas
  - Los Angeles River Revitalization Master Plan (2007)
- City of San Fernando
  - General Plan (1987)
  - San Fernando Corridors Specific Plan (2005)

3.1.2 Methodology

The methodologies developed to determine potential transportation impacts with respect to transit, traffic, parking, and pedestrian and bicycle facilities are described in this section.

3.1.2.1 Transit

Future transit ridership was established through an extensive evaluation utilizing the Metro Travel Demand Model. The model was developed by Metro and incorporates inputs from the SCAG Regional Travel Demand Model. The model applies current travel patterns and future transit changes to the network in relation to the project, in order to develop trips by mode, projected boardings, and travel speeds and times for each project alternative.

To enhance the multimodal connectivity for the TSM and all of the build alternatives, active transportation improvements that would connect neighborhoods to existing transit infrastructure could be added by expanding catchment areas through bike and walking, and by adding robust bicycle facilities on parallel streets with low traffic volumes. However, Metro's current travel demand model has no capability to reflect these features. If the model had this capability, the addition of these features would not result in any additional significant differences among the alternatives. Therefore, the active transportation improvements were not included in the alternative evaluation from a travel forecasting perspective and are not addressed in this report.

3.1.2.2 Traffic

The traffic analysis incorporates level-of-service (LOS) methodologies for signalized intersections, per local jurisdictional policies, for the purpose of providing a comprehensive traffic analysis.

The City of Los Angeles utilizes the Circular 212 Critical Movement Analysis (CMA) Planning methodology per LADOT *Traffic Study Policies and Procedures, June 2013*, whereas the City of San Fernando utilizes the Intersection Capacity Utilization (ICU) for signalized intersections. For Congestion Management Plan (CMP) intersections, either CMA or ICU are considered acceptable methodologies.

However, for the purposes of the proposed project, the City of Los Angeles has accepted the use of the 2010 Highway Capacity Manual (HCM) Operational Analysis Methodology for evaluation of transit projects. This methodology is based on average intersection delay and takes into account operational factors such as signal timing and phasing, and adjustments to lane configurations via seconds of delay that a driver would experience at each signalized location. As such, it provides a better assessment of the traffic conditions as it relates to complexity of a transit project.

A letter value is assigned to define the LOS, ranging from A (free-flow operations) to F (severely congested operations). Table 3-1 provides the level-of-service criteria for the HCM methodology.

Table 3-1: Level-of-Service Definitions – HCM Signalized Intersection Analysis

LOS	Definition	Average Stop Delay per Vehicle (sec/veh)
A	LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal.	≤10
B	LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant.	>10–20
C	LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds.	>20–35
D	LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections.	>35–55
E	LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections.	>55–80
F	LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing.	>80
Source: KOA, 2015.		

Existing Conditions

Compiling information on existing conditions involved extensive data collection that included compilation of traffic counts and signal timing plans and field work to determine lane geometries, traffic control, transit stop locations near intersections, and on-street parking restrictions.

The Synchro software package was used to build a study area roadway network model to assist in the analysis of signal timing/phasing under the HCM methodology for signalized intersections.

Future Conditions

For the future baseline (No-Build scenario), volumes were defined through the use of data exported from the Metro Travel Demand Model. As the model includes input from the SCAG regional model on population and employment growth, it provides estimates of future vehicle travel demand on roadways throughout the region. The future baseline conditions volumes were the basis for the analysis of the No-Build Alternative.

Comparisons were then made to each of the project build alternatives, in terms of projected study area intersection operations and LOS. Changes in study area vehicle travel patterns identified by the model, based on corridor lane configurations and trip mode splits (vehicles, transit, etc.) with the project-related improvements; and transit park-and-ride activity, were analyzed and served as the basis for the analysis of incremental changes in study intersection volumes and operations.

On a corridor level, the project corridor land uses were collected to assist with the development of trip generation and the development of driveway trip diversion/redistribution. Since each alternative imposes different types and locations of turn restrictions, traffic impacts along the corridor vary. Therefore, driveway trip diversions were established for each alternative that would be affected by turn restrictions from the presence of a median guideway or intersection turn prohibitions. The volume projections for the alternatives were developed using the following approach:

- Development of a growth factor for the 28-year period between existing and future conditions for all project alternatives derived from the Metro model;
- Development of increased bus volumes along the corridor due to future bus headway improvements for all project alternatives as developed in the proposed transit operations plan;
- Development of trip generation rates for the increased demand at three existing park-and-ride facilities under the bus and rail alternatives based on the Metro model;
- Development of trip generation rates for MSF sites within the project study area under the bus and rail Alternatives; and
- Development of corridor trip diversions due to turning restrictions implemented under BRT Alternative 2 and the rail alternatives.

In addition, an Existing (2012) with Alternative 3 scenario has been evaluated. This scenario provides the environmental setting that "normally constitute[s] the baseline physical conditions by which a lead agency determines whether an impact is significant," consistent with Section 15125(a) of the CEQA Guidelines. Considering that Alternative 3 would have the greatest traffic impacts, the Existing (2012) with Alternative 3 scenario presents a worst-case scenario for traffic relative to any of the other "Existing Plus Project" scenarios. Thus, traffic impacts would be no greater than those identified for Build Alternative 3.

Alternate Corridor Analysis

As part of the traffic analysis an expanded assessment of area-wide highway corridors was conducted in order to provide a more comprehensive analysis of the potential effects of the build alternatives on adjacent and nearby roadway corridors.

The travel corridors that were included in the expanded analysis were as follows:

- Van Nuys Boulevard – from the Metro Orange Line to Ventura Boulevard
- Sepulveda Boulevard - from Lassen Street to Ventura Boulevard
- Woodman Avenue – from Lassen Street to Oxnard Street

Roadway Vehicle Speeds

From the Metro Travel Demand Model, average vehicle speeds (based on volumes and roadway segment capacities) and congested time (amount of total delay added to a trip due to congestion) values were estimated. The data was analyzed in approximate one-mile segments, but the distance varies based on the location of major arterials and other major elements of the transportation network. This analysis provides an estimate of the effects on vehicle travel speeds of project elements such as roadway lane reconfigurations and changes in trip mode splits.

3.1.2.3 Parking

The parking analysis considered the utilization of existing on-street and off-street parking within a primarily one to two block extent on either side of Van Nuys Boulevard.

Parking analysis zones (PAZs) were developed along the length of Van Nuys Boulevard to define blocks of parking areas for both on- and off-street parking. For each PAZ, numbers were assigned to each block face for each side of the roadway. For on-street parking areas that did not have any parking space markings, an average parking space length of 20 feet was used to determine the number of parking spaces. The collection of parking demand data (number of parked cars) for each of the on-street and off-street areas within each PAZ was conducted on two weekdays (Monday and Friday) and on one Saturday:

- Monday surveys were conducted on April 29, 2013 at 11 a.m., 1 p.m., and 3 p.m.
- Friday surveys were conducted on May 3, 2013 at 11 a.m., 1 p.m., and 3 p.m.
- Saturday surveys were conducted on April 27, 2013 at 12 p.m., 2 p.m., 4 p.m., and 6 p.m.

The focus of the parking survey was on overall occupancy for the parking study areas, but a second and more important component was the identification of vehicle parking occupancy within individual street segments and parking lots, including whether or not the number of parked vehicles versus available spaces met or exceeded a threshold value of 90 percent. When conducting an assessment of parking on a street segment or off-street facility, an occupancy value of 90 percent generally means few spaces remain available per block curb face or parking facility and is considered to represent the level at which the parking area is perceived to be full. Therefore, the ideal occupancy value for a block or facility should be at 90 percent of the spaces available or lower.

For each project alternative, the amount of on-street and off-street parking displaced along the alignment was quantified to develop general conclusions regarding the effects of the project on local parking conditions. For each station, the estimated parking demand was compared to the proposed supply, and the qualitative effects of spillover parking was identified in the vicinity of the station (within an approximate 1/4 of a mile walking distance).

Construction and development of new park-and-ride facilities are not being considered as a part of the project. Increased demand at existing park-and-ride facilities was considered at the following locations:

- Sylmar/San Fernando Metrolink Station
- Van Nuys Amtrak/Metrolink Station
- Metro Orange Line Van Nuys Station

3.1.2.4 Pedestrian and Bicycle Facilities

Bicycle and pedestrian circulation were evaluated as part of this transportation analysis.

With respect to bicycle facilities, the planned inclusion of bicycle lanes on Van Nuys Boulevard and San Fernando Road/Truman Street corridors per the 2010 City of Los Angeles Bicycle Plan were considered as part of the analysis along with the evaluation of roadway cross-sections. In addition, the station design plans were reviewed for consideration of adequate pedestrian facilities and the feasibility of bicycle facilities.

3.1.3 CEQA Significance Thresholds

The determination of traffic impact significance is guided by the policies and requirements of both NEPA and CEQA. The project must satisfy both federal and state requirements. As NEPA and CEQA definitions of significance are different, what may be considered significant under CEQA may not apply to NEPA's determination of significance, especially since only CEQA requires significance thresholds.

CEQA requires state and local government agencies to identify the significant environmental effects of proposed actions; however, CEQA does not describe specific significance thresholds. According to the Governor's Office of Planning and Research, significance thresholds for a given environmental effect are at the discretion of the Lead Agency and are at the levels at which the Lead Agency finds the effects of the project to be significant.[1]

State CEQA Guidelines

The State CEQA Guidelines define a significant effect on the environment as: "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (State CEQA Guidelines, Section 15382).[2]

The State CEQA Guidelines do not describe specific significance thresholds. However, Appendix G of the State CEQA Guidelines lists a variety of potentially significant effects, which are often used as thresholds or guidance in developing thresholds for determining impact significance. According to Appendix G, a project could have a significant transportation impact, if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

As noted earlier, CEQA defers quantitative significance threshold criteria to the local agency with jurisdiction over the project. Therefore, for the purposes of this EIS/EIR, the thresholds of significance used in the determination of project specific impacts as it relates to transit, traffic (intersection and performance measures), parking, pedestrian, and bicycles are summarized in Table 3-2.

[1] OPR (State of California, Governor's Office of Planning and Research). 1994. *Thresholds of Significance: Criteria for Defining Environmental Significance*. September. Available: < http://ceres.ca.gov/ceqa/more/tas/Threshold.html>. Accessed: February 12, 2013.

[2] AEP. 2015. *California Environmental Quality Act (CEQA) Statute and Guidelines.*

Table 3-2: Significance Thresholds

Transportation Type	Significance Thresholds
Transit	A substantial increase in travel time.
Traffic	Level of Service • Intersection operating at LOS C with an average delay per vehicle due to project-related increases equal to 6 or more seconds • Intersection operating at LOS D with an average delay per vehicle due to project-related increases equal to 4 or more seconds • Intersection operating at LOS E or F with an average delay per vehicle due to project-related increases equal to 2.5 or more seconds • Intersection at high end of delay value range (more than 100 seconds, with causing or worsening of LOS F conditions. Level of Service under the Congestion Management Program (CMP): Intersection operating at LOS F with an average volume-to-capacity (V/C) ratio due to project-related increases equal to 0.02 or more.
Parking	Under CEQA, parking impacts are not considered to be significant impacts unless the loss of parking leads to other substantial adverse impacts on the environment.
Pedestrian	Changes to pedestrian circulation that would result in a substantial reduction in pedestrian access and connectivity.
Bicycle	Conflict with goals or policies of local bicycle plans.
Source: KOA, 2015.	

Local Jurisdiction Thresholds – First-Stage Impact Analysis

The City of Los Angeles has established thresholds of impact significance for signalized intersections for V/C and delay analysis methodologies. Significance thresholds for project-related V/C increases are established per the LADOT *Traffic Study Policies and Procedures* (August 2014).

LADOT permits the use of HCM methodology for infrastructure (e.g., LRT, BRT, bicycle lanes) project intersection analysis, which is consistent with other Metro projects. The delay-based significance thresholds are equivalent to V/C significance thresholds under the CMA methodology. This method applies to the remaining thresholds.

The City of San Fernando applies the same significance thresholds as the City of Los Angeles when evaluating signalized intersections.

The CMP guideline for evaluating significant impacts at intersections is based on an increase in project-related traffic volumes. A significant impact occurs if the project-related increase in the V/C ratio is equal to or greater than 0.02 at LOS F or thereby worsening the operation to LOS F. The CMP allows for consideration of more stringent criteria. Because the City of Los Angeles significance thresholds are considered more conservative in comparison, the evaluation of impact significance utilized these criteria. Employing the delay threshold, if an intersection operates at LOS D, for example, and the delay at the intersection increases by 4 seconds due to project-related traffic, the intersection is considered significantly affected (see significance thresholds in Table 3-2, above).

Analysis of Travel Performance Measures – Second-Stage Impact Analysis

In addition to the traditional impact analysis required by CEQA and the local jurisdictions, a comparison of regional travel performance measures was developed in order to identify the effects that each build alternative would have on travel patterns across the study area roadway network. These measures included evaluating potential queuing concerns, review of Vehicle Miles Traveled (VMT), Vehicle Hours Traveled (VHT), vehicle speeds, and a person-trips analysis by alternative.

Further analysis was conducted on select intersections to identify potential queuing concerns as a result of the turning restrictions under Alternatives 2, 3, and 4. Issues related to queuing can affect upstream and downstream intersections as well as create an increase in intersection blockage.

The effects of the alternatives with respect to the regional transportation network vary within the study area and to/from the corridor. VMT provides a good metric for determining vehicle trip changes across the area roadway network. Reductions to VMT are beneficial since they mean that fewer cumulative vehicle miles are being generated on a daily basis as a result of a particular alternative. Increases in VMT infer that more miles are being traveled, and this can create impacts by indicating that additional vehicle trips or longer vehicle trips would be generated by a project.

Passenger throughput provides a metric for evaluating travel capacity across a defined geographic area or corridor. Passenger throughput measures the capacity of travel across multiple modes within the analysis area. If capacity improvements are provided for one mode but reduced for another mode, and the improved mode can provide more overall capacity (in terms of more vehicles passing through the area in set timeframe, or an increased number of seats due to an increase in number or capacity of passing transit buses, etc.), passenger throughput is increased.

3.1.3.1 Recent CEQA Litigation

The *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* and subsequent cases (*Madera Oversight Coalition, Inc. v. County of Madera; Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*) have considered the question of what is an appropriate baseline for the impact analyses in CEQA documents. Traditional future-year impact analyses are normally considered by lead agencies for impact determinations on major multi-year projects with planned opening dates that are far in the future.

In the Neighbors for Smart Rail case, the court held that "while an agency preparing an EIR does have discretion to omit an analysis of the project's significant impacts on existing environmental conditions and substitute a baseline consisting of environmental conditions projected to exist in the future, the agency must justify its decision by showing an existing conditions analysis would be misleading or without information value."

As the proposed project does not have full funding for any of the build alternatives, project final design and construction would not begin until a future date when the project becomes financially feasible. The year 2040 was chosen for the definition of future baseline conditions, primarily due to the need to match the future baseline year of the Metro Travel Demand Model, and also partially due to the potential for the project to be completed and become operational at a later planning horizon year. Therefore, the transportation analysis represents operational year 2040 conditions. As such, the cumulative analysis and resulting cumulative impacts, are inherent to the operational year conditions.

3.2 Affected Environment and Existing Conditions

The existing project study area public transit system, highway and roadway network, parking, pedestrian and bicycle facilities serve the project corridor and the surrounding communities. The infrastructure and public services are vital to the regional movement of residents and workers into and out of the eastern San Fernando Valley, and are described within this section to provide a background of the study area and its existing conditions.

3.2.1 Transit

The project study area contains three major transit facilities:

- The Metro Orange Line Busway
- The Metrolink Antelope Valley Line
- The Metrolink Ventura County Line (also used by the daily interstate Amtrak Coast Starlight train and the regional service of the Amtrak Pacific Surfliner)

These core transit services traverse and serve the study area at various geographic locations and local transit links to these services are provided by local and Rapid Bus service.

The Van Nuys Boulevard corridor has the seventh highest total transit boardings in the Metro system, and has the second-highest boardings total in the San Fernando Valley (about 24,800 per day), just behind the Metro Orange Line busway (about 25,500 per day). Figure 3-1 illustrates existing transit boardings for all bus lines and the Metro Orange Line within the study area. The corridor is also noted for having a high number of bus-to-bus transfers, with three transfer locations in the top 30 non-rail transfer locations. The locations include the Van Nuys Metro Orange Line Station, Van Nuys Boulevard/Roscoe Boulevard, and Van Nuys Boulevard/Sherman Way.

3.2.1.1 Programmed Transit Improvements

The Sepulveda Pass Corridor and the California High Speed Rail Projects have not been defined with respect to the project study area extents and are therefore not included as part of the future buildout analysis. However, the projects are discussed to provide background context because they could link to the project, thereby providing greater regional connectivity.

3.2.2 Highway and Roads

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 and the greater Los Angeles region. They include the following:

Figure 3-1: Existing Transit Boardings

Source: Metro, 2011.

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 freeway and the I-5 freeway. San Fernando Road has an interchange with the SR-118 freeway.

3.2.2.1 Planned Roadway Improvement Projects

Future planned projects include capital improvements identified in the financially constrained element of Metro's 2009 LRTP and SCAG's 2012 constrained RTP that will be implemented by 2035. This includes the installation of carpool lanes on the I-5 between SR-118 and SR-170, and on the I-405 through the Sepulveda Pass. The Metro Model has been updated to analyze a future baseline year of 2040, but the current RTP is based on the 2035 baseline model.

3.2.2.2 Study Area Level of Service

A total of 73 signalized intersections on Van Nuys Boulevard, between San Fernando Road and Ventura Boulevard; and San Fernando Road/Truman Road, between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink Station were included as part of the analysis. A total of 60 study intersections are located within the City of Los Angeles, which includes one CMP intersection location, while the remaining 13 intersections are located within the City of San Fernando. It should be noted that although intersections south of Oxnard Street are not directly affected by any of the build alternatives, these intersections are considered part of the overall study area and were therefore evaluated.

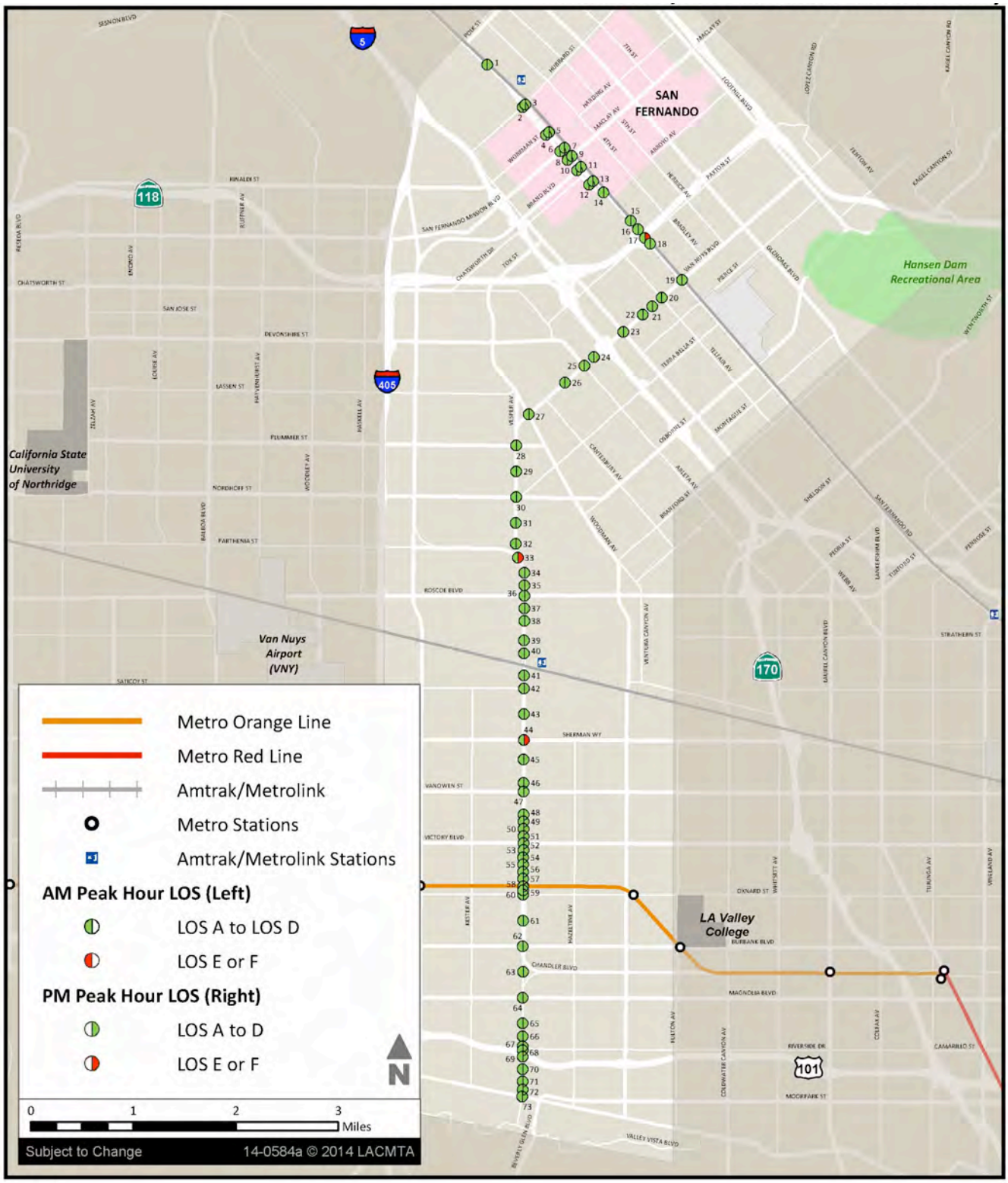
3.2.2.3 Existing Intersection Level of Service

Under the existing conditions scenario, three of the 73 intersections are operating at LOS E or F during weekday peak hours as shown in Table 3-3 and Figure 3-2.

Table 3-3: Existing Intersection Operations at LOS E or F

Study Intersections		Jurisdiction	AM Peak Hour		PM Peak Hour	
			Delay (secs)	LOS	Delay (secs)	LOS
17	San Fernando Rd & Paxton St	Los Angeles	32.7	C	57.6	E
33	Van Nuys Blvd & Parthenia St/Vesper Ave	Los Angeles	24.3	C	80.8	F
44	Van Nuys Blvd & Sherman Way	Los Angeles	43.0	D	59.8	E
Source: KOA, 2015.						

Figure 3-2: Existing Study Area AM and PM LOS Map



Source: KOA, 2014.

3.2.3 Parking

Based on review of existing parking data, Monday and Friday for the weekday (the two days were averaged) and Saturday for the weekend were analyzed for the worst-case scenario.

3.2.3.1 Off-Street Parking

Existing off-street parking facilities are generally reserved for businesses and their customers via surface parking lots located directly off of the Van Nuys Boulevard corridor. The overall corridor off-street parking supply, from Oxnard Street to San Fernando Road, includes a total of 19,853 parking spaces.

Transit parking facilities are provided at the Sylmar/San Fernando Metrolink Station (375 parking spaces), Van Nuys Metrolink Station (350 parking spaces), and the Metro Orange Line Van Nuys (776 parking spaces). Transit facilities located along Van Nuys Boulevard are included in the overall total spaces calculated for the parking study.

The peak parking demand for the off-street spaces occurred during the weekday at 1 p.m. when 45 percent of the spaces were occupied.

3.2.3.2 On-Street Parking

Curbside parking availability varies considerably along much of the extent of Van Nuys Boulevard and San Fernando Road/Truman Street. It is generally permitted along most of the corridor and includes metered, passenger/loading zone, unrestricted (with some segments allowing parking throughout the day), and restricted (segments that allow parking only during off-peak hours) parking.

Specific to Van Nuys Boulevard from Oxnard Street to San Fernando Road, a total of 1,140 on-street parking spaces are provided, with an additional 4,611 on-street spaces provided on adjacent blocks to the east and west of the corridor. These areas serve various businesses and residents with both long-term and short-term parking needs.

The peak parking demand for on-street spaces occurred on Saturday during the 12:00 p.m. hour when 52 percent of the spaces were occupied. The majority of on-street parking demand occurred in residential areas north of Parthenia Street to Laurel Canyon Boulevard with smaller pockets of high demand scattered throughout the commercial areas.

During the weekday, the peak parking demand for on-street parking spaces occurred on a weekday during the 3:00 p.m. hour when 42 percent of the spaces were occupied. There was no particular area where parking demand was most concentrated, but instead demand was scattered throughout various blocks in both residential and commercial areas.

High parking demand along San Fernando Road/Truman Street generally occurred within downtown San Fernando. On-street and off-street parking was sufficient and was not fully utilized during this period.

Specifically, within the downtown area of San Fernando, generally between Wolfskill Street on the southeast and Hubbard Street on the northwest, on-street parking is currently provided within pockets of parallel spaces and diagonal spaces.

Based on parking demand monitoring conducted in the San Fernando Road/Truman Street corridor, the highest parking demand generally occurs within downtown San Fernando. There is underutilized parking supply within both on-street and off-street areas that could accommodate the loss of parking on San Fernando Road.

3.2.4 Pedestrian Facilities

The pedestrian circulation system within the project corridor is generally well developed as the study area is urbanized and there is a consistent street grid pattern in most areas. Sidewalks and crosswalks are provided that serve both adjacent residential and commercial land uses. Sidewalk widths vary throughout the project alignment corridors from five to 16 feet, but are generally an adequate 10 feet. Crosswalks at signalized intersections have pedestrian indications and push-button activation for pedestrian phases.

The existing pedestrian activity at intersections near several of the proposed station locations is summarized in Table 3-4.

3.2.5 Bicycle Facilities

Based on the Caltrans Highway Design Manual (2012), bicycle facilities are classified based on the standards described below and illustrated in the LADOT-produced figure on the next page.

Class I Bikeway (Bicycle Path) – A completely separate ROW for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian cross-flows minimized.

Class II Bikeway (Bicycle Lane) – A restricted ROW designated for the use of bicycles, with a striped lane on a street or a highway. Vehicle parking along with vehicle and pedestrian cross-flows are usually permitted.

Class III Bikeway (Bicycle Route) – A shared ROW designated by signs or pavement markings for use by both bicyclists and motor vehicles.

The existing bicycle facilities along the project alignment (Figure 3-3) are as follows:

- Van Nuys Boulevard – A Class II bicycle lane exists between Chandler Boulevard and the Metro Orange Line. More recently, a Class II bicycle lane has been striped from Parthenia Street to Beachy Avenue.
- San Fernando Road – A Class I bicycle path exists from Roxford Street to Hubbard Street. A multi-use path exists from Hubbard Street to Wolfskill Street/La Rue Street.

Several bicycle facilities provide parallel and connecting opportunities for bicyclists in the area. The facilities that interface with the project corridors are located on the following roadways:

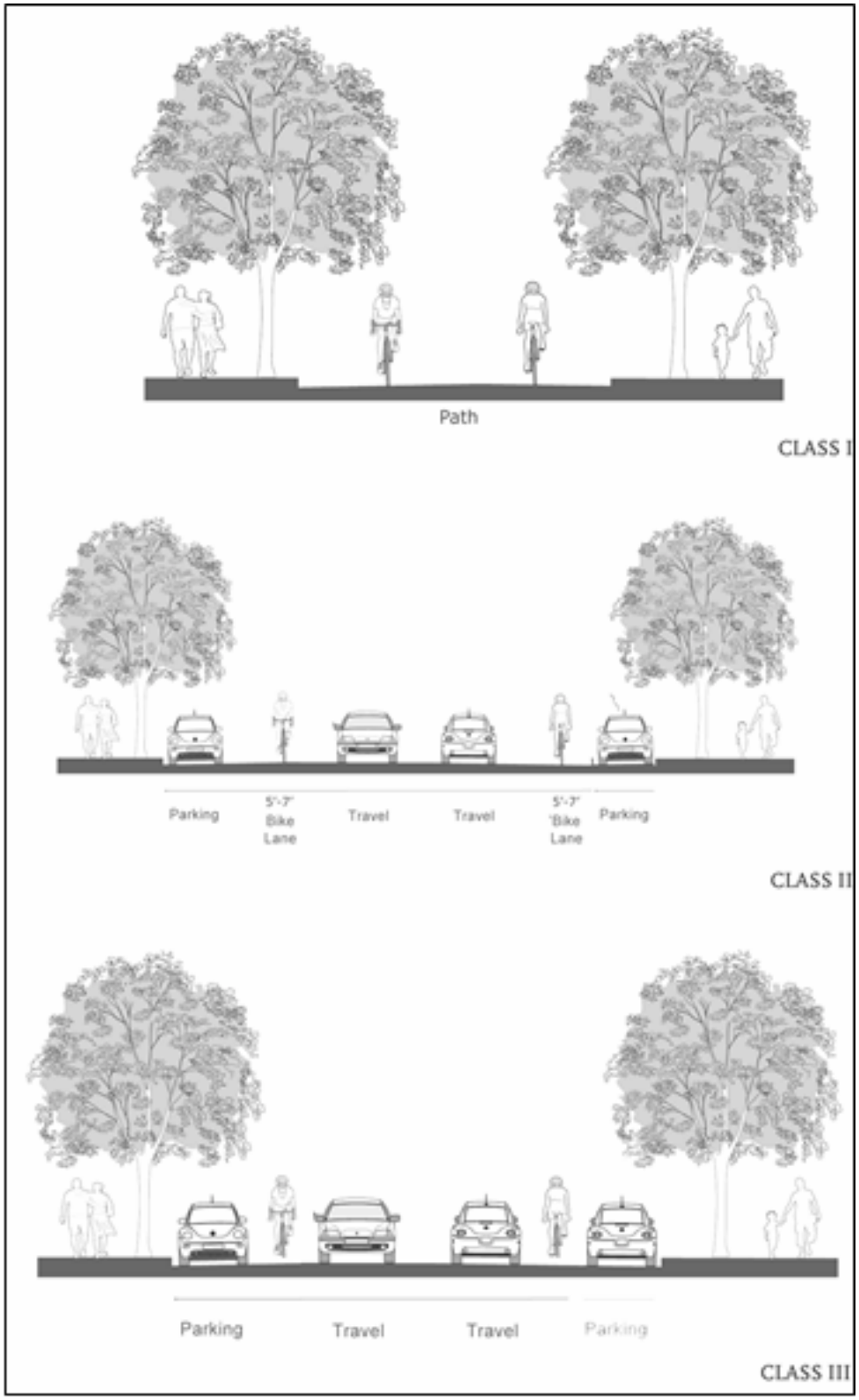
- Plummer Street (Class II) – This east-west bicycle lane intersects Van Nuys Boulevard providing a facility on Plummer Street to the west of the corridor, and transitioning onto Woodman Avenue as a north-south bicycle route to the east of the corridor.
- Parthenia Street (Class II) – This east-west bicycle lane provides a bicycle facility for the western leg of Parthenia Street, which eventually merges to Van Nuys Boulevard.
- Metro Orange Line (Class I) – This east-west bicycle path is located within the Metro Orange Line ROW and intersects Van Nuys Boulevard.
- Chandler Boulevard (Class II) – The east-west bicycle lane has a western terminus at Van Nuys Boulevard and continues east along the roadway.
- Riverside Drive (Class II) – This east-west bicycle lanes has a western terminus at Van Nuys Boulevard and continues east for a short distance where it eventually connects to the north-south bicycle lane on Laurel Canyon Boulevard.

Table 3-4: Existing Pedestrian Activity at Proposed Station Locations

Pedestrian Activity*			
Station	**AM**	**PM**	**Description**
Sylmar/San Fernando Metrolink Station	117	112	Current pedestrian activity is average. With the project, this station would serve as a key transfer point.
Hubbard Station			
Maclay Station	124	108	Current pedestrian activity is average.
Paxton Station	66	125	Current pedestrian activity is relatively low.
Chase Station	376	714	Current pedestrian activity is relatively high.
Roscoe Boulevard Station	521	988	Current pedestrian activity is relatively high.
Blythe Station	1,049	1,237	Current pedestrian activity is relatively high due to its proximity to Panorama High School.
Van Nuys/Keswick Metrolink Station	165	159	Current pedestrian activity is relatively low. With the project, this station would serve as a key transfer point.
Sherman Way Station	375	696	Current pedestrian activity is relatively high.
Vanowen Station	471	780	Current pedestrian activity is high.
Victory Station	314	440	Current pedestrian activity is average.
Metro Orange Line Van Nuys Station	818	594	Current pedestrian activity is very high due to the Metro Orange Line ridership. With the project, this station would serve as a key transfer point.
Source: KOA, 2015.			

* The pedestrian counts were collected by LADOT. The counts were collected on a Tuesday, Wednesday, or Thursday. The time period for the pedestrian counts was from 7 a.m.–10 a.m. and 3 p.m.–6 p.m.

Figure 3-3: Illustration of Class I, II, and III Bikeways



Source: LADOT, 2010.

3.3 Environmental Consequences, Impacts, and Mitigation Measures

3.3.1 Impact Overview

This section provides an overview of the potential construction, operational, and cumulative impacts that could occur as a result of the No-Build Alternative, TSM Alternative, and the project build alternatives.

The impact areas that are discussed in this section include:

- Traffic including impacts on highways, roadways, and local intersections
- Parking
- Transit
- Non-motorized transportation (pedestrian and bicycle)

The most prominent impact areas are the potential parking, non-motorized transportation, loading/unloading, local circulation, and access/egress impacts on land uses fronting Van Nuys Boulevard. Detailed information specific to the impacts of each alternative's impacts and proposed mitigation measures are discussed after this section.

A summary of the specific characteristics of each build alternative is provided in Table 3-5.

Table 3-5: Build Alternatives Attributes

Van Nuys Boulevard Segment – Build Attributes									
Build Alternative	Length Total		Stations Total		Circulation		Parking		Bicycle Facilities
	Van Nuys Blvd.	San Fernando Rd.	Van Nuys Blvd.	San Fernando Rd.	Van Nuys Blvd.	San Fernando Rd.	Van Nuys Blvd.	San Fernando Rd.	
Alternative 1 (Curb-Running BRT)	6.7 miles	2.5 miles	14 BRT	4 BRT	Curb lane BRT and RT Only	Mixed-flow	NPAT and NSAT all Curb Segments (7 a.m. to 7 p.m.)	Permitted	Sharrow Only
Alternative 2 (Median-Running BRT)	6.7 miles	2.5 miles	13 BRT	4 BRT	30 Intersections No Left Turn	Mixed-flow	NPAT and NSAT all Curb Segments	Permitted	None
Alternative 3 (Low-Floor LRT/Tram)	6.7 miles	2.5 miles	24 Rail	4 Rail	30 Intersections No Left Turn	11 Intersections Turn Restrictions	NPAT and NSAT all Curb Segments	NPAT and NSAT all Curb Segments	None
Alternative 4 (LRT)	4.2 miles (Median) + 2.5 miles (Subway)	2.5 miles (rail ROW)	11 Rail (3 are subway)	3 Rail	43 Intersections No Left Turn	No Restrictions	NPAT and NSAT except when LRT underground	Permitted	None

Notes:
NPAT = No Parking Any Time
NSAT = No Stopping Any Time
RT = Right Turn
Source: KOA, 2015.

3.3.1.1 Traffic

How Would Vehicular Circulation Be Affected?

Each of the build alternatives would affect corridor-wide, local circulation, and land use access/egress with differing and increasing levels of restrictiveness. Under the No-Build and TSM Alternatives, there would be no changes in circulation patterns.

Under Alternative 1 (Curb-Running BRT), the curbside lane would be reserved for transit buses and bicycles from the morning to early evening. As noted above, where currently available, parking would be prohibited from 7 a.m. to 7 p.m., resulting in a loss of on-street parking. All current motor vehicle turns into and out of cross streets and driveways would be maintained under this alternative. No prohibitions on left turns or right turns would be necessary.

Under Alternative 2 (Median-Running BRT), all curbside parking would be prohibited along the entire extent of Van Nuys Boulevard from the Van Nuys Metro Orange Line Station to San Fernando Road. Although two lanes would be provided the length of Van Nuys Boulevard in each direction, the flow in the curbside lane of traffic would be impeded whenever a right-turning vehicle yields to crossing pedestrians or a local bus is stopped at a bus stop.

Thirty intersections would have left-turn prohibitions; these are generally secondary roadways along the corridor. At these intersections, only right turns from Van Nuys Boulevard or right turns onto Van Nuys Boulevard would be permitted. Otherwise, left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections, and prohibited at all unsignalized intersections. The dual left-turn lanes on northbound and southbound Van Nuys Boulevard at Sherman Way and at Roscoe Boulevard would be reduced to single left-turn lanes.

Several left-turns in the Van Nuys Civic Center, between Calvert Street and Hartland Street, would be prohibited to accommodate median bus stop platforms. Because of the distance between signalized intersections, there would not be enough space for left-turn lanes. For the same reasons, the left turn into the retail property on the east side of Van Nuys Boulevard, between Roscoe Boulevard and Chase Street, would be prohibited.

Unless otherwise prohibited, U-turns would be allowed from signalized left-turn lanes on Van Nuys Boulevard. Access to and from minor side streets and private driveways would rely on these U-turn opportunities.

All movements across the median guideway would be prohibited. This includes left turns from Van Nuys Boulevard at unsignalized intersections and private driveways, as well as left turns and through traffic from the side streets or from private driveways. Motorists who desire to make a left turn into an unsignalized cross-street or driveway would need to find a signalized left turn from which to make a U-turn or turn right off of Van Nuys Boulevard and seek a route that would enable them to reach a signalized cross street.

Only right turns into and out of unsignalized cross streets and driveways would be allowed. Left turns into and out of cross streets and driveways would be prohibited.

Under Alternative 3 the (Low-Floor LRT/Tram), all curbside parking would be prohibited along the entire extent of the project alignment.

Forty-one intersections would have left-turn prohibitions. At these intersections, only right turns from Van Nuys Boulevard or right turns onto Van Nuys Boulevard would be permitted. All other turning prohibitions noted under Alternative 2 remain the same. Additionally, all existing turning movements on San Fernando Road between Wolfskill Street and Van Nuys Boulevard would be maintained where the Low-Floor LRT/Tram would share travel lanes with motor vehicles.

Under Alternative 4 (LRT), curbside parking would be prohibited along the majority of the project alignment with the exception of where the alignment goes underground between Vose Street and Parthenia Street, and along San Fernando Road as it would be located within an exclusive ROW.

Forty-three intersections would have left-turn prohibitions. At these intersections, only right turns from Van Nuys Boulevard or right turns onto Van Nuys Boulevard would be permitted. All other turning prohibitions noted under Alternative 2 remain the same.

Table 3-6 summarizes the project traffic impacts by alternative.

Table 3-6: Potential Traffic Impacts by Alternative

Traffic Impacts				
Alternative	**Intersections at LOS E or F**	**Number of Significant Impacts**	**Typical Mitigations Available**	**Alternate Mitigation Measures Available**
2040 No Build	16	—	N/A	N/A
TSM	16	—	N/A	N/A
Alternative 1 (Curb-Running BRT)	18	16	No	Partially Mitigating *
Alternative 2 (Median-Running BRT)	21	24	No	Partially Mitigating *
Alternative 3 (Low-Floor LRT/Tram)	27	32	No	Partially Mitigating *
Alternative 4 (LRT)	21	20	No	Partially Mitigating *

Source: KOA, 2015.
** The proposed project, providing new transit services, will reduce vehicle miles traveled (VMT), vehicles hours traveled (VHT), and otherwise general improve transportation options. It is therefore mitigating traffic impacts caused by the project, to some extent.*

Tables 3-7 and Table 3-8 summarize the performance of the project in relation to reductions in daily VMT and VHT, and effects on peak hour average vehicle speed, compared to the No-Build Alternative. These metrics provide insight into the potential benefits associated with each alternative.

Table 3-7: Project Performance – VMT and VHT by Alternative

Alternative	Daily VMT Reduction	Daily VHT Reduction
Outside the Study Area		
TSM	9,353	440
Alternative 1 (Curb-Running BRT)	33,137	1,594
Alternative 2 (Median-Running BRT)	34,733	1,686
Alternative 3 (Low-Floor LRT/Tram)	9,188	704
Alternative 4 (LRT)	44,487	2,495
Within the Study Area		
TSM	254	11
Alternative 1 (Curb-Running BRT)	2,823	102
Alternative 2 (Median-Running BRT)	2,625	93
Existing + Alternative 3 (Low-Floor LRT Tram)	7,948	1,254
Alternative 3 (Low-Floor LRT Tram)	10,819	385
Alternative 4 (LRT)	9,720	343
Source: KOA, 2015.		

Table 3-8: Project Performance – Average Traffic Speeds by Alternative

Alternative	AM Peak-Hour Average Speed (NB Direction)	PM Peak-Hour Average Speed (SB Direction)
No Build	22.6	27.3
TSM	22.6	27.3
Alternative 1 (Curb-Running BRT)	22.3	26.9
Alternative 2 (Median-Running BRT)	22.4	26.9
Alternative 3 (Low-Floor LRT Tram)	22.3	26.5
Alternative 4 (LRT)	22.7	27.2
Source: KOA, 2015.		

The VMT value provided in Table 3-7 provides a combined estimate of both the vehicle trips generated (as versus transit trips, bicycling, walking, etc.) and the length of those vehicle trips. Alternative 4 has the most daily VMT reduction compared to the No-Build Alternative, with a reduction of 44,487 outside of the study area and a reduction of 9,270 within the study area. The majority of the reduction is to/from outside of the corridor because the trips within the study area are relatively short; those to/from outside tend to be longer trips.

Alternatives 1 and 2 have similar VMT reductions, at 33,137 and 34,733 outside of the study area, and reductions of 2,823 and 2,625 within the study area. The reason that the BRT alternatives have less reduction within the study area than Alternative 4 is that the BRT alternatives do not serve the markets within the study area as well; therefore, the BRT alternatives have fewer transit trips within the study area, which translates into less VMT reduction. However, the advantage of the BRT alternatives is that they require no extra transfer at the Metro Orange Line as is required with Alternative 4. As a result, the BRT alternatives serve the corridor to outside market better than Alternative 4.

Alternative 3 has a VMT reduction of 9,188 outside of the study area and a reduction of 10,819 within the study area. The corridor transit trip paths and lengths are modified under the rail alternatives, resulting in a loss of transit trips in some instances. However, because Alternative 4 has more competitive transit service, it has less transit trip loss and more transit trip gains than Alternative 3, which offsets the transit trip loss.

The VHT value provided in Table 3-7 is a similar combined value of vehicle trips generated and the time required to complete those trips (incorporating congestion into the measure). Similar to the VMT reduction, Alternative 4 has the highest total reduction in VHT at 2,495 outside of the study area and a reduction of 343 within the study area. Alternative 3 has a higher VHT reduction, at a slightly higher value of 385. The BRT alternatives have a similar ranking amongst all of the alternatives, as they do under the VMT value.

Table 3-8 provides a comparison of projected average roadway speeds across the project alternatives. During the AM peak period, all of the build alternatives would have a negligible affect on roadway speeds, as the approximately 22 mph value remains relatively constant.

During the PM peak period, the values do not change by large amounts across the alternatives (all values approximately 26 or 27 mph), but higher relative speeds would be provided under the BRT alternatives and the highest would be provided under Alternative 4. The LRT Alternative would have the fastest transit travel times and would also have fewer surface station locations due to the subterranean operating segments, and therefore, less traffic impacts than Alternative 3.

Would There Be Increased Congestion on Corridor Intersections as a Result of Constructing Any of the Build Alternatives?

There would be increased congestion and significantly affected intersections under each of the build alternatives.

Would There Be Increased Congestion on Parallel Roadway Intersections as a Result of Constructing Any of the Build Alternatives?

There would be increased congestion and significantly affected intersections under each of the build alternatives due to shifting and/or diverting traffic.

Would There Be Impacts on Traffic During Construction?

There would be adverse traffic conditions during the construction of the build alternatives, most notably Alternatives 2 through 4. Construction impacts could include roadway segment closures for extended periods of time and/or the loss of travel lanes on Van Nuys Boulevard.

3.3.1.2 Transit

How Would Transit Be Affected?

Transit riders would benefit from increased transit service frequency and generally improved travel times along the corridor during the peak periods. With the transit improvements, daily boardings, and transit trips (an indicator of how many trips are moving from auto to transit versus the No-Build) would increase over the No-Build Alternative for all project alternatives. For riders traveling through the corridor, the bus alternatives would be the most beneficial as it would avoid the need to transfer; whereas, the rail alternatives force the transfer for continued service, hence the higher overall transit boardings. Table 3-9 summarizes the transit performance results.

Table 3-9: Transit Performance by Alternative

Transit Summary			
Alternative	Daily Transit Boardings	New Daily Transit Trips	Travel Time San Fernando Rd. – Metro Orange Line (SB AM Peak minutes)
TSM	38,128	466	34.8 (Line 761) 36.3 (Line 233)
Alternative 1 (Curb-Running BRT)	46,644	2,970	27.8 (Line 761X) 29.8 (Line 233X)
Alternative 2 (Median-Running BRT)	46,934	2,969	23.9 (Line 761X) 41.8 (Line 233X)
Alternative 3 (Low-Floor LRT/Tram)	55,145	8,452	27 (LRT/Tram)
Alternative 4 (LRT)	69,221	8,604	18 (LRT) 41.8 (Line 233)
Source: KOA, 2015.			

Would There Be Impacts on Transit during Construction?

Transit service would be disrupted to varying levels depending on the build alternative. Alternative 1 would create the least disruptions while Alternatives 2 through 4 would create the greatest disruption due to the construction of median guideways. Construction, at a minimum, would cause lane closures and the temporary closure of bus stops, which would be temporarily moved outside of the work areas.

3.3.1.3 Parking

What Type of Parking and Loading/Unloading Changes Would Be Made along the Project Corridor?

For all four build alternatives (two BRT and two rail transit alternatives), parking, as well as loading/unloading, along Van Nuys Boulevard would be affected. This is due to the use of the curb lane in Alternative 1 as a full time transit lane during the day and in Alternatives 2 through 4 due to the reduction in travel lanes on Van Nuys Boulevard from three to two, which is necessary to accommodate a median guideway for either the bus (Alternative 2) or rail alternatives (Alternatives 3 and 4). It should be noted that under Alternative 4, parking would not be affected where the alignment travels underground for approximately two-and-a-half miles. In the City of San Fernando, some curbside parking on San Fernando Road would be prohibited to provide for extended bus stop lengths, which would range between 80 feet and 150 feet. All curbside parking would be prohibited along the alignment on Van Nuys Boulevard and on San Fernando Road under Alternative 3. No parking along San Fernando Road would be affected under Alternative 4 since the rail service would be operating in an exclusive ROW within that corridor.

Table 3-10 summarizes the project parking impacts by alternative.

Where Would Motorists Park and Where Would Deliveries Occur?

Parking for land uses along Van Nuys Boulevard would be required to shift from on-street to off-street lots and garages conjoined to the property or on the side streets in the vicinity of the land use in question. Deliveries to businesses and residences would not be able to rely on curbside parking and would either have to use off-street parking facilities, parking on an adjacent street, or alleyways behind commercial properties.

Won't This Require People to Walk Further to and from a Land Use?

In those cases where a land use does not have off-street parking available, it may be necessary for people and delivery persons to walk further as they may have to park a block or more away.

3.3.1.4 Pedestrian and Bicycle

How Would Pedestrian and Bicyclists (non-motorized transportation) Be Affected?

Pedestrian and bicyclists would be affected to varying degrees under the four build alternatives as described below.

Under Alternative 1, all current pedestrian movements across roadways would be maintained including all existing mid-block crossing opportunities.

On Van Nuys Boulevard, the curb lane would be shared by buses and bicyclists. The existing Class II bicycle lanes on Van Nuys Boulevard north of Parthenia Street to Beachy Avenue would be removed under this alternative.

Table 3-10: Van Nuys Boulevard Parking Impacts by Alternative

Parking								
Build Alternative	**No. of On-Street Spaces**	**No. of Off-Street Spaces**	**Loss of On-Street Parking**	**Loss of Off-Street Parking**	**Total Number of Spaces Lost**	**Weekday Shortfall in Blocks**	**Weekend Shortfall in Blocks**	**Adjacent Block Capacity**
Alternative 1 (Curb-Running BRT)	5,715	19,853	1,140	0	1,140	11	14	Yes
Alternative 2 (Median-Running BRT)	5,715	19,853	1,140	0	1,140	11	14	Yes
Alternative 3 (Low-Floor LRT/Tram)	5,715	19,853	1,155	152	1,307	12	15	Yes
Alternative 4 (LRT)	5,715	19,853	902	528	1,430	11	14	Yes
Source: KOA, 2015.								

Under Alternative 2, all existing signal-controlled crosswalks would be maintained. However, all other pedestrian crossings on Van Nuys Boulevard at unsignalized intersections would be prohibited. Bus patrons would be restrained between curbside local bus stops and median BRT bus stops by railings on the backside of median bus stop platforms.

Bicyclists would share the curb lane with other motorists. The existing Class II bicycle lanes on Van Nuys Boulevard north of Parthenia Street would be removed under this alternative.

Under Alternative 3, on the segment of San Fernando Road between Wolfskill Street and Van Nuys Boulevard where the Low-Floor LRT/Tram would operate in mixed-flow, pedestrians may continue to cross San Fernando Road at any location where crossings are currently allowed. There would be a pedestrian bridge at the Sylmar/San Fernando Metrolink station from the LRT platform to the Metrolink platform. On all other segments where the Low-Floor LRT/Tram operates in semi-exclusive guideway, pedestrian crossings would be permitted only at signal-controlled intersections. Pedestrians would be required to walk to a signalized location to cross San Fernando Road or Van Nuys Boulevard. Low-Floor LRT/Tram passengers would reach the median station platforms from crosswalks at signalized intersections.

The curb lane would be shared by mixed-flow traffic and bicyclists. Just as for the other alternatives, the existing Class II bicycle lanes on Van Nuys Boulevard north of Parthenia Street would be removed.

Under Alternative 4, all current crosswalks at signal-controlled intersections would be maintained. Between the signalized intersections, a fence would be installed to prevent mid-block pedestrian crossings, as is the current practice of Metro on its median-running LRT lines. Pedestrians would be required to walk to a signalized location to cross Van Nuys Boulevard. LRT passengers would reach the median station platforms from crosswalks at signalized intersections. There would be a pedestrian bridge at the Sylmar/San Fernando Metrolink station from the LRT platform to the parking lot.

The curb lane on Van Nuys Boulevard would be shared by mixed-flow traffic and bicyclists. The existing Class II bicycle lanes on Van Nuys Boulevard north of Parthenia Street to Beachy Avenue would be removed, but bicycle lanes would be provided along the segment where the LRT is underground from Hart Street north to Parthenia Street. Additionally, the City of Los Angeles recently constructed a bicycle path within Metro's railroad right-of-way parallel to San Fernando Road.

The right-of-way is sufficiently wide enough to allow the bicycle path to remain alongside a pair of LRT tracks and tracks for Metrolink and Union Pacific trains. At the point where the LRT crosses the bicycle path, near the intersection of Pinney Street and San Fernando Road, a signalized grade crossing would be provided. The bicycle path would be shifted from the east side of the railroad alignment to the west side of the tracks through the City of San Fernando to reduce the number of bicycle-rail crossings.

Would There Be Impacts on Pedestrians and Bicyclists during Construction?

Pedestrian and bicycle facilities would be affected during construction as a result of potential closure to these facilities. Detours and parallel routes would be established.

3.3.2 No-Build Alternative

The table below summarizes the potential transportation impacts under the No-Build Alternative (a "Yes" in the table indicates an adverse effect under NEPA or significant impact under CEQA would occur).

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	No	—	No	—	No	—	No	—	No	—
Operations	No	—	No	—	No	—	No	—	No	—
Cumulative	No	—	No	—	No	—	No	—	No	—

Yes = Significant impact under CEQA, Adverse effect under NEPA;
No = No impact or less than significant impact under CEQA, No effect or no adverse effect under NEPA.

3.3.2.1 Construction Impacts

Transit

No construction activity is planned under the No-Build Alternative; therefore, no impacts on transit would occur.

Traffic

There would be no physical changes to the existing environment as a result of the No-Build Alternative; therefore, no impacts on traffic would occur.

Parking

No project-related construction or physical improvements would occur along the alignment under the No-Build Alternative; thus, this alternative would not result in parking impacts on on-street parking.

Pedestrian and Bicycle Facilities

The No-Build Alternative would not generate impacts on pedestrian and bicycle facilities, as project-related construction and/or physical improvements would not occur along the project corridor under this alternative.

3.3.2.2 Operational Impacts

Transit

Under the No-Build Alternative, the Rapid Line 761 and Local Line 233 bus service would be identical to existing bus service. Therefore, there would be no direct operational impacts on transit.

The No-Build Alternative, however, would lack the potential transportation benefits that the build alternatives would provide, such as increased service frequency and capacity, improved transit access and reliability, and improved connections to the regional transit network. Over time, traffic congestion is expected to increase, creating additional delay per mile for buses and auto traffic. The No-Build Alternative would not provide a reliable alternative to these existing modes of travel in the project area.

Traffic

Intersections

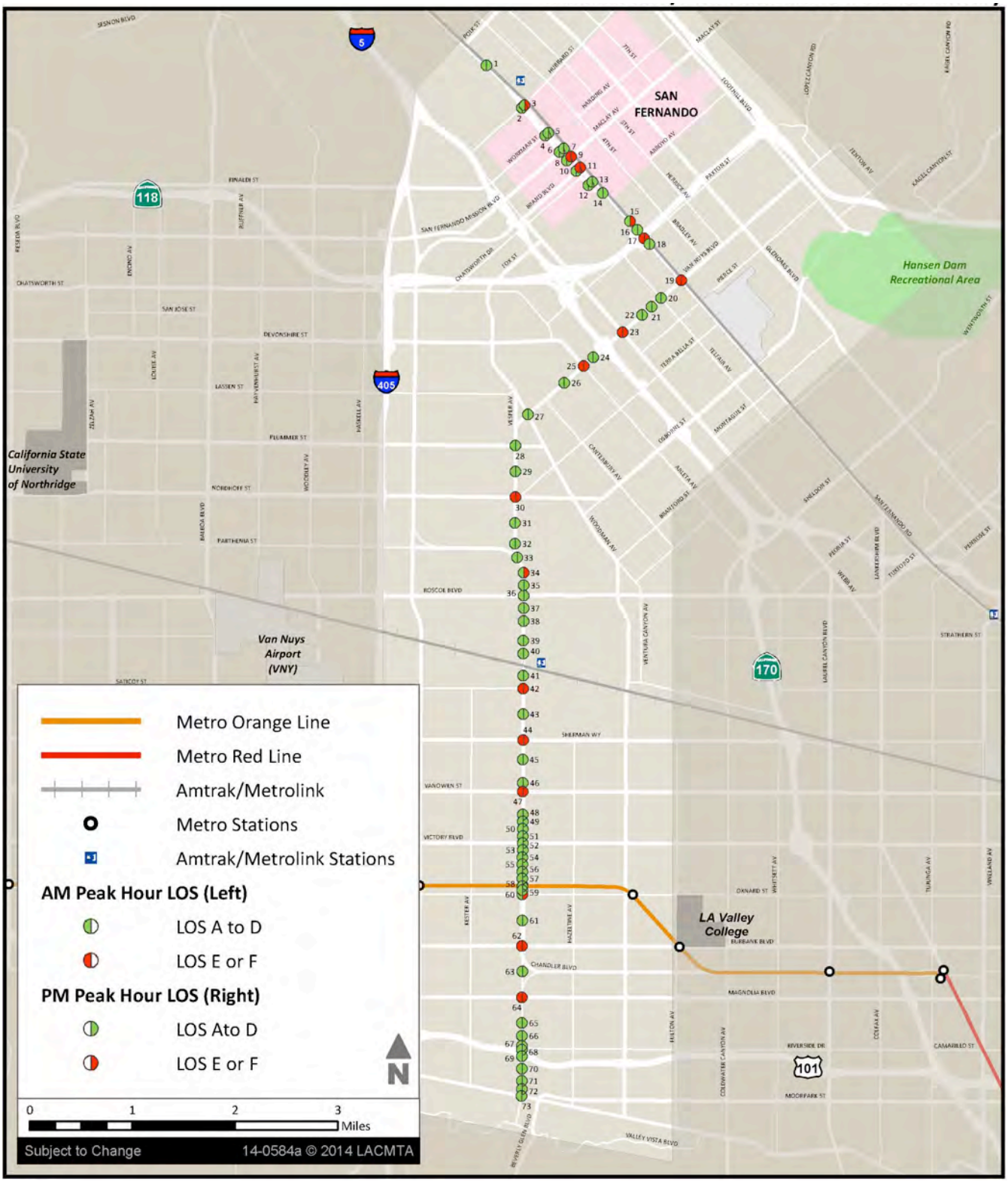
Daily vehicle traffic within the study area is projected to increase over the 28-year period between existing and future baseline conditions during the AM and PM peak periods. Under the future baseline analysis scenario, 16 of the 73 analyzed intersections would operate at LOS E or F during weekday peak hours.

Table 3-11 summarizes the future baseline AM and PM peak hour LOS values at the study intersections. Figure 3-4 illustrates these LOS values on a map of the project study area.

Table 3-11: Future (2040) Baseline Conditions – Intersections Operating at LOS E or F

Study Intersections		Jurisdiction	AM Peak Hour		PM Peak Hour	
			Delay (secs)	LOS	Delay (secs)	LOS
3	Truman St & Hubbard St	San Fernando	45.3	D	72.2	E
9	Truman St & Maclay Ave	San Fernando	87.6	F	122.8	F
11	Truman St & Brand Blvd	San Fernando	117.3	F	73.0	E
15	San Fernando Rd & Desmond St	Los Angeles	31.1	C	196.3	F
17	San Fernando Rd & Paxton St	Los Angeles	99.7	F	76.6	E
19	San Fernando Rd & Van Nuys Blvd	Los Angeles	100.4	F	128.9	F
23	Laurel Canyon Blvd & Van Nuys Blvd	Los Angeles	157.2	F	124.0	F
25	Arleta Ave & Van Nuys Blvd	Los Angeles	65.2	E	75.1	E
30	Van Nuys Blvd & Nordhoff St	Los Angeles	72.0	E	76.7	E
34	Van Nuys Blvd & Chase St	Los Angeles	23.7	C	72.2	E
42	Van Nuys Blvd & Saticoy St	Los Angeles	92.4	F	128.0	F
44	Van Nuys Blvd & Sherman Way	Los Angeles	57.5	E	120.3	F
47	Van Nuys Blvd & Vanowen St	Los Angeles	70.4	E	89.3	F
60	Van Nuys Blvd & Oxnard St	Los Angeles	45.9	D	55.5	E
62	Van Nuys Blvd & Burbank Blvd	Los Angeles	149.9	F	104.9	F
64	Van Nuys Blvd & Magnolia Blvd	Los Angeles	58.4	E	80.9	F
Source: KOA, 2015.						

Figure 3-4: Future (2040) Baseline Study Area AM and PM LOS Map



Source: KOA, 2014.

Performance Measures

The No-Build Alternative represents the future baseline against which all other project alternatives are compared to determine the potential benefits to VMT, VHT, and vehicle speeds.

Parking

The No-Build Alternative does not include operational changes and consequently would not result in impacts on the on-street parking supply.

Pedestrian and Bicycle Facilities

The No-Build Alternative would not result in operational impacts on pedestrian and bicycle facilities.

3.3.2.3 Cumulative Impacts

CEQA requires an environmental impact report to evaluate a project's contribution to cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of the related past, present, and reasonably foreseeable future projects.

No transportation improvements would occur under the No-Build Alternative. As a result, no effects or impacts from this scenario would contribute to and/or produce any cumulative impacts.

3.3.2.4 Mitigation Measures

Construction Mitigation Measures

No construction mitigation measures are required.

Operational Mitigation Measures

No operational mitigation measures are required.

3.3.2.5 Impacts Remaining After Mitigation

NEPA Finding

No adverse transportation effects would occur under the No-Build Alternative.

CEQA Determination

No transportation impacts would occur under the No-Build Alternative.

3.3.3 TSM Alternative

The following table summarizes the impacts of the TSM Alternative.

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	No	—	No	—	No	—	No	—	No	—
Operations	No	—	No	—	No	—	No	—	No	—
Cumulative	No	—	No	—	No	—	No	—	No	—

Yes = Significant impact under CEQA; adverse effect under NEPA.
No = No impact or less than significant impact under CEQA; no effect or no adverse effect under NEPA.

3.3.3.1 Construction Impacts

Transit

Under the TSM Alternative, minor physical improvements to existing roadways (e.g., signal improvements) and bus stops could occur. Construction of these improvements would be very limited in scope and short in duration; it's not expected that road closures or detours would be required. Therefore, construction effects under NEPA would not be adverse and would be less than significant under CEQA.

Traffic

Because construction of any physical improvement would be temporary and short in duration and because road closures would not occur, potential impacts on traffic would not be adverse under NEPA and would be less than significant under CEQA.

Parking

Similar to impacts on transit and traffic described above, any physical improvements to roadways or bus stops proposed under the TSM Alternative would be very limited in scope and short in construction duration. It's anticipated few if any parking spaces would be affected by proposed construction activities. Any potential effects that would occur would be temporary. Therefore, potential effects on parking would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

The very minor construction that could occur under the TSM Alternative would not result in the permanent removal of any existing bike lanes. It's also not anticipated that construction would require sidewalks to be removed or reduced in width. Consequently, construction impacts on pedestrian and bicycle facilities would not be adverse under NEPA and would be less than significant under CEQA.

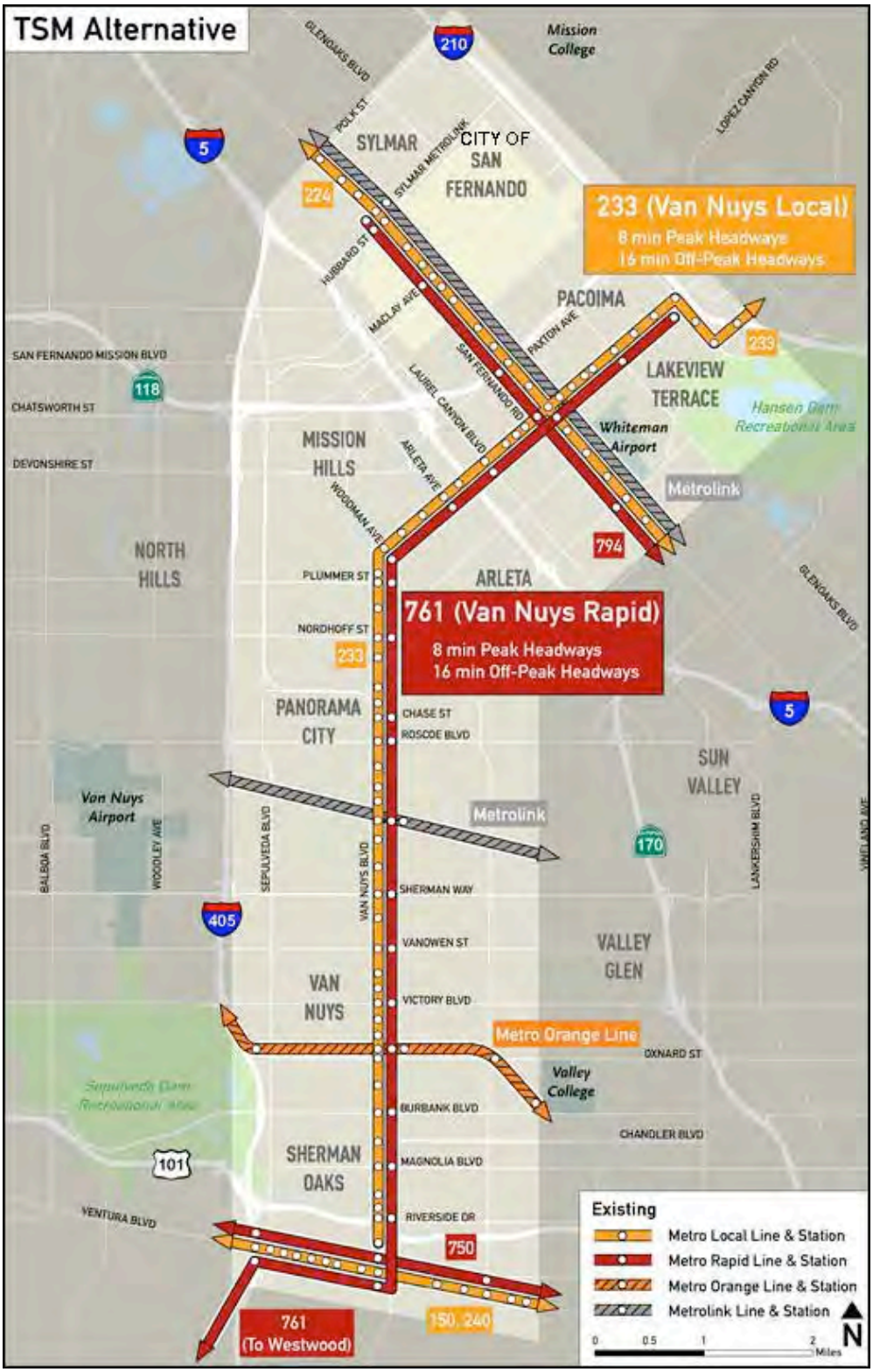
3.3.3.2 Operational Impacts

Transit

Existing bus routes Rapid Line 761 and Local Line 233 would retain the current stop locations with enhancements to bus services through increased bus frequencies. The bus headways would be improved as follows and as shown in Figure 3-5:

- Rapid Line 761 – Two-minute peak headway improvement (eight minutes versus 10 minutes); one-and-a-half minute off-peak headway improvement (16 minutes versus 17.5 minutes);
- Local Line 233 – Four-minute peak headway improvement (eight minutes versus 12 minutes); four minute off-peak headway improvement (16 minutes versus 20 minutes).
- Implementation of improved transit service under the TSM Alternative would result in an increase of 466 daily transit trips on Van Nuys Boulevard between the Metro Orange Line and the Sylmar/San Fernando Metrolink station, as compared to future No-Build/baseline conditions. The improved transit service would result in increased bus service, and no adverse operational impacts.

Figure 3-5: TSM Alternative



Source: STV, 2014.

Traffic

Intersections

No changes to the existing roadway configuration are proposed under the TSM Alternative. With implementation of the increased bus service proposed under the TSM Alternative, 16 of 73 study intersections would operate at LOS E or F during weekday peak hours in the year 2040, as shown in Table 3-12. In comparison to the No-Build/future baseline scenario, implementation of the TSM Alternative would not cause study intersection operations to worsen by a measurable amount; therefore, the significant impact thresholds would not be exceeded. Impacts would not be adverse under NEPA and would be less than significant under CEQA.

Performance Measures

Average vehicle speeds in the corridor would not change considerably from the No-Build Alternative, as only existing bus frequencies would increase under this alternative. Benefits in terms of VMT and VHT would also be negligible.

Parking

The TSM Alternative would not require removal of parking spaces or otherwise adversely affect parking along the corridor. No operational impacts or effects would occur.

Pedestrian and Bicycle Facilities

The TSM Alternative does not propose any physical or operational changes to pedestrian and bicycle facilities within the corridor. No operational impacts or effects would occur.

3.3.3.3 Cumulative Impacts

The TSM Alternative involves the enhancement of transportation system upgrades and low-cost transit improvements. These improvements could be beneficial to the study area and would not contribute to any significant adverse cumulative transportation impacts.

3.3.3.4 Mitigation Measures

Construction Mitigation Measures

No construction mitigation measures are required.

Operational Mitigation Measures

No operational mitigation measures are required.

3.3.3.5 Impacts Remaining After Mitigation

NEPA Finding

No adverse effects would occur during construction and operation of the TSM Alternative.

CEQA Determination

No or less-than-significant impacts would occur during construction and operation of the TSM Alternative.

Table 3-12: TSM Alternative – Intersections at LOS E or F in 2040

Study Intersections		Jurisdiction	AM Peak Hour		PM Peak Hour	
			Delay (secs)	LOS	Delay (secs)	LOS
3	Truman St & Hubbard St	San Fernando	45.3	D	72.2	E
9	Truman St & Maclay Ave	San Fernando	87.6	F	>100	F
11	Truman St & Brand Blvd	San Fernando	>100	F	73.0	E
15	San Fernando Rd & Desmond St	Los Angeles	31.1	C	>100	F
17	San Fernando Rd & Paxton St	Los Angeles	99.7	F	76.6	E
19	San Fernando Rd & Van Nuys Blvd	Los Angeles	>100	F	>100	F
23	Laurel Canyon Blvd & Van Nuys Blvd	Los Angeles	>100	F	>100	F
25	Arleta Ave & Van Nuys Blvd	Los Angeles	65.2	E	75.1	E
30	Van Nuys Blvd & Nordhoff St	Los Angeles	72.0	E	76.7	E
34	Van Nuys Blvd & Chase St	Los Angeles	23.7	C	72.2	E
42	Van Nuys Blvd & Saticoy St	Los Angeles	92.4	F	>100	F
44	Van Nuys Blvd & Sherman Way	Los Angeles	57.5	E	>100	F
47	Van Nuys Blvd & Vanowen St	Los Angeles	70.4	E	89.3	F
60	Van Nuys Blvd & Oxnard St	Los Angeles	45.9	D	55.5	E
62	Van Nuys Blvd & Burbank Blvd	Los Angeles	>100	F	>100	F
64	Van Nuys Blvd & Magnolia Blvd	Los Angeles	58.4	E	80.9	F

Source: KOA, 2015.

3.3.4 BRT Alternatives (Alternatives 1 and 2)

3.3.4.1 Alternative 1 – Curb-Running BRT

The table below summarizes the impacts of Alternative 1 under CEQA and NEPA, which are discussed in detail in the text that follows.

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	No	—	No	—	No	—	No	—	Yes	No
Operations	No	—	Yes	No	No	—	No	—	Yes	No
Cumulative	No	—	Yes	No	No	—	No	—	No	No

Yes = Significant impact under CEQA; adverse effect under NEPA.
No = No impact or less than significant impact under CEQA; no effect or no adverse effect under NEPA.

Construction Impacts

Construction would require pavement breaking, excavation, and removal of the existing roadway pavement; the removal of curbs and gutters; grading of the roadbed to prepare it for paving; paving (an asphalt concrete overlay would be provided in place of the existing pavement for the dedicated BRT lanes and mixed-flow BRT lanes); installation of surface and subsurface drainage systems; and concrete finish work. With commencement of construction, public access to parking spaces, bus stops, curb lanes, and bicycle lanes within each work area would be prohibited. As described below, the duration of construction within each work zone is anticipated to be less than 2 weeks. At the start of construction within each work area, on-street parking areas would be removed for project-related construction activities. Temporary lane and street closures may be necessary under this alternative. The extent and duration of the closures would depend on a number of factors, including the construction contract limits and individual contractor's choices, and would be coordinated with the Cities of Los Angeles and San Fernando, as necessary. Restrictions on the extent and duration of the closures can be incorporated in the project construction specifications. In some cases, short-term full closures might be substituted for extended partial closures to reduce overall impacts.

The duration of construction within each work zone along the project corridor would very likely be less than 2 weeks. The construction contractor would develop detour routes, if required, to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas. Additionally, where feasible, Metro would temporarily restripe roadways, including turn lanes, through lanes, and parking lanes, at the affected intersections to maximize the vehicular capacity at those locations that would be affected by construction closures. A majority of construction-related travel (i.e., deliveries, hauling, and worker trips) would be scheduled during off-peak hours.

Transit

Construction of Alternative 1 would occur in phases, within separate work zones, over an 18-month period.

Some curb lane closures within small work areas would be necessary to implement the improvements, bus stops would need to be temporarily closed, and temporary bus stops outside of the work areas, or the nearest bus stops would serve patrons of the temporarily closed stop(s).

Given the magnitude of construction and the fact that impacts would be temporary and short in duration at any one location (construction would include signing/striping and possibly concrete bus lane installation work, which would occur on a block-by-block basis), construction of Alternative 1 would not result in adverse effects on transit service under NEPA and would result in less-than-significant impacts under CEQA. Additionally, Worksite Traffic Control Plans and Traffic Management Plans would be required by the City of Los Angeles and the City of San Fernando before construction could begin.

Traffic

As noted above, the construction of Alternative 1 may require temporary lane and street closures; however, impacts would not be adverse under NEPA and would be less than significant under CEQA given the estimated limited duration and magnitude of construction within each work area.

Parking

On-street parking areas would be removed within each work zone for project-related construction activities related to pavement reconstruction, roadway signing and striping activities, and the installation of bus stop infrastructure including shelters and seating. Parking impacts would initially only occur during the construction period, typically from 7 a.m. to 7 p.m., but the completion of the bus-only lane would require that on-street parking areas be permanently removed during peak periods (such as 7 to 9 a.m. and 4 to 7 p.m.). As indicated by the results of the parking study for project operations, the corridor PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Lane closures and other partial roadway closures due to project construction would not encompass the entire corridor at a single time. Therefore, impacts would be less than those identified for the operation period of this build alternative. Impacts would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Existing and planned pedestrian and bicycle facilities would be affected during construction activities. To accommodate construction and implementation of Alternative 1, existing bicycle lanes along Van Nuys Boulevard would be removed. Implementation of Alternative 1 would also preclude construction of future planned bicycle lanes along Van Nuys Boulevard. The impacts on existing and planned bicycle lanes would conflict with the City of Los Angeles' adopted Bicycle Plan and would be adverse under NEPA and significant under CEQA.

Pedestrian routes would be lengthened where minor intersections would be closed as part of construction. Given the intersection closures would be temporary and short-term, and because construction work areas are not expected to span multiple blocks at a time, impacts on pedestrian access would not be adverse under NEPA and would be less than significant under CEQA.

Operational Impacts

Transit

The existing bus stops along San Fernando Road would remain unchanged under the TSM Alternative. Rapid Line 761X and Local Line 233X would retain the current stop locations along Van Nuys Boulevard with enhancements to bus services through increased bus frequencies. The bus headways would be improved as follows:

- Rapid Line 761X – Four-minute peak headway improvement (six minutes versus 10 minutes); five-and-a-half-minute off-peak headway improvement (12 minutes versus 17.5 minutes);
- Local Line 233X – Four-minute peak headway improvement (eight minutes versus 12 minutes); four-minute off-peak headway improvement (16 minutes versus 20 minutes).

Implementation of Alternative 1 would result in an increase of 2,970 daily transit trips between the Metro Orange Line and the Sylmar/San Fernando Metrolink station, as compared to future No-Build/baseline conditions.

Under Alternative 1, local bus service may benefit from the dedicated curb-adjacent bus lanes, which would be available to both the proposed BRT service and the existing local service.

Traffic

Intersections

Level-of-service analysis results for this scenario are discussed here, followed by significant impact determinations.

Of the 73 study intersections, 18 intersections would operate at LOS E or F during either one or both of the weekday peak hours. Level-of-service values at the following intersections would worsen to or be within poor conditions during the separately analyzed peak hours for this alternative:

- LOS at 14 study intersections would worsen to/be within LOS E or F during the AM peak hour
- LOS at 19 study intersections would worsen to/be within LOS E or F during the PM peak hour

Table 3-13 identifies intersections that would operate at LOS E or F and/or intersections that would be significantly affected as a result of implementation of Alternative 1. Under Alternative 1, within the list of intersections included in this table, significant traffic impacts would occur at 16 study intersections along Van Nuys Boulevard. Figure 3-6 illustrates the level of service for the overall study area.

With respect to the effects on parallel corridors, with the implementation of this alternative, the shifts in traffic to the Sepulveda and Woodman parallel corridors would cause 19 of the 50 study intersections to operate at or worsen within LOS E or F. In addition, significant traffic impacts would occur at 15 of these intersections, as shown in Table 3-14.

Performance Measures

Average vehicle speeds under Alternative 1 would not change considerably versus the other alternatives. The relative benefits of this alternative include higher total VMT and VHT values than the TSM Alternative and Alternative 3, but both values would be lower than Alternative 2 or Alternative 4.

Parking

The Van Nuys Boulevard corridor on-street parking supply, from Oxnard Street to San Fernando Road, totals 1,140 vehicle parking spaces. An additional 4,611 on-street spaces are provided on adjacent blocks east and west of the corridor.

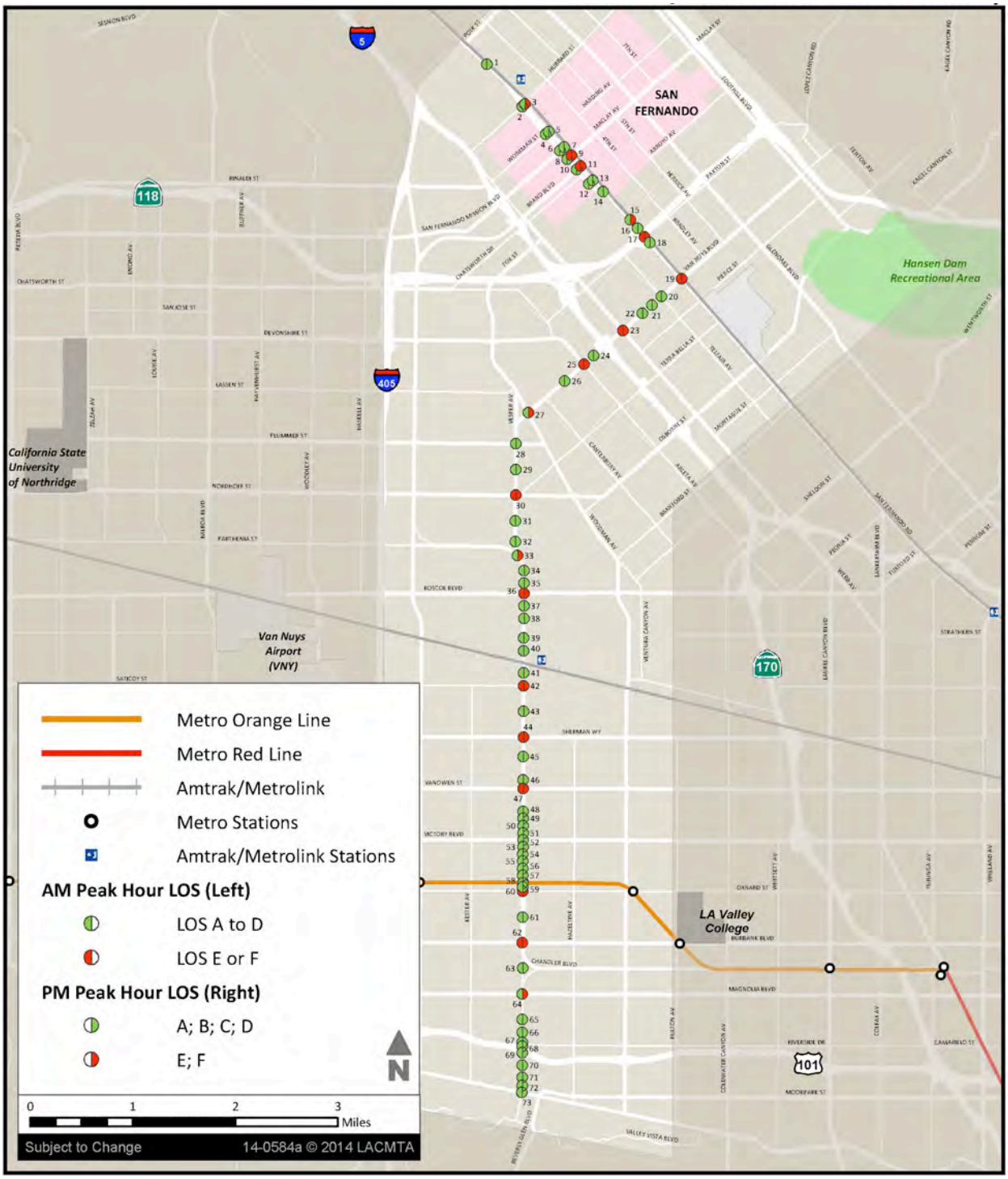
Under Alternative 1, all on-street parking spaces along Van Nuys Boulevard would be removed to accommodate the transit improvements along the corridor. During the late evening and early morning hours, however, the parking prohibition would not apply. On-street parking would be available at those times, and the BRT would operate in mixed-flow traffic. No off-street parking spaces would be removed. No on-street parking on San Fernando Road or Truman Street would be removed.

Table 3-13: Alternative 1 – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 1)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
3	Truman St & Hubbard St	45.3	D	72.2	E	45.3	D	72.2	E	0.0	0.0	No
9	Truman St & Maclay Ave	87.6	F	>100	F	87.6	F	>100	F	0.0	–	No
11	Truman St & Brand Blvd	>100	F	73.0	E	>100	F	73.0	E	–	0.0	No
11	Truman St & Brand Blvd	>100	F	73.0	E	>100	F	73.0	E	–	0.0	No
15	San Fernando Rd & Desmond St	31.1	C	>100	F	31.2	C	>100	F	0.1	–	No
17	San Fernando Rd & Paxton St	99.7	F	76.6	E	>100	F	76.7	E	–	0.1	No
19	San Fernando Rd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	–	–	No
23	Laurel Canyon Blvd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
25	Arleta Ave & Van Nuys Blvd	65.2	E	75.1	E	85.4	F	88.0	F	20.2	12.9	**Yes**
27	Woodman Ave & Van Nuys Blvd	40.0	D	50.3	D	43.7	D	57.0	E	3.7	6.7	**Yes**
30	Van Nuys Blvd & Nordhoff St	72.0	E	76.7	E	94.1	F	94.8	F	22.1	18.1	**Yes**
33	Van Nuys Blvd & Parthenia St/ Vesper Ave	25.4	C	49.4	D	32.3	C	59.0	E	6.9	9.6	**Yes**
34	Van Nuys Blvd & Chase St	23.7	C	72.2	E	33.9	C	54.4	D	10.2	-17.8	Yes
36	Van Nuys Blvd & Roscoe Blvd	52.9	D	53.8	D	57.7	E	57.9	E	4.8	4.1	**Yes**
38	Van Nuys Blvd & Lanark St	29.4	C	33.0	C	34.0	C	43.5	D	4.6	10.5	Yes
39	Van Nuys Blvd & Blythe St	18.6	B	20.1	C	23.7	C	39.0	D	5.1	18.9	Yes
40	Van Nuys Blvd & Arminta St	14.6	B	24.8	C	23.7	C	22.7	C	9.1	-2.1	Yes
41	Van Nuys Blvd & Keswick St	21.6	C	24.5	C	25.8	C	31.6	C	4.2	7.1	Yes
42	Van Nuys Blvd & Saticoy St	92.4	F	>100	F	>100	F	>100	F	–	–	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 1)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
44	Van Nuys Blvd & Sherman Way	57.5	E	>100	F	61.0	E	>100	F	3.5	–	**Yes**
47	Van Nuys Blvd & Vanowen St	70.4	E	89.3	F	88.2	F	>100	F	17.8	–	**Yes**
52	Van Nuys Blvd & Victory Blvd	35.2	D	20.7	C	41.6	D	18.4	B	6.4	-2.3	Yes
60	Van Nuys Blvd & Oxnard St	45.9	D	55.5	E	81.4	F	57.3	E	35.5	1.8	**Yes**
62	Van Nuys Blvd & Burbank Blvd	>100	F	>100	F	>100	F	98.5	F	–	–	No
64	Van Nuys Blvd & Magnolia Blvd	58.4	E	80.9	F	52.0	D	68.1	E	-6.4	-12.8	No
Source: KOA, 2015.												

Figure 3-6: Alternative 1 – Study Area AM/PM LOS Map



Source: KOA, 2014

Table 3-14: Alternative 1 – Parallel Corridors – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 1)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
77	Sepulveda Blvd & Nordhoff St	72.9	E	89.7	F	69.5	E	85.0	F	-3.4	-4.7	No
79	Sepulveda Blvd & Parthenia St	>100	F	63.5	E	99.8	F	61.7	E	–	-1.8	No
80	Sepulveda Blvd & Chase St	13.8	B	15.6	B	8.1	A	66.4	E	-5.7	50.8	**Yes**
81	Sepulveda Blvd & & Roscoe Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
82	Sepulveda Blvd & Lanark St – Sepulveda Pl	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
83	Sepulveda Blvd & Raymer St	6.3	A	54.4	D	5.6	A	56.8	E	-0.7	2.4	No
87	Sepulveda Blvd & Sherman Way	51.5	D	58.0	E	53.1	D	61.1	E	1.6	3.1	**Yes**
89	Sepulveda Blvd & Vanowen St	78.6	E	71.0	E	81.0	F	74.0	E	2.4	3.0	**Yes**
90	Sepulveda Blvd & Victory Blvd	73.4	E	44.5	D	80.0	E	46.2	D	6.6	1.7	**Yes**
94	Sepulveda Blvd & Oxnard St	36.2	D	60.0	E	34.0	C	64.1	E	-2.2	4.1	**Yes**
96	Sepulveda Blvd & Burbank Blvd	>100	F	>100	F	>100	F	>100	F	–	–	No
98	Sepulveda Blvd & Magnolia Blvd	48.6	D	>100	F	45.0	D	>100	F	-3.6	–	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 1)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
100	Sepulveda Blvd & Camarillo St	32.6	C	>100	F	34.0	C	>100	F	1.4	–	No
102	Sepulveda Blvd & Ventura Blvd	44.3	D	>100	F	45.5	D	>100	F	1.2	–	No
108	Woodman Ave & Chase St	55.7	E	57.7	E	62.6	E	59.6	E	6.9	1.9	**Yes**
110	Woodman Ave & Roscoe Blvd	91.1	F	>100	F	92.4	F	>100	F	1.3	–	No
111	Woodman Ave & Lanark St-Cantara St	>100	F	>100	F	>100	F	>100	F	–	–	No
113	Woodman Ave & Strathern St	13.8	B	11.9	B	21.8	C	12.2	B	8.0	0.3	**Yes**
114	Woodman Ave & Saticoy St	81.5	F	98.0	F	74.7	E	>100	F	-6.8	–	**Yes**
116	Woodman Ave & Valerio St	33.9	C	42.9	D	35.9	D	46.9	D	2.0	4.0	**Yes**
117	Woodman Ave & Sherman Way	43.9	D	79.8	E	45.1	D	84.6	F	1.2	4.8	**Yes**
119	Woodman Ave &Vanowen St	45.7	D	53.5	D	49.6	D	57.5	E	3.9	4.0	**Yes**
121	Woodman Ave & Victory Blvd	74.6	E	48.8	D	74.3	E	48.8	D	-0.3	0.0	No
124	Woodman Ave & Oxnard St	38.1	D	33.2	C	42.4	D	33.3	C	4.3	0.1	**Yes**

Source: KOA, 2015.

Based on the parking survey included in Appendix G of this EIS/EIR, the Van Nuys Boulevard corridor has a weekday peak parking demand of 481 on-street spaces and a Saturday peak parking demand of 589 on-street spaces. The majority of the PAZs, used to define blocks of parking areas for analysis purposes, within the Van Nuys Boulevard parking study area would be able to accommodate the on-street parking demand on Van Nuys Boulevard with the removal of the on-street spaces. However, there are several PAZs that cannot accommodate the additional Van Nuys Boulevard on-street parking demand. There is a shortfall of on-street parking spaces at 11 PAZs on a weekday and 14 PAZs on the weekend. Some of the off-street parking facilities within these PAZs have available parking spaces to accommodate the shortfall of on-street parking spaces.

A parking analysis of PAZs adjacent to the locations with a supply shortfall with the proposed project was conducted to determine if available on-street and off-street parking supplies within these PAZs could accommodate the additional Van Nuys Boulevard on-street parking demand. As shown in Appendix G, there is adequate parking supply either on adjacent streets or through off-street parking, for areas on Van Nuys Boulevard that may encounter parking shortfalls; therefore, the corridor PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas.

Areas along the Van Nuys Boulevard corridor that may encounter parking shortfalls during the weekday and/or weekend are generally located in commercial areas just north of the Metro Orange Line, directly south of the Amtrak/Metrolink Van Nuys Station north to Roscoe Boulevard, and near San Fernando Road. Shortfalls to parking in residential areas may occur along segments between Parthenia Street north to Woodman Avenue, and between Beachy Avenue and I-5. There may also be access issues for delivery trucks for smaller businesses (those without truck loading bays or other on-site loading/delivery facilities) since they would not be able to dwell within the roadway during the hours the parking restrictions are in place. Consequently, trucks would either have to use off-street parking facilities, or parking on an adjacent street, or alleyways behind the property.

In conclusion, the localized, minor, parking shortfalls and delivery access issues may create the need for drivers to park within a distance of a block or two from the destination business, which would cause limited inconvenience, but this condition would not constitute a substantial adverse effect under NEPA or a significant impact under CEQA. Within a small radius from each business, available parking would exist within a short walking distance, and this is typical of business districts. Therefore, the parking impacts due to the parking restrictions on Van Nuys Boulevard under this alternative would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Existing and planned pedestrian and bicycle facilities would be affected as a result of Alternative 1 operations. Alternative 1 would result in conflicts with the City of Los Angeles Bicycle Plan, as designated bicycle lanes on Van Nuys Boulevard under the “Backbone Bikeway Network” would not be feasible. Instead, bicyclists would have to share the proposed curb lane with buses during the peak-period, under Alternative 1.Within the Pacoima area, some of the striped on-street bicycle lanes called for in the Bicycle Plan have been implemented. These facilities would be removed as a result of implementation of Alternative 1.

The Bicycle Plan calls for bicycle lanes on parallel streets such as Woodman Avenue (1 mile east of Van Nuys Boulevard) between Ventura Boulevard and the Osborne Street and Nordhoff Street corridors and Osborne Street from that point to San Fernando Road. The proposed bicycle lanes along streets that parallel Van Nuys Boulevard provide alternate routes for bicyclists traveling along the corridor. Additionally, it should be noted that the Van Nuys Boulevard corridor is designated as a

Transit Priority Street within the City of Los Angeles General Plan Framework Element, which creates a conflict between the general plan and the bicycle plan. Because Alternative 1 would remove existing bicycle lanes and make it infeasible to implement planned bicycle lanes along Van Nuys Boulevard in the future, the effects/impacts would be adverse under NEPA and significant under CEQA.

Pedestrian routes would be lengthened where minor intersections would be permanently closed. Pedestrian crossings that remain would be improved with enhanced design and safety features. The overall impacts on pedestrian circulation would not be adverse under NEPA and would be less than significant under CEQA.

Cumulative Impacts

For the purposes of analyzing potential cumulative transportation impacts, the future growth and development projections from the regional transportation model and the localized impacts due to the cumulative related projects in Table 2-3 have been considered. The study area for the cumulative traffic impacts analysis encompasses the project corridor along Van Nuys Boulevard and San Fernando Road and the parallel corridors along Sepulveda Boulevard and Woodman Avenue.

Cumulative Impacts During Construction

Under existing conditions (see Table 3-3), three of 73 study intersections operate at an unacceptable LOS of E or F. Future growth and development in the region would generate additional traffic on streets in the project corridor, which would adversely affect traffic flow and bus transit service. Although the lane or street closures required to construct Alternative 1 would be temporary, they could, nonetheless, contribute to short-term increases in congestion for motorists and result in additional delays for bus vehicles, a potentially significant cumulative impact.

With regards to cumulative construction impacts on pedestrian circulation due to sidewalk closures, it is likely that cumulative projects would not substantially diminish pedestrian circulation over time. Additionally, it's not known what other related projects would be constructed concurrently and in the vicinity of Alternative 1 construction activities. Therefore, it is unlikely that Alternative 1 construction activities would result in a cumulatively considerable contribution to any significant cumulative impacts on pedestrian facilities.

It is probable that construction of some of the cumulative development projects in Table 2-3 would require temporary closure of bike lanes adjacent to construction sites to accommodate construction vehicles and equipment. Given these closures would be temporary and affect short segments of the bike lanes, the cumulative construction impacts on bike lanes due to the projects in Table 2-3 would not be significant. Construction of Alternative 1 would require the permanent removal of existing bicycle facilities on Van Nuys Boulevard within Los Angeles and would conflict with planned bikeways along Van Nuys Boulevard identified in the City's Bicycle Plan. Therefore, Alternative 1 would result in a cumulatively considerable contribution to a significant cumulative project effect on bicycle facilities.

Cumulative Impacts during Operation

As noted above, under existing conditions (see Table 3-3), three of 73 study intersections would operate at an unacceptable LOS of E or F. Because of future growth and development and the resulting increases in traffic, under future baseline (2040) conditions, 16 of the 73 study intersections would operate at unacceptable LOS of E or F, a cumulatively significant impact. Alternative 1 would convert mixed-flow lanes to dedicated BRT lanes, resulting in a reduction in roadway capacity for

mixed-flow traffic. As a consequence, in 2040, 18 study intersections would operate at LOS of E or F, an increase of two intersections compared to the future baseline conditions. Alternative 1 would result in a cumulatively considerable contribution to significant cumulative traffic impacts.

It is not expected that the cumulative projects would substantially diminish pedestrian circulation along the corridor and result in significant cumulative impacts. The closure of minor intersections under Alternative 1 would result in longer routes for some pedestrians. However, mitigation is proposed to minimize impacts. As a consequence, Alternative 1 would not result in a cumulatively considerable contribution to a significant cumulative impact on pedestrian circulation and facilities.

The cumulative projects are not expected to result in the removal of bicycle lanes or any other operational adverse impacts on bicycle lanes. Therefore, although Alternative 1 would result in the removal of existing bicycle lanes along Van Nuys Boulevard, which would be a significant project impact, it would not contribute to any significant cumulative bicycle lane impacts.

Mitigation Measures

Construction Mitigation Measures

Transit

No construction mitigation measures are required.

Traffic

No construction mitigation measures are required. As noted above, Worksite Traffic Control Plans and Traffic Management Plans would be required by the City of Los Angeles and the City of San Fernando before construction could begin.

Parking

No construction mitigation measures are required.

Pedestrian and Bicycle Facilities

MM-TRA-1: To ensure potential impacts on pedestrian and bicycle facilities are minimized to the extent feasible, the Traffic Management Plan and Traffic Control Plan shall include the following:

- Bicycle detour signs shall be provided, as appropriate, to route bicyclists away from detour areas with minimal-width travel lanes and onto parallel roadways.
- Sidewalk closure and pedestrian route detour signs shall be provided, as appropriate, that safely route pedestrians around work areas where sidewalks are closed for safety reasons or for specific construction work within the sidewalk area. In addition, the project contractor shall ensure appropriate "Open during Construction," wayfinding, and promotional signage for businesses affected by sidewalk closures is provided and access to these businesses is maintained.

Operational Mitigation Measures

Transit

No operational mitigation measures are required.

Traffic

There are no feasible mitigation measures.

Parking

No operational mitigation measures are required.

Pedestrian and Bicycle Facilities

The following general mitigation measures are proposed to reduce or minimize potential impacts on pedestrian facilities during the operations period:

MM-TRA-2: Additional visual enhancements, such as high-visibility crosswalks that meet current LADOT design standards, to the existing crosswalks at each proposed station location shall be implemented to further improve pedestrian circulation.

MM-TRA-3: To further reduce potential adverse and less-than-significant pedestrian impacts, Metro shall prepare a community linkages study that documents preferred pedestrian access to each station, general pedestrian circulation in the immediate vicinity of the station, and potential sites for connections to nearby bus services. The purpose of this study shall include ensuring sufficient circulation, access, and information important to users of the transit system. The results of the study shall be implemented through coordination between Metro and the local jurisdictions of the City of Los Angeles and the City of San Fernando.

Impacts Remaining After Mitigation

NEPA Finding

Construction Impacts

Measure MM-TRA-1 would ensure that impacts on pedestrian access during the construction period would be minimized. Therefore, Alternative 1 would not result in adverse construction effects on transit, traffic, parking, and pedestrian facilities after implementation of proposed mitigation measures.

Although mitigation measure MM-TRA-1 would reduce construction impacts on bicyclists and bicycle facilities, the permanent removal of the existing bicycle lanes along Van Nuys Boulevard would remain an adverse effect under NEPA.

Operational Impacts

Alternative 1 would result in adverse operational effects on traffic, no or beneficial effects on transit, no adverse effects on parking and pedestrian facilities, and adverse effects on bicycle facilities.

CEQA Determination

Construction Impacts

Alternative 1 would result in less-than-significant impacts on transit, traffic, parking, and pedestrian facilities. Impacts on existing and proposed bicycle facilities would be significant.

Operational Impacts

Alternative 1 would result in significant traffic impacts. There would be no adverse impacts on transit operations and less-than-significant impacts on parking and pedestrian facilities after implementation of proposed mitigation measures. Operational effects on existing and proposed bicycle facilities would be significant after implementation of proposed mitigation measures.

3.3.4.2 Alternative 2 – Median-Running BRT

The potential impacts of Alternative 2 under CEQA and NEPA are summarized in the table below and discussed in detail in the text that follows.

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	Yes	No	Yes	No	No	—	No	—	Yes	No
Operations	No	No	Yes	No	No	—	No	—	Yes	No
Cumulative	No	No	Yes	No	No	—	No	—	No	No

Yes = Significant impact under CEQA; adverse effect under NEPA.
No = No impact or less than significant impact under CEQA; no effect or no adverse effect under NEPA.

Construction Impacts

Construction of the Median-Running BRT Alternative would occur in phases. Construction activities would be the same as those described above for the Curb-Running BRT Alternative, except that this alternative would not require the relocation of existing bus stops in the curb lanes as would occur under the Curb-Running BRT Alternative. Additionally, construction of the BRT lanes and associated bus stops and platforms in the median of Van Nuys Boulevard would result in more extensive construction over a longer period of time.

With commencement of construction, public access to parking spaces, bus stops, curb lanes, and bicycle lanes within each work area would be prohibited The duration of construction activities is anticipated to be greater under this alternative than the Curb-Running BRT Alternative and would last approximately 24 months. As discussed above for the Curb-Running BRT Alternative, these are rough estimates and are likely to vary based on conditions in the field. The phases are likely to overlap to some degree, and the sequence of construction activities may also vary.

At the start of construction within each work area, on-street parking areas would be removed for project-related construction activities. Temporary lane and street closures may be necessary under this alternative. The extent and duration of the closures would depend on a number of factors, including the construction contract limits and individual contractor's choices, and would be coordinated with the Cities of Los Angeles and San Fernando, as necessary. Restrictions on the extent and duration of the closures can be incorporated in the project construction specifications. In some cases, short-term full closures might be substituted for extended partial closures to reduce overall impacts.

Transit

Construction activities could result in temporary lane or street closures, which would increase congestion along the project corridor and increase travel times for buses and other motor vehicles. Because of the magnitude of construction and length of time required to construct the BRT lanes, median stations, and traffic signal modifications, the construction impacts on transit would be adverse under NEPA and significant under CEQA.

Traffic

Because of the potential for temporary lane or street closures, the impacts on traffic and vehicle travel would be adverse under NEPA and significant under CEQA.

Parking

On-street parking would be prohibited within work areas, as prescribed in the Traffic Control Plans to be approved by LADOT (the BRT would operate in mixed-flow conditions within the city of San Fernando and major construction would not be required there). As indicated by the results of the parking study for project operations, the corridor PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Lane closures and other partial roadway closures due to project construction would not encompass the entire corridor at a single time. Therefore, impacts would be less than those identified for the operation period of this build alternative and would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Construction of Alternative 2 would require the closure and permanent removal of bicycle lanes located within the work zones along the corridor. This would be an adverse effect under NEPA and a significant impact under CEQA.

Alternative 2 would result in temporary and non- adverse effects and less-than-significant impacts on pedestrian facilities during construction due to potential temporary intersection and crosswalk closures.

Operational Impacts

Transit

Rapid Line 761X would have 17 new or upgraded bus stops, while Local Line 233 would retain the current local bus stop locations. There would be enhancements to bus service with improved headways similar to those that would occur under Alternative 1.

Transit speeds on local lines may decrease due to increased traffic congestion where the BRT fixed guideway and station locations would create travel lane reductions. However, this alternative would result in an increase of 2,969 daily transit trips between the Metro Orange Line and the Sylmar/San Fernando Metrolink station, as compared to the future No-Build/baseline conditions. This alternative, in providing dedicated bus lanes, would provide a faster transit alternative compared to local bus service.

Overall impacts on transit would be less than significant under CEQA and non-adverse under NEPA.

Traffic

Intersections

Level-of-service analysis results for this scenario are discussed here, followed by significant impact determinations.

A total of 21 of the 73 study intersections along the project corridor would operate at LOS E or F during either one or both of the weekday peak hours. Operations at the following intersections during the separately analyzed peak hours would worsen to or be within poor conditions compared to the No-Build conditions:

- LOS at 14 study intersections would worsen to/be within LOS E or F during the AM peak hours.
- LOS at 21 study intersections would worsen to/be within LOS E or F during the PM peak hours.

Table 3-15 identifies the study intersections that would operate at LOS E or F in the AM and PM peak hours or would be significantly affected as a result of implementation of Alternative 2. Within the list of intersections included in this table, significant traffic impacts would occur at 24 study intersections. Figure 3-7 illustrates the level of service at the study intersections along the project corridor. Additionally, it should be noted that left-turn movements would be permitted at primary intersections and prohibited at secondary intersections due to the installation of the median fixed guideway. At minor intersections, only right turns in and out of the side street would be allowed.

As for impacts on study intersections along the parallel corridors, the shifts in traffic to Sepulveda Boulevard and Woodman Avenue would cause 19 of the 50 study intersections to operate at or worsen within LOS E or F, and significant traffic impacts (criteria defined in Table 3-2) would occur at 14 of these intersections, as shown in Table 3-16.

Performance Measures

Although the overall roadway capacity would be reduced with the removal of lanes under this alternative, average vehicle speeds under Alternative 2 would slightly improve versus the No-Build Alternative. This is due in part to multiple factors that may include an increase in transit ridership, exclusive median guideway, changes in travel patterns, and/or a decrease in traffic conflicts because of turning movement restrictions/prohibition. The benefits of this alternative include reductions in VMT and VHT values that would be greater than those that would occur under the TSM Alternative or Alternative 3, but would not be greater than under Alternative 4.

Parking

Under Alternative 2, all 1,140 on-street parking spaces would be removed to accommodate the transit improvements along the Van Nuys Boulevard corridor. No off-street parking spaces would be removed under this build alternative. No on-street parking on San Fernando Road or Truman Street would be affected.

Specific areas along the Van Nuys Boulevard corridor that may encounter parking shortfalls and access issues during the weekday and/or weekend would be similar to Alternative 1. As shown in Appendix G, the adjacent PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Therefore, parking impacts would not be adverse under NEPA and would be less than significant under CEQA.

There may be access issues for delivery trucks for smaller businesses (those without truck loading bays or other on-site loading/delivery facilities) because they would not be able to dwell within the roadway during operations. Consequently, they would either have to use off-street parking facilities or parking on an adjacent street, or alleyways behind the property. This would not be an adverse effect under NEPA and would be a less-than-significant impact under CEQA.

Table 3-15: Alternative 2 – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
3	Truman St & Hubbard St	45.3	D	72.2	E	45.3	D	76.3	E	0.0	4.1	**Yes**
9	Truman St & Maclay Ave	87.6	F	>100	F	87.6	F	>100	F	0.0	–	No
11	Truman St & Brand Blvd	>100	F	73.0	E	>100	F	73.6	E	–	0.6	No
12	San Fernando Rd & Wolfskill St	8.0	A	8.2	A	8.0	A	>100	F	0.0	–	**Yes**
15	San Fernando Rd & Desmond St	31.1	C	>100	F	31.0	C	>100	F	-0.1	–	No
17	San Fernando Rd & Paxton St	99.7	F	76.6	E	>100	F	83.3	F	–	6.7	**Yes**
19	San Fernando Rd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**

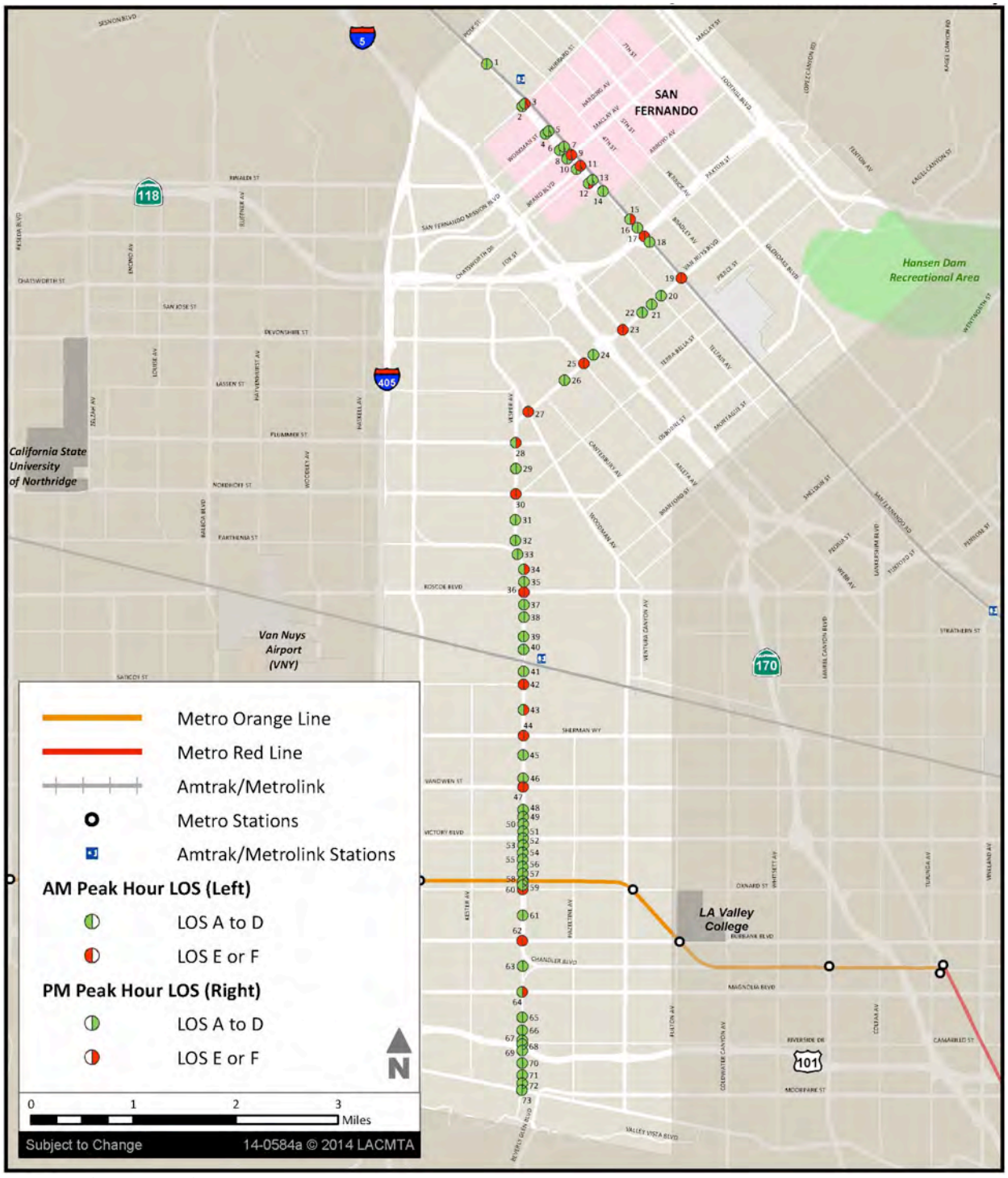
Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
23	Laurel Canyon Blvd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
25	Arleta Ave & Van Nuys Blvd	65.2	E	75.1	E	87.7	F	90.9	F	22.5	15.8	**Yes**
26	Beachy Ave & Van Nuys Blvd	14.2	B	10.7	B	44.8	D	15.5	B	30.6	4.8	Yes
27	Woodman Ave & Van Nuys Blvd	40.0	D	50.3	D	56.6	E	82.5	F	16.6	32.2	**Yes**
28	Van Nuys Blvd & Plummer St	32.9	C	38.9	D	41.7	D	56.4	E	8.8	17.5	**Yes**
30	Van Nuys Blvd & Nordhoff St	72.0	E	76.7	E	>100	F	>100	F	–	–	**Yes**
31	Van Nuys Blvd & Rayen St	6.1	A	17.5	B	8.4	A	41.1	D	2.3	23.6	Yes
32	Van Nuys Blvd & Parthenia St	11.9	B	11.9	B	10.0	A	23.1	C	-1.9	11.2	Yes
34	Van Nuys Blvd & Chase St	23.7	C	72.2	E	32.6	C	>100	F	8.9	–	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
36	Van Nuys Blvd & Roscoe Blvd	52.9	D	53.8	D	86.0	F	>100	F	33.1	–	**Yes**
38	Van Nuys Blvd & Lanark St	29.4	C	33.0	C	43.3	D	33.3	C	13.9	0.3	Yes
39	Van Nuys Blvd & Blythe St	18.6	B	20.1	C	53.3	D	40.5	D	34.7	20.4	Yes
40	Van Nuys Blvd & Arminta St	14.6	B	24.8	C	25.6	C	27.2	C	11.0	2.4	Yes
41	Van Nuys Blvd & Keswick St	21.6	C	24.5	C	15.8	B	36.3	D	-5.8	11.8	Yes
42	Van Nuys Blvd & Saticoy St	92.4	F	>100	F	>100	F	>100	F	–	–	**Yes**
43	Van Nuys Blvd & Valerio St	15.5	B	23.6	C	24.0	C	72.4	E	8.5	48.8	**Yes**
44	Van Nuys Blvd & Sherman Way	57.5	E	>100	F	87.8	F	>100	F	30.3	–	**Yes**
45	Van Nuys Blvd & Vose St	13.3	B	18.3	B	13.3	B	31.3	C	0.0	13.0	Yes

Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
47	Van Nuys Blvd & Vanowen St	70.4	E	89.3	F	96.5	F	>100	F	26.1	–	**Yes**
60	Van Nuys Blvd & Oxnard St	45.9	D	55.5	E	87.6	F	65.6	E	41.7	10.1	**Yes**
62	Van Nuys Blvd & Burbank Blvd	>100	F	>100	F	>100	F	98.6	F	–	–	No
64	Van Nuys Blvd & Magnolia Blvd	58.4	E	80.9	F	52.1	D	67.5	E	-6.3	-13.4	No

Source: KOA, 2015.

Figure 3-7: Alternative 2 – Study Area AM/PM LOS Map



Source: LADOT, KOA, 2014

Table 3-16: Alternative 2 – Parallel Corridors – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
77	Sepulveda Blvd & Nordhoff St	72.9	E	89.7	F	69.1	E	85.8	F	-3.8	-3.9	No
79	Sepulveda Blvd & Parthenia St	>100	F	63.5	E	99.5	F	62.0	E	–	-1.5	No
80	Sepulveda Blvd & Chase St	13.8	B	15.6	B	8.1	A	67.9	E	-5.7	52.3	**Yes**
81	Sepulveda Blvd & & Roscoe Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
82	Sepulveda Blvd & Lanark St – Sepulveda Pl	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
83	Sepulveda Blvd & Raymer St	6.3	A	54.4	D	4.4	A	56.1	E	-1.9	1.7	No
87	Sepulveda Blvd & Sherman Way	51.5	D	58.0	E	53.1	D	60.9	E	1.6	2.9	**Yes**
89	Sepulveda Blvd & Vanowen St	78.6	E	71.0	E	81.6	F	70.7	E	3.0	-0.3	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
90	Sepulveda Blvd & Victory Blvd	73.4	E	44.5	D	77.7	E	47.3	D	4.3	2.8	**Yes**
94	Sepulveda Blvd & Oxnard St	36.2	D	60.0	E	34.9	C	62.3	E	-1.3	2.3	No
96	Sepulveda Blvd & Burbank Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
98	Sepulveda Blvd & Magnolia Blvd	48.6	D	>100	F	44.4	D	>100	F	-4.2	–	**Yes**
99	Sepulveda Blvd & US-101 WB (NB) off-ramp	60.7	E	23.8	C	51.9	D	50.6	D	-8.8	26.8	**Yes**
100	Sepulveda Blvd & Camarillo St	32.6	C	>100	F	23.2	C	>100	F	-9.4	–	No
102	Sepulveda Blvd & Ventura Blvd	44.3	D	>100	F	44.7	D	>100	F	0.4	–	No
108	Woodman Ave & Chase St	55.7	E	57.7	E	58.5	E	60.1	E	2.8	2.4	**Yes**
110	Woodman Ave & Roscoe Blvd	91.1	F	>100	F	92.1	F	>100	F	1.0	–	No

Study Intersections		Future No Build				Future With Project (Alternative 2)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
111	Woodman Ave & Lanark St–Cantara St	>100	F	>100	F	>100	F	>100	F	–	–	No
114	Woodman Ave & Saticoy St	81.5	F	98.0	F	83.4	F	>100	F	1.9	–	**Yes**
116	Woodman Ave & Valerio St	33.9	C	42.9	D	43.5	D	46.9	D	9.6	4.0	**Yes**
117	Woodman Ave & Sherman Way	43.9	D	79.8	E	45.3	D	84.6	F	1.4	4.8	**Yes**
119	Woodman Ave &Vanowen St	45.7	D	53.5	D	50.0	D	57.4	E	4.3	3.9	**Yes**
Source: KOA, 2015.												

Pedestrian and Bicycle Facilities

Alternative 2 would result in impacts on existing and planned pedestrian facilities that would be non-adverse under NEPA and less than significant under CEQA. Impacts on bicycle facilities would be adverse under NEPA and significant under CEQA. Impacts would be the same as those that would occur under Alternative 1.

Cumulative Impacts

Alternative 2 would result in the same cumulative transit, traffic, pedestrian and bicycle facilities, and parking impacts as those described above for Alternative 1.

Mitigation Measures

Construction Mitigation Measures

Transit

As noted previously, a Traffic Management Plan will be developed and implemented by the construction contractor in coordination with Metro, LADOT, and the City of San Fernando in order to minimize impacts on transit service. To ensure impacts are minimized to the extent feasible, the following measure is proposed:

> **MM-TRA-4:** The Traffic Management Plan shall require Metro to communicate closures and information on any changes to bus service to local transit agencies in advance and develop detours as appropriate. Bus stops within work areas shall be relocated, with warning signs posted in advance of the closure, and warnings and alternate stop notifications posted during the extent of the closure.

The Traffic Management Plan would partially mitigate temporary disruptions to transit service. However, since significant impacts could remain, and additional mitigation measures are not feasible, the potential impacts would be significant and unavoidable under CEQA and adverse under NEPA.

Traffic

To facilitate the flow of traffic in and around the construction zones and ensure impacts are minimized to the extent feasible, the following measure is proposed:

> **MM-TRA-5:** The Traffic Management Plan shall include including the following typical measures, and others as appropriate:
>
> - Schedule a majority of construction-related travel (i.e., deliveries, hauling, and worker trips) during the off-peak hours;
> - Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas;
> - Where feasible, temporarily restripe roadways including turning lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures;

- Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at those locations affected by construction closures. In these areas where street parking is temporarily removed in front of businesses, the contractor shall provide wayfinding to other nearby parking lots or temporary lots, with any temporary parking secured well in advance of parking being removed in the affected area;
- Where feasible, place station traffic control officers at major intersections during peak hours to minimize delays related to construction activities;
- Assign a Construction Relations team inclusive of a manager, senior officers, and social media strategist to develop and implement the Metro Board's adopted Construction Relations model. The team will conduct the outreach program to inform the general public about the construction process, planned roadway closures, and anticipated mitigations through community briefings in public meeting spaces and use of signage (banners, etc.);
- Develop and implement a program with business owners to minimize effects to businesses during construction activities, including but not limited to signage, Eat, Shop, Play, and promotional programs;
- Consult and seek input on the designation and identification of haul routes and hours of operation for trucks with the local jurisdictions and Caltrans. The selected routes should minimize noise, vibration, and other effects;
- To the extent practical, maintain traffic lanes in both directions, particularly during the morning and afternoon peak hours;
- Maintain access to adjacent businesses via existing or temporary driveways throughout the construction period; and
- Coordinate potential road closures and detour routes with local school districts.

Combined, these measures would partially address adverse effects and significant impacts on traffic flow during the construction period. However, since significant impacts could remain, and additional feasible mitigation measures have not been identified, impacts would be significant and unavoidable under CEQA and adverse under NEPA.

Parking

No construction mitigation measures are required.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-1 described under Alternative 1 above.

Operational Mitigation Measures

Transit

No mitigation measures are required or proposed to mitigate the non-adverse and less-than-significant operational impacts on transit.

Traffic

Implementation of this alternative, would result in significant traffic impacts on the project corridor and along parallel corridors during operation. Typical mitigation measures that would add vehicular capacity, such as lane configuration changes that would increase capacity of the roadways or

restrictions in allowable turning movements, are considered infeasible due to ROW constraints or secondary effects to upstream and downstream locations. No other feasible mitigation measures have been identified.

Parking

No operational mitigation measures are required.

Pedestrian and Bicycle Facilities

Please see the mitigation measures MM-TRA-2 and MM-TRA-3 under Alternative 1 above.

Impacts Remaining After Mitigation

NEPA Finding

Construction Impacts

Alternative 2 would result in adverse construction effects on transit, traffic, and bicycle facilities and non-adverse effects to parking and pedestrian facilities after implementation of proposed mitigation measures.

Operational Impacts

Alternative 2 would result in non-adverse operational effects on local transit lines and adverse effects on traffic. However, Alternative 2 would result in beneficial regional effects on transit service.

Effects on parking and pedestrian facilities would not be adverse, and effects on bicycle facilities would be adverse due to the infeasibility of bicycle lanes within the project corridor and the conflict with the adopted City of Los Angeles Bicycle Plan.

CEQA Determination

Construction Impacts

Alternative 2 would result in significant construction impacts on transit, traffic, and bicycle facilities, and less-than-significant impacts on parking and pedestrian facilities.

Operational Impacts

Alternative 2 would result in significant traffic and bicycle facilities impacts and less-than-significant impacts on transit, parking, and pedestrian facilities after implementation of proposed mitigation measures.

3.3.5 LRT Alternatives (Alternatives 3 and 4)

3.3.5.1 Existing with Alternative 3 – Low-Floor LRT Tram

The potential impacts of Alternative 3 under CEQA and NEPA are summarized in the table below and discussed in detail in the text that follows.

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	Yes	No	Yes	No	No	—	No	—	Yes	No
Operations	No	No	Yes	No	No	—	No	—	Yes	No
Cumulative	No	No	Yes	No	No	—	No	—	Yes	No

Yes = Significant impact under CEQA; adverse effect under NEPA.
No = No impact or less-than-significant impact under CEQA; no effect or no adverse effect under NEPA.

Construction Impacts

Transit

Construction of Alternative 3 would occur over a period of four years. Construction activity would most likely be divided into separate work zones with varying levels of construction.

Construction activities could result in temporary lane or street closures, which would increase congestion along the project corridor and reduce travel times for buses and other motor vehicles. Because of the magnitude of construction and length of time required to construct the guideway, stations, overhead contact system (OCS), traction power substations (TPSS), maintenance and storage facilities (MSF), and communication and signaling systems, the construction impacts on transit would be adverse under NEPA and significant under CEQA.

Traffic

Because of the potential for temporary lane or street closures, impacts on traffic and vehicle travel would be adverse under NEPA and significant under CEQA.

Parking

On-street parking would be prohibited within work areas, as prescribed in the Traffic Control Plans to be approved by LADOT and the City of San Fernando. However, the supply of parking on adjacent streets and in off-street lots is expected to be adequate with respect to demand. Therefore, impacts on parking would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Construction of Alternative 3 would require closure and permanent removal of bicycle lanes within the work zones along the corridor. This would be an adverse effect under NEPA and a significant impact under CEQA.

Alternative 3 would result in temporary non- adverse effects and less-than-significant impacts on pedestrian facilities during construction due to temporary intersection and crosswalk closures.

Operational Impacts

Transit

Alternative 3 would include a total of 28 stations. Metro bus service would be eliminated along the length of the Van Nuys Boulevard portion of the project alignment. Bus service would be provided north of San Fernando Road on Van Nuys Boulevard by Local Line 233S, while Rapid Line 761S would operate south of the Metro Orange Line to Westwood. The transit headways would be as follows:

- The Low-Floor LRT/Tram would operate at four-minute peak headways and eight-minute off-peak headways;
- Rapid Line 761S – Six-minute peak headways and 12-minute off-peak headways; and
- Local Line 233S – Eight-minute peak headways and 16-minute off-peak headways.

Proposed transit improvements would result in 8,452 additional daily transit trips between the Metro Orange Line and the Sylmar/San Fernando Metrolink station versus existing conditions.

Under Alternative 3, local bus service would be removed on Van Nuys Boulevard between San Fernando Road on the north and the Metro Orange Line on the south. The Low-Floor LRT/Tram service would replace that local service, although the transit stop distances would increase within the service corridor. The presence of dedicated signal phases for the new transit service could improve travel times and the reliability of the transit service. Therefore, transit operational impacts would be minor and less than significant.

Traffic

Intersections

A total of 5 of the 73 study intersections along the project corridor would operate at LOS E or F during weekday peak hours. Table 3-17 identifies the intersections that would operate at LOS E or F in the AM and PM peak hours or would be significantly affected as a result of implementation of Alternative 3. As shown in the table, significant traffic impacts would occur at 16 study intersections. Figure 3-8 illustrates the level of service for the overall study area.

Under Alternative 3, the traffic signal on Van Nuys Boulevard at the Panorama Mall (between Chase Street and Roscoe Boulevard) would be removed to accommodate the proposed Low-Floor LRT/Tram's dedicated median; only through movements on Van Nuys Boulevard would be permitted. As a result, the intersection was not analyzed.

Left-turn movements would be permitted at primary intersections and prohibited at secondary intersections because of the installation of the median's fixed guideway. At minor intersections, only right turns in and out of the side street would be allowed.

Under Alternative 3, the shifts in traffic to the parallel Sepulveda and Woodman corridors would cause 6 of the 50 study intersections to operate at LOS E or F. In addition, significant traffic impacts would occur at nine of these intersections, as summarized in Table 3-18.

Table 3-17: Alternative 3 – Intersections Operating at LOS E or F and/or Significantly Affected under Existing with Project Conditions

Study Intersections		Existing Conditions				Existing with Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
2	San Fernando Rd & Hubbard St	14.1	B	18.0	B	32.3	C	30.4	C	18.2	12.4	Yes
3	Truman St & Hubbard St	16.4	B	17.6	B	29.2	C	31.1	C	12.8	13.5	Yes
6	San Fernando Rd & San Fernando Mission Blvd	6.6	A	7.7	A	23.4	C	25.6	C	16.8	17.9	Yes
17	San Fernando Rd & Paxton St	32.7	C	57.6	E	35.3	D	64.0	E	2.6	6.4	Yes
19	San Fernando Rd & Van Nuys Blvd	34.2	C	41.9	D	36.6	D	46.7	D	2.4	4.8	Yes
27	Woodman Ave & Van Nuys Blvd	33.5	C	35.0	C	29.8	C	43.6	D	-3.7	8.6	Yes
30	Van Nuys Blvd & Nordhoff St	45.6	D	47.6	D	60.0	E	54.6	D	14.4	7.0	Yes
31	Van Nuys Blvd & Rayen St	4.8	A	12.4	B	8.3	A	24.0	C	3.5	11.6	Yes
34	Van Nuys Blvd & Chase St	25.1	C	34.9	C	25.2	C	47.6	D	0.1	12.7	Yes
36	Van Nuys Blvd & Roscoe Blvd	48.0	D	46.8	D	54.0	D	58.7	E	6.0	11.9	Yes
39	Van Nuys Blvd & Blythe St	11.6	B	9.0	A	45.9	D	41.7	D	34.3	32.7	Yes
41	Van Nuys Blvd & Keswick St	10.0	A	9.2	A	20.3	C	37.1	D	10.3	27.9	Yes
42	Van Nuys Blvd & Saticoy St	36.2	D	31.3	C	67.7	E	>100	F	31.5	-	Yes
43	Van Nuys Blvd & Valerio St	14.6	B	14.9	B	20.1	C	28.2	C	5.5	13.3	Yes
44	Van Nuys Blvd & Sherman Way	43.0	D	59.8	E	47.9	D	>100	F	4.9	-	Yes
47	Van Nuys Blvd & Vanowen St	24.8	C	32.6	C	31.4	C	54.1	D	6.6	21.5	Yes
Source: KOA, 2016.												

Figure 3-8: Alternative 3 – Study Area AM/PM LOS Map

Source: KOA, 2016

Table 3-18: Alternative 3 – Parallel Corridors, Intersections Operating at LOS E or F and/or Significantly Affected under Existing with Project Conditions

Study Intersections		Existing Conditions				Existing with Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
74	Sepulveda Blvd & Lassen St	29.1	C	25.4	C	24.1	C	33.7	C	-5.0	8.3	**Yes**
81	Sepulveda Blvd & & Roscoe Blvd	43.9	D	43.3	D	54.5	D	48.6	D	10.6	5.3	**Yes**
82	Sepulveda Blvd & Lanark St – Sepulveda Pl	31.4	C	9.3	A	49.1	D	11.5	B	17.7	2.2	**Yes**
87	Sepulveda Blvd & Sherman Way	40.4	D	43.0	D	44.4	D	46.5	D	4.0	3.5	**Yes**
90	Sepulveda Blvd & Victory Blvd	34.4	C	35.6	D	43.2	D	30.2	C	8.8	-5.4	**Yes**
96	Sepulveda Blvd & Burbank Blvd	>100	F	>100	F	50.1	D	56.9	E	-	-	No
98	Sepulveda Blvd & Magnolia Blvd	28.7	C	>100	F	17.9	B	60.1	E	-10.8	-	No
99	Sepulveda Blvd & US-101 WB (NB) off-ramp	33.6	C	15.5	B	37.2	D	24.8	C	3.6	9.3	**Yes**
102	Sepulveda Blvd & Ventura Blvd	44.7	D	97.4	F	32.6	C	58.6	E	-12.1	-38.8	No
110	Woodman Ave & Roscoe Blvd	56.9	E	71.6	E	52.5	D	66.5	E	-4.4	-5.1	No
111	Woodman Ave & Lanark St – Cantara St	96.6	F	>100	F	9.5	A	15.6	B	-87.1	-	No
114	Woodman Ave & Saticoy St	63.8	E	58.9	E	63.7	E	46.8	D	-0.1	-12.1	No
117	Woodman Ave & Sherman Way	25.3	C	38.3	D	36.2	D	56.0	E	10.9	17.7	**Yes**
119	Woodman Ave &Vanowen St	30.9	C	28.4	C	44.0	D	32.2	C	13.1	3.8	**Yes**
121	Woodman Ave & Victory Blvd	32.4	C	35.5	D	40.1	D	45.8	D	7.7	10.3	**Yes**
Source: KOA, 2016.												

Performance Measures

Under Alternative 3, average vehicle speeds would improve slightly compared with the No-Build Alternative. These changes may be attributed to an increase in transit ridership, changes in travel patterns, and/or a decrease in traffic conflicts because of turning movement restrictions/prohibitions. The benefits of this alternative include reductions in VMT and VHT values, although these reductions would be greater under the BRT alternatives and Alternative 4.

Maintenance and Storage Facilities

Alternative 3 would require the addition of an MSF. There are a total of three potential MSF sites. The additional traffic as a result of staffing at the potential MSFs is not projected to cause an increase in intersection delay. The typical arrival and departure times for employees are outside typical weekday peak travel periods. Employees would travel to and from the MSF before the AM peak hour and before trains begin morning operations and after the PM peak hour when trains begin operating at lower frequencies.

Rail vehicles being serviced at the three MSF location options would cross vehicular travel lanes on Van Nuys Boulevard to travel between the MSF site and the guideway. Movements of Low-Floor LRT/Tram vehicles to and from the final MSF site would result in an increase in adjacent intersection delay. However, with planned implementation of grade crossing devices (e.g., crossing gates, flashing signals, pedestrian safety signage) and traffic/conflict management improvements on local streets, given the fact that train crossings would be made only by vehicles entering or exiting service and not at a regular frequency during peak periods, impacts would not be adverse under NEPA and would be less than significant under CEQA.

Parking

All 1,140 on-street parking spaces on Van Nuys Boulevard, in addition to 15 adjacent cross-street spaces, would be removed, for a total decrease in on-street parking supply of 1,155. Approximately 152 off-street parking spaces would be removed to accommodate the TPSS and the Van Nuys/San Fernando station. Parking would be removed along San Fernando Road to accommodate median-running and mixed-flow operations of the Low-Floor LRT/Tram.

Specific areas along the Van Nuys Boulevard corridor may encounter parking shortfalls and access issues on weekdays and/or weekends, just as for the other build alternatives, except for an increased potential shortfall near the Metro Orange Line and along San Fernando Road. The adjacent parking areas along Van Nuys Boulevard and San Fernando Road would be able to accommodate this reduction in on- and off-street parking with the available on-street and/or off-street parking supply. Thus, the parking impacts due to the removal of the on- and off-street parking would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Existing and planned pedestrian and bicycle facilities would be affected under this alternative. Alternative 3 would conflict with the City of Los Angeles Bicycle Plan because designated bicycle lanes on Van Nuys Boulevard would not be feasible under this alternative. However, it should also be noted that the Van Nuys Boulevard corridor is designated as a Transit Priority Segment within the City of Los Angeles General Plan Framework Element, which creates a conflict between the General Plan and the Bicycle Plan.

Pedestrian routes would be lengthened where minor intersections would be permanently closed. Pedestrian crossings that remain would be improved with enhanced design and safety features. Overall operational effects and impacts on pedestrian facilities would not be adverse under NEPA and would be less than significant under CEQA.

Cumulative Impacts

Alternative 3 would result in the same cumulative impacts that could occur under Alternative 2.

Mitigation Measures

Compliance Requirements and Design Features

The Low-Floor LRT/Tram stations would be fully compliant with ADA and Metro Rail Design Criteria pertaining to design features such as rail platforms, rail station signs, public address systems, clocks, ramps, and track crossings.

Also see the discussion above under Alternative 1.

Construction Mitigation Measures

Transit

Please see mitigation measure MM-TRA-6 under Alternative 2, above.

Traffic

Please see mitigation measure MM-TRA-7 under Alternative 2, above.

Parking

No construction mitigation measures are required.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-1 and MM-TRA-2 under Alternative 1, above.

Operational Mitigation Measures

Transit

No mitigation measures are proposed or are required.

Traffic

Implementation of this alternative would result in significant traffic impacts on the project corridor and along parallel corridors during operation. Typical mitigation measures that would add vehicular capacity, such as lane configuration changes that would increase the capacity of the roadways or restrictions in allowable turning movements, were considered infeasible because of ROW constraints or secondary effects on upstream and downstream locations. No other feasible mitigation measures have been identified.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-3 and MM-TRA-4 under Alternative 1, above.

Impacts Remaining After Mitigation

NEPA Finding

Construction Impacts

Alternative 3 would result in adverse construction effects on transit, traffic, and bicycle facilities and non-adverse effects on parking and pedestrian facilities after implementation of proposed mitigation measures.

Operational Impacts

Alternative 3 would result in adverse localized operational effects on traffic. However, Alternative3 would result in beneficial regional effects on transit.

Effects on parking and pedestrian facilities would not be adverse. Effects on bicycle facilities would be adverse because of conflicts with the Bicycle Plan.

CEQA Determination

Construction Impacts

Alternative 3 would result in significant construction impacts on transit, traffic, and bicycle facilities and less-than-significant impacts on parking and pedestrian facilities.

Operational Impacts

Alternative 3 would result in significant bicycle facility and traffic impacts and less-than-significant impacts on transit, parking, and pedestrian facilities after implementation of proposed mitigation measures.

3.3.5.2 Alternative 3 – Low-Floor LRT Tram

The potential impacts of Alternative 3 under CEQA and NEPA are summarized in the table below and discussed in detail in the text that follows.

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	Yes	No	Yes	No	No	—	No	—	Yes	No
Operations	No	No	Yes	No	No	—	No	—	Yes	No
Cumulative	No	No	Yes	No	No	—	No	—	No	No

Yes = Significant impact under CEQA; adverse effect under NEPA.
No = No impact or less-than-significant impact under CEQA; no effect or minor adverse effect under NEPA.

Construction Impacts

Because the Low-Floor LRT/Tram vehicles would operate on rail tracks and would be powered by overhead electrical wires, power duct bank, additional transit structures and associated infrastructure would be required to operate this alternative that would differ from those described above for the BRT alternatives. Construction of Alternative 3 would occur over a period of four years. The construction activity would likely be divided into separate work zones with varying levels of construction.

At the start of construction within each work area, on-street parking areas would be removed for project-related construction activities. Temporary street and lane closures may be necessary under this alternative. The extent and duration of the closures would depend on a number of factors, including the construction contract limits and individual contractor's choices, and would be coordinated with the Cities of Los Angeles and San Fernando, as necessary. Restrictions on the extent and duration of the closures can be incorporated in the project construction specifications. In some cases, short-term full closures might be substituted for extended partial closures to reduce overall impacts. Community outreach to keep the public and businesses advised as to closures would be provided. Signage and access to businesses would also be provided.

Under this alternative, the construction contractor would develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas. Additionally, where feasible, Metro would temporarily restripe roadways including restriping turn lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures. A majority of construction-related travel (i.e., deliveries, hauling, and worker trips) would be scheduled during the off-peak hours.

On-street parking may be removed to maximize vehicular capacity at those locations affected by construction closures. Additionally, traffic control officers may be placed at major intersections during peak hours to minimize delays related to construction activities.

Transit

Construction activities would increase congestion along the project corridor and increase travel times for buses and other motor vehicles. Due to the magnitude of construction and length of time required to construct the guideway, stations, overhead contact system (OCS), traction power substations (TPSS), maintenance and storage facilities (MSF), and communications and signaling, the construction impacts on transit would be adverse under NEPA and significant under CEQA.

Traffic

Because of the potential for temporary lane or street closures, the impacts on traffic and vehicle travel would be adverse under NEPA and significant under CEQA.

Parking

On-street parking would be prohibited within work areas as prescribed in the Traffic Control Plans that will be prepared and approved by LADOT and the City of San Fernando. As indicated by the results of the parking study for project operations, the corridor PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Therefore, the impacts on parking would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Construction of Alternative 3 would require the closure and permanent removal of bicycle lanes located within the work zones along the corridor. This would be an adverse effect under NEPA and a significant impact under CEQA.

Alternative 3 would result in temporary non- adverse effects and less-than-significant impacts on pedestrian facilities during construction due to potential temporary intersection and crosswalk closures.

Operational Impacts

Transit

Alternative 3 would include a total of 28 stations. Metro bus service would be eliminated along the length of the Van Nuys Boulevard portion of the project alignment. Bus service would be provided north of San Fernando Road on Van Nuys Boulevard via Local Line 233S, while Rapid Line 761S would operate south of the Metro Orange Line to Westwood. Transit headways would be as follows:

- The Low-Floor LRT/Tram would operate at four-minute peak headways and eight-minute off-peak headways;
- Rapid Line 761S – Six-minute peak headways and 12-minute off-peak headways; and
- Local Line 233S – Eight-minute peak headways and 16-minute off-peak headways.

Proposed transit improvements would result in an increase of 8,452 daily transit trips between the Metro Orange Line and the Sylmar/San Fernando Metrolink station versus the future No-Build/baseline conditions.

Under Alternative 3, local bus service would be removed on Van Nuys Boulevard between San Fernando Road on the north and the Metro Orange Line on the south. The Low-Floor LRT/Tram service would replace that local service, although the transit stop distances would be increased within the service corridor. The presence of dedicated signal phases for the new transit service would potentially improve travel times and the reliability of the transit service. Therefore, transit operational impacts would be minor and less than significant.

Traffic

Intersections

Level-of-service analysis results for this scenario are discussed here, followed by significant impact determinations.

A total of 27 of the 73 study intersections along the project corridor would operate at LOS E or F during either one or both of the weekday peak hours. Operations at the following intersections would worsen to or within poor conditions, versus the No-Build future baseline conditions, during the separately analyzed peak hours:

- LOS at 26 study intersections would worsen to/within LOS E or F during the AM peak hour
- LOS at 26 study intersections would worsen to/within LOS E or F during the PM peak hour

Table 3-19 identifies the intersections that would operate at LOS E or F in the AM and PM peak hours or would be significantly affected as a result of implementation of Alternative 3. Within the list of intersections included in this table, significant traffic impacts would occur at 32 study intersections. Figure 3-9 illustrates the level of service for the overall study area.

Table 3-19: Alternative 3 – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
2	San Fernando Rd & Hubbard St	22.6	C	45.7	D	65.8	E	>100	F	43.2	–	**Yes**
3	Truman St & Hubbard St	45.3	D	72.2	E	63.0	E	>100	F	17.7	–	**Yes**
4	San Fernando Rd & Workman St	8.3	A	11.5	B	18.6	B	56.8	E	10.3	45.3	**Yes**
6	San Fernando Rd & San Fernando Mission Blvd	8.1	A	51.4	D	26.7	C	66.8	E	18.6	15.4	**Yes**
9	Truman St & Maclay Ave	87.6	F	>100	F	88.6	F	>100	F	1.0	–	**Yes**
10	San Fernando Rd & Brand Blvd	13.5	B	34.8	C	13.1	B	59.4	E	-0.4	24.6	**Yes**
11	Truman St & Brand Blvd	>100	F	73.0	E	>100	F	>100	F	–	–	**Yes**
12	San Fernando Rd & Wolfskill St	8.0	A	8.2	A	9.7	A	>100	F	1.7	–	**Yes**
13	Truman St & Wolfskill St	36.4	D	26.2	C	36.0	D	59.4	E	-0.4	33.2	**Yes**

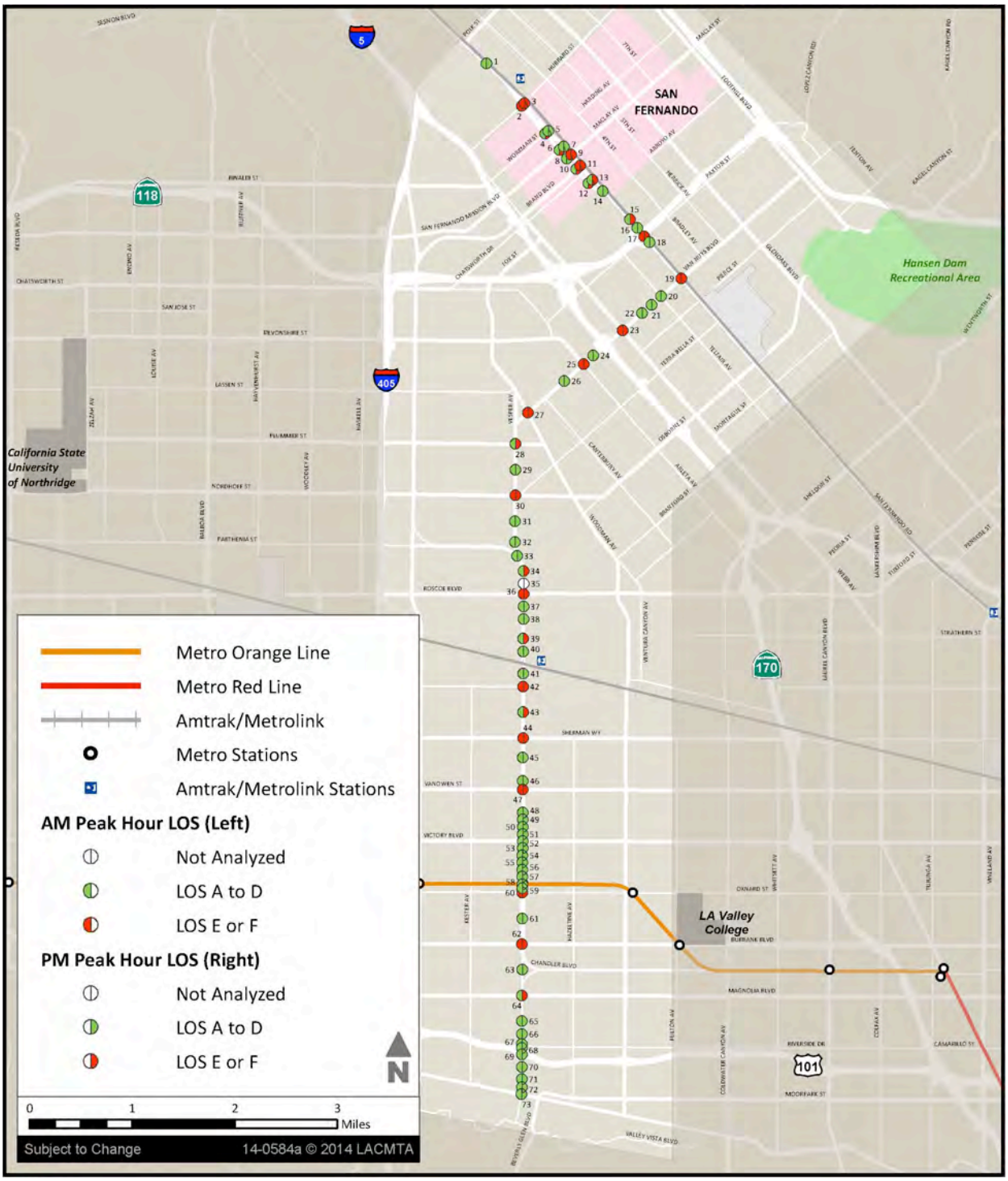
Study Intersections		Future No Build				Future With Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
15	San Fernando Rd & Desmond St	31.1	C	>100	F	31.4	C	>100	F	0.3	–	No
17	San Fernando Rd & Paxton St	99.7	F	76.6	E	>100	F	>100	F	–	–	**Yes**
18	San Fernando Rd & SR-118 EB on-/off-ramps	47.3	D	27.0	C	52.1	D	25.7	C	4.8	-1.3	Yes
19	San Fernando Rd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
23	Laurel Canyon Blvd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
25	Arleta Ave & Van Nuys Blvd	65.2	E	75.1	E	87.3	F	91.6	F	22.1	16.5	**Yes**
26	Beachy Ave & Van Nuys Blvd	14.2	B	10.7	B	44.9	D	15.6	B	30.7	4.9	Yes
27	Woodman Ave & Van Nuys Blvd	40.0	D	50.3	D	56.6	E	81.5	F	16.6	31.2	**Yes**
28	Van Nuys Blvd & Plummer St	32.9	C	38.9	D	42.6	D	59.1	E	9.7	20.2	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
30	Van Nuys Blvd & Nordhoff St	72.0	E	76.7	E	>100	F	>100	F	–	–	**Yes**
34	Van Nuys Blvd & Chase St	23.7	C	72.2	E	35.7	D	>100	F	12.0	–	**Yes**
36	Van Nuys Blvd & Roscoe Blvd	52.9	D	53.8	D	88.4	F	>100	F	35.5	–	**Yes**
38	Van Nuys Blvd & Lanark St	29.4	C	33.0	C	43.9	D	38.6	D	14.5	5.6	Yes
39	Van Nuys Blvd & Blythe St	18.6	B	20.1	C	54.6	D	71.1	E	36.0	51.0	**Yes**
40	Van Nuys Blvd & Arminta St	14.6	B	24.8	C	24.9	C	23.0	C	10.3	-1.8	Yes
41	Van Nuys Blvd & Keswick St	21.6	C	24.5	C	16.7	B	42.9	D	-4.9	18.4	Yes
42	Van Nuys Blvd & Saticoy St	92.4	F	>100	F	>100	F	>100	F	–	–	**Yes**
43	Van Nuys Blvd & Valerio St	15.5	B	23.6	C	23.5	C	69.3	E	8.0	45.7	**Yes**
44	Van Nuys Blvd & Sherman	57.5	E	>100	F	88.2	F	>100	F	30.7	–	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
	Way											
45	Van Nuys Blvd & Vose St	13.3	B	18.3	B	13.4	B	34.4	C	0.1	16.1	Yes
47	Van Nuys Blvd & Vanowen St	70.4	E	89.3	F	>100	F	>100	F	–	–	**Yes**
60	Van Nuys Blvd & Oxnard St	45.9	D	55.5	E	86.0	F	65.0	E	40.1	9.5	**Yes**
62	Van Nuys Blvd & Burbank Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**

Source: KOA, 2015.

Figure 3-9: Alternative 3 – Study Area AM/PM LOS Map



Source: KOA, 2014

Under this alternative, the traffic signal on Van Nuys Boulevard and the Panorama Mall (between Chase Street and Roscoe Boulevard) would be removed to accommodate the proposed Low-Floor LRT/Tram dedicated median; only through movements on Van Nuys Boulevard would be permitted. As a result, the intersection was not analyzed.

Left-turn movements would be permitted at primary intersections and prohibited at secondary intersections due to the installation of the median fixed guideway. At minor intersections, only right turns in and out of the side street would be allowed.

Under this alternative, the shifts in traffic to the Sepulveda and Woodman parallel corridors would cause 22 of the 50 study intersections to operate at or worsen within LOS E or F. In addition, significant traffic impacts (criteria defined in Table 3-2) would occur at 23 of these intersections as summarized in Table 3-20.

Performance Measures

Under Alternative 3, average vehicle speeds would slightly improve versus the No-Build Alternative. These changes may be attributed to an increase in transit ridership, change in travel patterns, and/or a decrease in traffic conflicts because of turning movement restrictions/prohibition. The benefits of this alternative include reductions in VMT and VHT values, although these reductions would be greater under the BRT alternatives and Alternative 4.

Maintenance and Storage Facilities

Alternative 3 would require the addition of an MSF. There are a total of three potential MSF sites. The additional traffic as a result of staffing at the potential MSFs is not projected to cause an increase in intersection delay. The typical arrival and departure times for employees are outside typical weekday peak travel periods. Employees would travel to and from the MSF before the AM peak hour and before trains begin morning operations, and also after the PM peak hour when trains begin operating at lower frequencies.

Rail vehicles being serviced at the three MSF location options would cross vehicular travel lanes on Van Nuys Boulevard to travel between the MSF site and the guideway. Movements of the Low-Floor LRT/Tram vehicles to and from the final MSF site would result in an increase in adjacent intersection delay. However, with the planned implementation of grade crossing devices (e.g., crossing gates, flashing signals, and pedestrian safety signage) and traffic/conflict management improvements to the local streets and given the fact that train crossings would only be made by vehicles entering or exiting service and not at a regular frequency during peak periods, impacts would not be adverse under NEPA and would be less than significant under CEQA.

Parking

All 1,140 on-street parking spaces on Van Nuys Boulevard in addition to 15 adjacent cross-street spaces would be removed for a total decrease in on-street parking supply of 1,155. Approximately 152 off-street parking spaces would be removed to accommodate the TPSS and the Van Nuys/San Fernando Station. Parking would be removed along San Fernando Road to accommodate the median-running and mixed-flow operations of the Low-Floor LRT/Tram.

Specific areas along the Van Nuys Boulevard corridor that may encounter parking shortfalls and access issues during the weekday and/or weekend are comparable to the other build alternatives, except for an increased potential shortfall near the MOL, and along San Fernando Road.

Table 3-20: Alternative 3 – Parallel Corridors - Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
74	Sepulveda Blvd & Lassen St	46.2	D	52.2	D	43.9	D	56.1	E	-2.3	3.9	**Yes**
75	Sepulveda Blvd & Plummer St	51.6	D	53.4	D	51.9	D	56.0	E	0.3	2.6	**Yes**
77	Sepulveda Blvd & Nordhoff St	72.9	E	89.7	F	69.0	E	95.1	F	-3.9	5.4	**Yes**
79	Sepulveda Blvd & Parthenia St	>100	F	63.5	E	99.4	F	67.5	E	–	4.0	**Yes**
80	Sepulveda Blvd & Chase St	13.8	B	15.6	B	8.1	A	77.3	E	-5.7	61.7	**Yes**
81	Sepulveda Blvd & & Roscoe Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
82	Sepulveda Blvd & Lanark St – Sepulveda Pl	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
83	Sepulveda Blvd & Raymer St	6.3	A	54.4	D	3.0	A	63.8	E	-3.3	9.4	**Yes**
87	Sepulveda Blvd & Sherman Way	51.5	D	58.0	E	52.6	D	62.9	E	1.1	4.9	**Yes**
89	Sepulveda Blvd & Vanowen St	78.6	E	71.0	E	81.1	F	69.6	E	2.5	-1.4	**Yes**
90	Sepulveda Blvd & Victory Blvd	73.4	E	44.5	D	82.3	F	51.0	D	8.9	6.5	**Yes**
94	Sepulveda Blvd & Oxnard St	36.2	D	60.0	E	32.5	C	82.2	F	-3.7	22.2	**Yes**
95	Sepulveda Blvd & Hatteras St	13.4	B	23.1	C	17.0	B	44.9	D	3.6	21.8	**Yes**
96	Sepulveda Blvd & Burbank Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
98	Sepulveda Blvd & Magnolia Blvd	48.6	D	>100	F	43.7	D	>100	F	-4.9	–	**Yes**
99	Sepulveda Blvd & US-101 WB(NB) off-ramp	60.7	E	23.8	C	50.2	D	51.2	D	-10.5	27.4	**Yes**
100	Sepulveda Blvd & Camarillo St	32.6	C	>100	F	21.6	C	>100	F	-11.0	–	No
102	Sepulveda Blvd & Ventura Blvd	44.3	D	>100	F	44.3	D	>100	F	0.0	–	No
108	Woodman Ave & Chase St	55.7	E	57.7	E	57.6	E	60.2	E	1.9	2.5	**Yes**

Study Intersections		Future No Build				Future With Project (Alternative 3)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
110	Woodman Ave & Roscoe Blvd	91.1	F	>100	F	91.2	F	>100	F	0.1	–	**Yes**
111	Woodman Ave & Lanark St–Cantara St	>100	F	>100	F	>100	F	>100	F	–	–	No
114	Woodman Ave & Saticoy St	81.5	F	98.0	F	82.5	F	>100	F	1.0	–	**Yes**
116	Woodman Ave & Valerio St	33.9	C	42.9	D	43.7	D	45.5	D	9.8	2.6	**Yes**
117	Woodman Ave & Sherman Way	43.9	D	79.8	E	45.5	D	83.0	F	1.6	3.2	**Yes**
119	Woodman Ave &Vanowen St	45.7	D	53.5	D	47.3	D	56.7	E	1.6	3.2	**Yes**
121	Woodman Ave & Victory Blvd	74.6	E	48.8	D	74.3	E	58.5	E	-0.3	9.7	**Yes**
Source: KOA, 2015.												

As shown in Appendix G, the adjacent PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Thus, the parking impacts due to the removal of the on- and off-street parking would not be adverse under NEPA and would be less than significant under CEQA.

There may be access issues for delivery trucks for smaller businesses (those without truck loading bays or other on-site loading/delivery facilities) since they would not be able to dwell within the roadway during operations. Consequently, they would either have to use off-street parking facilities, or parking on an adjacent street, or alleyways behind the property. This impact would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Existing and planned pedestrian and bicycle facilities would be affected under this alternative. Alternative 3 would conflict with the City of Los Angeles Bicycle Plan, as designated bicycle lanes on Van Nuys Boulevard would not be feasible under this alternative. However, it should also be noted that Van Nuys Boulevard corridor is designated as a Transit Priority Segment within the City of Los Angeles General Plan Framework Element, which creates a conflict between the General Plan and the Bicycle Plan.

Pedestrian routes would be lengthened where minor intersections would be permanently closed. Pedestrian crossings that remain would be improved with enhanced design and safety features. Overall operational effects and impacts on pedestrian facilities would not be adverse under NEPA and would be less than significant under CEQA.

Cumulative Impacts

Alternative 3 would result in the same cumulative impacts hat could occur under Alternative 2.

Mitigation Measures

Construction Mitigation Measures

Transit

Please see mitigation measure MM-TRA-4 under Alternative 2 above.

Traffic

Please see mitigation measure MM-TRA-5 under Alternative 2 above.

Parking

No construction mitigation measures are required.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-1 under Alternative 1 above.

Operational Mitigation Measures

Transit

No mitigation measures are proposed or are required.

Traffic

No other feasible mitigation measures have been identified.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-2 and MM-TRA-3 under Alternative 1 above.

Impacts Remaining After Mitigation

NEPA Finding

Construction Impacts

Alternative 3 would result in adverse construction effects on transit, traffic, and bicycle facilities and non-adverse effects to parking and pedestrian facilities after implementation of proposed mitigation measures.

Operational Impacts

Alternative 3 would result in adverse localized operational effects on traffic. However, Alternative3 would result in beneficial regional effects on transit.

Effects on parking and pedestrian facilities would not be adverse. Effects on bicycle facilities would be adverse, due to conflicts with the Bicycle Plan.

CEQA Determination

Construction Impacts

Alternative 3 would result in significant construction impacts on transit, traffic, and bicycle facilities, and less-than-significant impacts on parking and pedestrian facilities.

Operational Impacts

Alternative 3 would result in significant bicycle facilities and traffic impacts, and less-than-significant impacts on transit, parking, and pedestrian facilities after implementation of proposed mitigation measures.

3.3.5.3 Alternative 4 – LRT

The potential impacts of Alternative 4 are summarized in the table below and discussed in detail in the text that follows (please note that a "Yes" in the table indicates an adverse effect under NEPA or significant impact under CEQA would occur).

	Transit		Traffic		Parking		Pedestrian		Bicycle	
Period	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated	Impact	Mitigated
Construction	Yes	No	Yes	No	No	—	No	—	Yes	No
Operations	No	No	Yes	No	No	—	No	—	Yes	No
Cumulative	No	No	Yes	No	No	—	No	—	No	No

Yes = Significant impact under CEQA; adverse effect under NEPA.
No = No impact or less than significant impact under CEQA; no effect or no adverse effect under NEPA.

Construction Impacts

The LRT vehicles would operate on rail tracks and would be powered by overhead electrical wires, power duct bank, additional transit structures and associated infrastructure would be required to operate this alternative. Construction of Alternative 4 would occur over a period of five years. The construction activity would likely be divided into separate work zones with varying levels of construction.

This alternative differs from Alternative 3 as three stations would be underground. The underground portion of the alignment would be constructed using either a cut-and-cover technique or a tunnel boring machine, or a combination of both. The method will be determined by the construction contractor, who will take into consideration a number of factors in determining which method would be the most appropriate for the subway portion of the LRT alignment. Regardless of the subway construction method, the process would necessitate some full street closures in the early stages of the station construction process. During periods of full street closure, delays to transit operations and traffic would be realized resulting in increased levels of congestions and travel times.

Under this alternative, the construction contractor would develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas. Additionally, where feasible, Metro would temporarily restripe roadways including restriping turn lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures. A majority of construction-related travel (i.e., deliveries, hauling, and worker trips) would be scheduled during the off-peak hours.

At the start of construction within each work area, on-street parking areas would be removed for project-related construction activities. Temporary street and lane closures may be necessary under this alternative. The extent and duration of the closures would depend on a number of factors, including the construction contract limits and individual contractor's choices, and would be coordinated with the Cities of Los Angeles and San Fernando, as necessary. Restrictions on the extent and duration of the closures can be incorporated in the project construction specifications. In some cases, short-term full closures might be substituted for extended partial closures to reduce overall impacts. Community outreach to keep the public and businesses advised as to closures would be provided. Signage and access to businesses would also be provided. Additionally, traffic control officers may be placed at major intersections during peak hours to minimize delays related to construction activities.

Transit

Construction of Alternative 4 could take up to five years, which is the longest construction period of the four build alternatives. The impacts on transit would be the same as those described above for Alternative 3. The effects would be adverse under NEPA and significant under CEQA due to the estimated duration and magnitude of construction activities required to relocate utilities, remove the existing roadbed, construct the subway portion of the alignment, install high-floor LRT system trackage, signals, power infrastructure, and install stations and related infrastructure.

Traffic

The construction traffic impacts of Alternative 4 would be adverse under NEPA and significant under CEQA as a consequence of the estimated duration and magnitude of construction, which would include lane and street closures and potentially 2.5 miles of cut and cover construction for the subway segment of the alignment.

Parking

Impacts would be to the same as under Alternative 3. On-street parking would be prohibited within work areas as prescribed in the Traffic Control Plans to be approved by LADOT and the City of San Fernando.

As indicated by the results of the parking study for project operations, the corridor PAZs would be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Lane closures and other partial roadway closures due to project construction would not encompass the entire corridor at a single time. Therefore, impacts would be less than those identified for the operation period of this build alternative and would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Construction of Alternative 4 would require the permanent removal of bicycle facilities located within the work zones. This would be an adverse effect under NEPA and a significant impact under CEQA.

Impacts on pedestrian facilities would not be adverse under NEPA and would be less than significant under CEQA.

Operational Impacts

Transit

Local bus operating speeds may decrease because of the proposed traffic lane reductions along the project corridor and the resulting increases in traffic congestion. However, the transit improvements proposed under this alternative would result in an increase of 8,604 daily transit trips between the Metro Orange Line and the Sylmar/San Fernando Metrolink station, as compared to future No-Build/baseline conditions. An LRT line would improve travel times and the reliability of transit service compared to existing bus lines along the corridor. Therefore, overall operational impacts on transit service would not be adverse under NEPA and would be less than significant under CEQA.

Traffic

Intersections

Level-of-service analysis results for this scenario are discussed here, followed by significant impact determinations.

Of the 73 study intersections, 21 would operate at LOS E or F during either one or both of the weekday peak hours. Operating LOS at the following intersections would worsen to or within poor conditions during the separately analyzed peak hours, versus No-Build/baseline conditions:

- LOS at 13 study intersections would worsen to/within LOS E or F during the AM peak hour.
- LOS at 21 study intersections would worsen to/within LOS E or F during the PM peak hour.

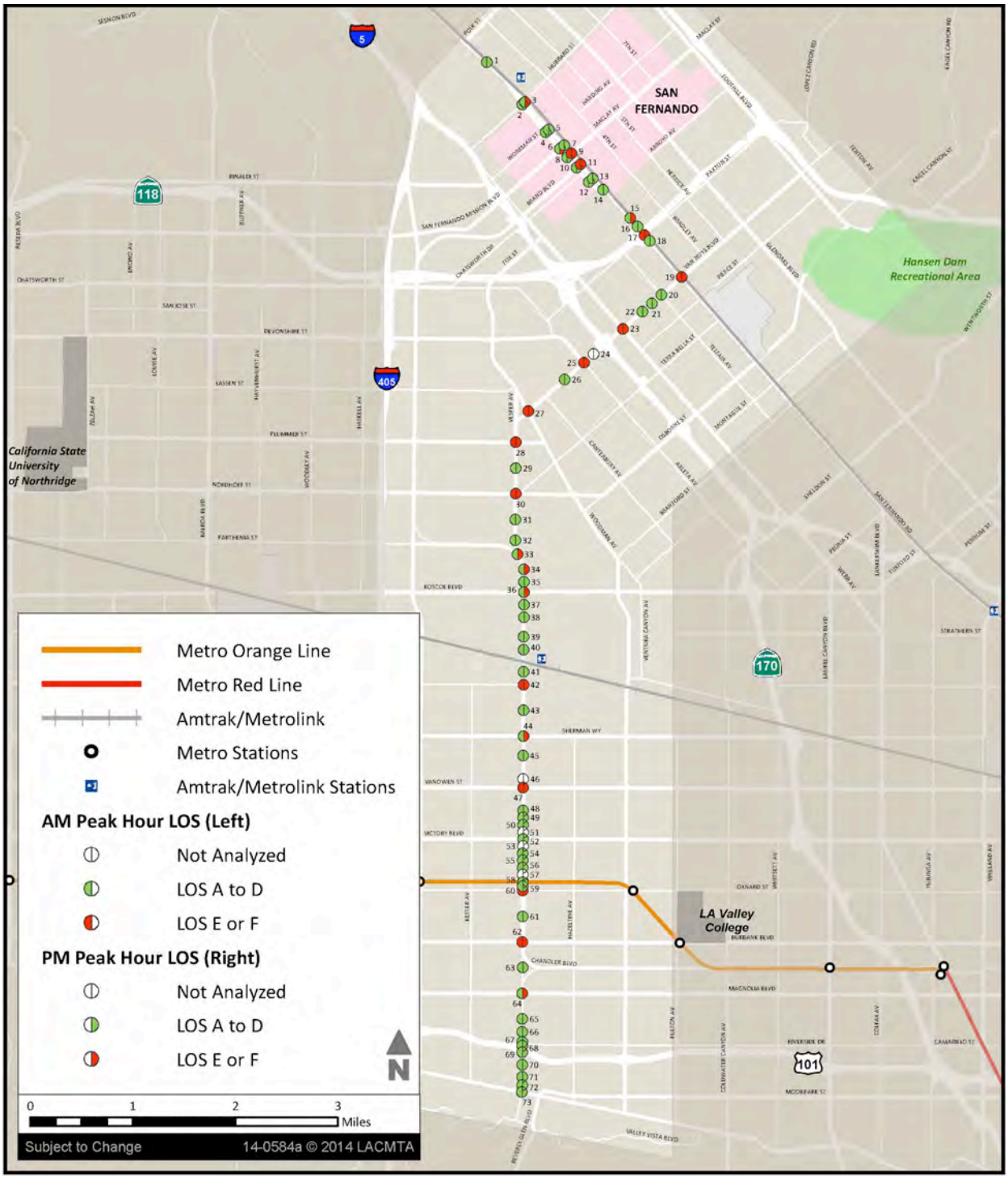
Table 3-21 identifies the study intersections along the project corridor that would operate at LOS E or F in the AM and PM peak hour and/or intersections that would be significantly affected as a result of implementation of Alternative 4. Within the list of intersections included in this table, significant traffic impacts would occur at 20 study intersections. Figure 3-10 illustrates the level of service for the overall study area.

Table 3-21: Alternative 4 – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 4)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
3	Truman St & Hubbard St	45.3	D	72.2	E	49.4	D	81.7	F	4.1	9.5	Yes
6	San Fernando Rd & San Fernando Mission Blvd	8.1	A	51.4	D	8.4	A	57.8	E	0.3	6.4	Yes
9	Truman St & Maclay Ave	87.6	F	>100	F	87.5	F	>100	F	-0.1	-	No
11	Truman St & Brand Blvd	>100	F	73.0	E	>100	F	70.0	E	-	-3.0	No
15	San Fernando Rd & Desmond St	31.1	C	>100	F	30.6	C	>100	F	-0.5	-	No
17	San Fernando Rd & Paxton St	99.7	F	76.6	E	>100	F	74.9	E	-	-1.7	Yes
19	San Fernando Rd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	-	-	Yes
20	Telfair Ave & Van Nuys Blvd	11.6	B	12.3	B	15.6	B	27.3	C	4.0	15.0	Yes
22	Haddon Ave & Van Nuys Blvd	8.0	A	14.6	B	13.1	B	29.1	C	5.1	14.5	Yes
23	Laurel Canyon Blvd & Van Nuys Blvd	>100	F	>100	F	>100	F	>100	F	-	-	Yes
25	Arleta Ave & Van Nuys Blvd	65.2	E	75.1	E	>100	F	>100	F	-	-	Yes
26	Beachy Ave & Van Nuys Blvd	14.2	B	10.7	B	41.3	D	19.8	B	27.1	9.1	Yes
27	Woodman Ave & Van Nuys Blvd	40.0	D	50.3	D	81.0	F	>100	F	41.0	-	Yes
28	Van Nuys Blvd & Plummer St	32.9	C	38.9	D	71.9	E	>100	F	39.0	-	Yes
30	Van Nuys Blvd & Nordhoff St	72.0	E	76.7	E	>100	F	>100	F	-	-	Yes
32	Van Nuys Blvd & Parthenia St	11.9	B	11.9	B	9.2	A	25.1	C	-2.7	13.2	Yes

Study Intersections		Future No Build				Future With Project (Alternative 4)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
33	Van Nuys Blvd & Parthenia St/Vesper Ave	25.4	C	49.4	D	23.6	C	84.8	F	-1.8	35.4	Yes
34	Van Nuys Blvd & Chase St	23.7	C	72.2	E	37.0	D	68.8	E	13.3	-3.4	Yes
36	Van Nuys Blvd & Roscoe Blvd	52.9	D	53.8	D	53.7	D	56.0	E	0.8	2.2	No
39	Van Nuys Blvd & Blythe St	18.6	B	20.1	C	35.6	D	38.6	D	17.0	18.5	Yes
42	Van Nuys Blvd & Saticoy St	92.4	F	>100	F	84.3	F	>100	F	-8.1	-	No
44	Van Nuys Blvd & Sherman Way	57.5	E	>100	F	54.4	D	>100	F	-3.1	-	Yes
45	Van Nuys Blvd & Vose St	13.3	B	18.3	B	23.2	C	47.1	D	9.9	28.8	Yes
47	Van Nuys Blvd & Vanowen St	70.4	E	89.3	F	>100	F	>100	F	-	-	Yes
60	Van Nuys Blvd & Oxnard St	45.9	D	55.5	E	89.8	F	63.4	E	43.9	7.9	Yes
62	Van Nuys Blvd & Burbank Blvd	>100	F	>100	F	>100	F	91.3	F	-	-	No
64	Van Nuys Blvd & Magnolia Blvd	58.4	E	80.9	F	52.6	D	64.6	E	-5.8	-16.3	No

Figure 3-10: Alternative 4 – Study Area AM/PM LOS Map



Source: KOA, 2014.

Additionally, it should be noted that left turns would be permitted at primary intersections and prohibited at secondary intersections due to the installation of the median fixed guideway. At minor intersections, right turns in and out of the side streets would be allowed. The following study intersections were not analyzed in this scenario since the traffic signals would be removed, and only through movements on Van Nuys Boulevard would be permitted:

- Bartee Avenue & Van Nuys Boulevard (#24)
- Van Nuys Boulevard & Hartland Street (#46)
- Van Nuys Boulevard & Gilmore Street (#51)
- Van Nuys Boulevard & Friar Street (#53)
- Van Nuys Boulevard & Calvert Street (#57)

With the implementation of Alternative 4, the shifts in traffic to the Sepulveda and Woodman parallel corridors would cause 17 of the 50 study intersections to operate at LOS E or F. In addition, significant traffic impacts (criteria defined in Table 3-2) would occur at six of these intersections, as shown in Table 3-22.

Performance Measures

Under Alternative 4, vehicle travel speeds may decrease because of the proposed traffic lane reductions along the Project corridor and the resulting increases in traffic congestion, where the fixed guideway and station locations would necessitate travel lane reductions. This may be attributed to potential areas of congestion where the LRT transitions from at-grade to underground in the subway section. Once underground, the roadway capacity would not be different from existing conditions; however, once the LRT enters/exits the portal, the roadway capacity would be consistent with the remainder of the alignment on Van Nuys Boulevard.

This alternative would provide the highest reduction in VMT and VHT values.

Mitigation Measures

Construction Mitigation Measures

Transit

Please see mitigation measure MM-TRA-4 under Alternative 2 above.

Traffic

Please see mitigation measure MM-TRA-5 under Alternative 2 above.

Parking

No construction mitigation measures are required.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-1 under Alternative 1 above.

Table 3-22: Alternative 4 – Parallel Corridors – Intersections at LOS E or F and/or Significantly Affected in 2040

Study Intersections		Future No Build				Future With Project (Alternative 4)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
75	Sepulveda Blvd & Plummer St	51.6	D	53.4	D	51.3	D	55.5	E	-0.3	2.1	No
77	Sepulveda Blvd & Nordhoff St	72.9	E	89.7	F	72.8	E	89.3	F	-0.1	-0.4	No
79	Sepulveda Blvd & Parthenia St	>100	F	63.5	E	>100	F	63.2	E	–	-0.3	No
81	Sepulveda Blvd & & Roscoe Blvd	>100	F	>100	F	97.4	F	>100	F	–	–	No
82	Sepulveda Blvd & Lanark St – Sepulveda Pl	>100	F	>100	F	>100	F	>100	F	–	–	No
87	Sepulveda Blvd & Sherman Way	51.5	D	58.0	E	52.7	D	58.5	E	1.2	0.5	No
89	Sepulveda Blvd & Vanowen St	78.6	E	71.0	E	73.8	E	67.5	E	-4.8	-3.5	No
90	Sepulveda Blvd & Victory Blvd	73.4	E	44.5	D	75.9	E	44.7	D	2.5	0.2	**Yes**
94	Sepulveda Blvd & Oxnard St	36.2	D	60.0	E	33.2	C	61.6	E	-3.0	1.6	No
96	Sepulveda Blvd & Burbank Blvd	>100	F	>100	F	>100	F	>100	F	–	–	**Yes**
98	Sepulveda Blvd & Magnolia Blvd	48.6	D	>100	F	44.8	D	>100	F	-3.8	–	**Yes**
99	Sepulveda Blvd & US-101 WB (NB) off-ramp	60.7	E	23.8	C	58.2	E	30.0	C	-2.5	6.2	**Yes**
100	Sepulveda Blvd & Camarillo St	32.6	C	>100	F	33.9	C	>100	F	1.3	–	No
102	Sepulveda Blvd & Ventura Blvd	44.3	D	>100	F	45.3	D	>100	F	1.0	–	No
103	Woodman Ave & Plummer St	59.0	E	12.0	B	66.8	E	14.7	B	7.8	2.7	**Yes**
108	Woodman Ave & Chase St	55.7	E	57.7	E	55.7	E	57.7	E	0.0	0.0	No
110	Woodman Ave & Roscoe Blvd	91.1	F	>100	F	91.1	F	>100	F	0.0	–	No

Study Intersections		Future No Build				Future With Project (Alternative 4)				Change in Delay (secs)		Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
		Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	Delay (secs)	LOS	AM Peak Hour	PM Peak Hour	
111	Woodman Ave & Lanark St–Cantara St	>100	F	>100	F	>100	F	>100	F	–	–	No
114	Woodman Ave & Saticoy St	81.5	F	98.0	F	81.5	F	98.0	F	0.0	0.0	No
116	Woodman Ave & Valerio St	33.9	C	42.9	D	41.3	D	42.5	D	7.4	-0.4	**Yes**
117	Woodman Ave & Sherman Way	43.9	D	79.8	E	43.4	D	79.9	E	-0.5	0.1	No
Source: KOA, 2015.												

Maintenance and Storage Facilities

Alternative 4, would require the addition of a MSF. Staffing of the facility is not projected to cause an increase in intersection delay since the typical arrival and departure times for employees are outside typical weekday peak travel periods.

Rail vehicles being serviced by any of the three MSF location options would cross vehicular travel lanes on Van Nuys Boulevard to transfer between the MSF site and the median fixed guideway. This would result in an increase in adjacent intersection delay. However, this increase would not result in an adverse effect under NEPA and would result in a less-than-significant traffic impact under CEQA.

Parking

A total of 902 on-street parking spaces on Van Nuys Boulevard and approximately 528 off-street parking spaces would be removed to accommodate the median guideway, TPSS, the Sherman Way Station, Keswick Street/Metrolink Station, Roscoe Boulevard Station, and Van Nuys/San Fernando Station. Parking supply on San Fernando Road would not be removed since the LRT would operate within an exclusive ROW adjacent to the Metrolink tracks.

Areas along Van Nuys Boulevard corridor that may encounter parking shortfalls and access issues during the weekday and/or weekend would be the same as those for the other build alternatives.

As shown in Appendix G, the adjacent PAZs will be able to accommodate the Van Nuys Boulevard weekday and weekend on-street parking demand within the available on-street spaces and/or off-street parking areas. Parking impacts would not be adverse under NEPA and would be less than significant under CEQA.

There may be access issues for delivery trucks for smaller businesses (those without truck loading bays or other on-site loading/delivery facilities) since they would not be able to dwell within the roadway during operations. Consequently, they would either have to use off-street parking facilities, or parking on an adjacent street, or alleyways behind the property. This impact would not be adverse under NEPA and would be less than significant under CEQA.

Pedestrian and Bicycle Facilities

Existing and planned pedestrian and bicycle facilities would be affected under Alternative 4. Alternative 4 would conflict with the City of Los Angeles Bicycle Plan, as designated bicycle lanes on Van Nuys Boulevard would not be feasible under this alternative. This would be an adverse effect under NEPA and a significant impact under CEQA. However, it should be noted that the City of Los Angeles General Plan Framework Element designates the corridor as a Transit Priority Segment, which conflicts with City of Los Angeles Bicycle Plan.

Pedestrian routes would be lengthened where minor intersections would be permanently closed. Pedestrian crossings that remain would be improved with enhanced design and safety features. Overall operational effects and impacts on pedestrian facilities would not be adverse under NEPA and would be less than significant under CEQA.

Cumulative Impacts

The cumulative impacts would be the same as those described above for Alternatives 2 and 3.

Operational Mitigation Measures

Transit

No mitigation measures are proposed or required.

Traffic

No feasible mitigation measures have been identified.

Parking

No operational mitigation measures are required.

Pedestrian and Bicycle Facilities

Please see mitigation measures MM-TRA-2 and MM-TRA-3 under Alternative 1 above.

Impacts Remaining After Mitigation

NEPA Finding

Construction Impacts

Alternative 4 would result in adverse construction effects on transit, traffic, and bicycle facilities and non-adverse effects to parking and pedestrian facilities after implementation of proposed mitigation measures.

Operational Impacts

Alternative 4 would result in adverse localized operational effects on traffic. However, Alternative 4 would result in non-adverse effects on local transit service due to increased congestion but overall beneficial regional effects on transit due to increased transit capacity and reduced travel times for LRT riders.

Effects on parking and pedestrian facilities would not be adverse. Effects on bicycle facilities would be adverse, due to conflicts with the City of Los Angeles Bicycle Plan.

CEQA Determination

Construction Impacts

Alternative 4 would result in significant construction impacts on transit, traffic, and bicycle facilities, and less-than-significant impacts on parking and pedestrian facilities.

Operational Impacts

Alternative 4 would result in significant bicycle facilities and traffic impacts, and less-than-significant impacts on parking, and pedestrian facilities after implementation of proposed mitigation measures. Impacts on local transit would be less than significant and beneficial on overall regional transit service.