

## 4.14 Safety and Security

### 4.14.1 Regulatory Framework and Methodology

The applicable federal, state, and local regulations that are relevant to an analysis of the proposed project's safety and security impacts are listed below. For additional information regarding these regulations, please see the Safety and Security Impact Report (KOA Corporation 2015) in Appendix W of this Draft EIS/EIR.<sup>1</sup>

#### 4.14.1.1 Regulatory Framework

##### Federal

Federal safety and security regulations that would be applicable to the proposed project are listed below.

- Public Transportation Safety Act of 2010;
- Moving Ahead for Progress in the 21<sup>st</sup> Century;
- FTA's State Safety Oversight Rule;
- U.S. Department of Homeland Security Act of 2002;
- Uniform Fire Code; and
- Standards for Accessible Design.

##### State

State safety and security regulations and agencies that would be applicable to the proposed project are listed below.

- California Public Utilities Commission; and
- California Building Code.

##### Local

Local safety and security regulations and agencies that would be applicable to the proposed project are listed below.

##### Metro Transit Safety and Security Measures

Station design, which is governed by Metro Design Criteria and includes proved Crime Prevention through Environmental Design, aims to create a safe environment for pedestrians, including Americans with Disabilities Act (ADA) treatments for the disabled. Metro's transit safety and security measures are as follows:

- Cameras have been installed at Metro facilities. Metro security personnel will monitor the cameras in real-time. The video feeds can also be shared with local police;
- Metro General Safety and Education Programs;
- Metro System Safety Program Plan;

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<sup>1</sup> ICF International. 2015. *Safety and Security Impact Report, East San Fernando Valley Transit Corridor Project*.

- Metro Emergency Response Plan;
- Metro System Security Plan;
- Metro Rail Design Fire/Life Safety Design Criteria; and
- City of Los Angeles General Plan Safety Element.

### **Metro Complete Streets Policy**

While this project does not meet all of the goals of the Metro Complete Streets Policy, the following goal is in alignment with one of the main purposes of this project:

- Maximize the benefits of transit service and improve access to public transit by making it convenient, safe, and attractive for users.

### **The City of Los Angeles Bureau of Fire Prevention and Public Safety**

- City of Los Angeles Emergency Preparedness Department;
- City of San Fernando Safety Element; and
- City of San Fernando Emergency Operations Plan.

## **4.14.1.2 Methodology**

NEPA requires that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331(b)(2)). Although NEPA does not include specific guidance or direction with respect to evaluating alternatives and relative effects of alternatives on public safety and security, FTA/FHWA, in its implementation of NEPA (23 U.S.C. 109(h)), directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, including whether a project or a design option would result in unacceptable safety or operational problems.

The analysis of the proposed project's impacts on pedestrian, bicyclist, and motorist safety along the proposed project alternative alignments and within 0.25 mile of the proposed station areas and maintenance facility sites is based on a qualitative assessment of whether existing police and fire protection services would be adequate with respect to proposed project facilities and comply with federal, state, and local safety regulations pertaining to system operations and passenger/pedestrian safety. The assessment of security addresses crime prevention and the potential for crime against persons, property theft, and vandalism. The analysis also reviews the proposed project design features in the context of Metro guidelines and procedures and considers the prior experience of other rail systems in the region to assess impacts.

## **4.14.1.3 Significance Thresholds**

### **NEPA**

NEPA does not include specific significance thresholds. According to the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA, the determination of significance under NEPA is based on context and intensity.<sup>2</sup> The CEQA thresholds (described below) encompass factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. Therefore, the CEQA thresholds listed below also apply to NEPA for the proposed project and its alternatives.

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<sup>2</sup> Council on Environmental Quality. n.d. *Regulations for Implementing NEPA, 40 CFR Part 1508, Terminology and Index*. Available: < [https://ceq.doe.gov/ceq\\_regulations/regulations.html](https://ceq.doe.gov/ceq_regulations/regulations.html) >. Accessed: July 8, 2016.

## CEQA

CEQA does not describe specific significance thresholds. According to the 2016 CEQA Guidelines (15064.7. Thresholds of Significance), each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.<sup>3</sup>

The State CEQA Guidelines define a significant effect on the environmental 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).<sup>4</sup>

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. As outlined in Appendix G, a project would normally have a significant impact with respect to safety and security if it would:

- Be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, resulting in a safety hazard for people residing or working in the project area;
- Be within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The *L.A. CEQA Thresholds Guide* does not include specific safety and security significance thresholds.

## 4.14.2 Affected Environment/Existing Conditions

### 4.14.2.1 Pedestrian, Bicyclist, and Vehicle Safety

The proposed project is composed of two primary corridors in the eastern San Fernando Valley (i.e., the Van Nuys Boulevard corridor and the San Fernando Road/Truman Street corridor). The pedestrian circulation system, which consists of sidewalks, crosswalks, street lighting, and street furniture, is generally well developed and complete, serving both adjacent residential and commercial land uses in the two corridors as shown in Figure 4.14-1.

Crosswalks at signalized intersections have pedestrian indicators and push-button activation for pedestrian phases in the Cities of Los Angeles and San Fernando. Most intersections in the project study area allow pedestrian crossings along all four sides.

<sup>3</sup> 2016 California Environmental Quality Act (CEQA) Statute and Guidelines.

<sup>4</sup> 2014 State CEQA Guidelines, Association of Environmental Professionals.

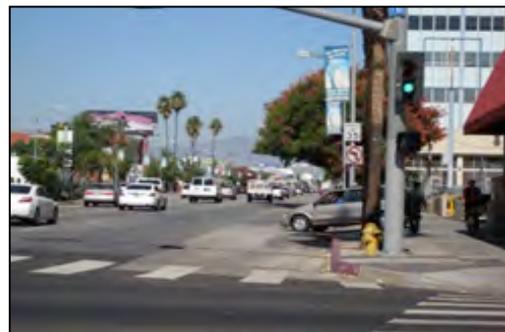
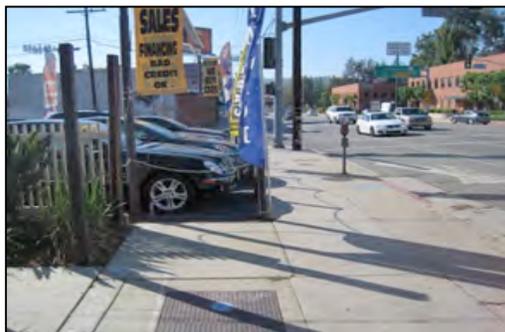
**Figure 4.14-1 Existing Pedestrian Infrastructure**



Source: Metro, 2015.

Sidewalk widths along Van Nuys Boulevard range from a minimum of 5 feet to a maximum of 20 feet, with most sidewalks ranging from 10 to 13 feet in width.<sup>5</sup> Along San Fernando Road and Truman Street, the sidewalks range from a minimum of 7 feet to a maximum of 13 feet, with most sidewalks falling in the 8 to 12 foot range. There are sections of sidewalk where pedestrian accessibility is compromised by crossing driveways and obstructions protrude into the path of pedestrians. Some of these sections are shown in the photos comprising Figure 4.14-2.

**Figure 4.14-2 Examples of Existing Obstructions to Pedestrian Accessibility**



Source: Metro, 2015.

<sup>5</sup> Van Nuys Boulevard is classified as a Class II Major Highway by the City of Los Angeles. The City's standard for sidewalk widths along Class II Major Highways is 12 feet.

Streets are generally well lit throughout the study area. Streetlights are placed at regular intervals along Van Nuys Boulevard between San Fernando Road and Woodman Avenue, except at the I-5 freeway underpass. A higher concentration of streetlights occurs near populated intersections, such as Van Nuys Boulevard and Laurel Canyon Road, and near bus stations.

There are striped Class II bike lanes on Van Nuys Boulevard north of Parthenia Street to Beachy Avenue. There is an existing Class I bike path adjacent to San Fernando Road.

According to California Highway Patrol data collected and geocoded by the Safe Transportation Research and Education Center at the University of California, Berkeley, 10 vehicle incidents occurred during the 2011 calendar year on or adjacent to the proposed alignment. As shown in Table 4.14-1, of the 10 vehicle incidents in the vicinity, the most prevalent vehicle collision type involved a vehicle and another vehicle or other object, resulting in 19 injuries. One vehicle incident involving a pedestrian was reported in 2011, resulting in one injury. There was also one vehicle incident involving a bicyclist in 2011, resulting in one injury. It should be noted that figures provided in Table 4.14-1 most likely underrepresent the number of vehicle incidents that occurred in the area in 2011 because many incidents result in property damage but not injury or death.<sup>6</sup>

**Table 4.14-1: Vehicle Collisions within or Adjacent to Proposed Alignment, 2010 and 2011**

Collision Type	Total Incidents	Persons Injured	Persons Killed
<b>2011</b>			
With Pedestrian	1	1	0
With Bicycle	1	1	0
With Other Motor Vehicle or Other Object	8	19	0
<b>TOTAL</b>	<b>10</b>	<b>21</b>	<b>0</b>
<b>2010</b>			
With Pedestrian	2	3	0
With Bicycle	1	1	0
With Other Motor Vehicle or Other Object	4	6	0
<b>TOTAL</b>	<b>7</b>	<b>10</b>	<b>0</b>

Source: Safe Transportation Research and Education Center 2014.

<sup>6</sup> The 2011 data are the most recent data available. It is anticipated that 2012 data will not be available until summer 2014.

#### 4.14.2.2 Fire Protection

The Los Angeles Fire Department (LAFD) provides fire and emergency response services throughout the project study area. LAFD would provide first response in case of an accident and coordinate closely with Metro to provide emergency services during construction and operation of the proposed project. Figure 4.14-3 shows the fire stations located within the project study area, which are the following:<sup>7</sup>

- Station #7: 14123 Nordhoff Street, Arleta;
- Station #39: 14415 Sylvan Street, Van Nuys;
- Station #81, 14355 Arminta Street, Panorama City;
- Station #88: 5101 N. Sepulveda Boulevard, Sherman Oaks; and
- Station #98, 13035 Van Nuys Boulevard, Pacoima.

In addition to fire protection and emergency medical services, Station #88 also includes an Urban Search and Rescue Task Force and is a designated Emergency Preparedness Training Center.

#### City of San Fernando Fire Services

The study area is partly located within the City of San Fernando. Fire protection and emergency medical services within the City of San Fernando are provided by the LAFD.

#### 4.14.2.3 Security

The affected environment with respect to security is the bus and rail system, which includes stations, vehicles, and ancillary facilities, and the areas in the immediate vicinity of those facilities. Passengers, transit employees, vendors, contractors, and members of the general public who come in contact with the system, as well as transit property and equipment, would be susceptible to the same crimes they might experience in the surrounding neighborhoods. Passenger security features include closed-circuit television cameras (CCTV), emergency call boxes, fully lighted station stops, bicycle parking, and transit parking areas. These features, which are within the trains and buses or at the rail stations, are designed to offer security and a personal sense of well being for passengers.

The majority of the study area is served by the Los Angeles Police Department (LAPD) for police protection and the LAFD for fire protection and emergency medical services. Fire protection and emergency services are governed by the Fire Protection Prevention Plan of the City of Los Angeles.

#### 4.14.2.4 Police Protection

The following LAPD stations are located within the project study area:<sup>8</sup>

- Foothill Community Police Station, 12760 Osborne Street, Pacoima; and
- Van Nuys Community Police Station, 6240 Sylmar Avenue, Van Nuys.

<sup>7</sup> City of Los Angeles Fire Department. 2013a. *Find a Station*. Available: <<http://lafd.org/>>. Accessed: February 2013.

<sup>8</sup> City of Los Angeles Police Department. 2013. *Our Communities*. Available: <[http://www.lapdonline.org/our\\_communities](http://www.lapdonline.org/our_communities)>. Accessed: March 2013.

Figure 4.14-3: LAFD Stations Located in the Project Study Area



Source: ICF International, 2014.

The City of San Fernando Police Department is located at 910 First Street in the City of San Fernando, less than 1 mile from the Sylmar Metrolink station. The San Fernando Police Department includes 35 sworn officers and 25 civilian personnel.<sup>9</sup>

Figure 4.14-4 shows the police stations located within the project area.

### Existing Crime For Metro Train/Bus Facilities and Rights-of-Way

According to the Los Angeles County Sheriff's Department Transit Services Bureau, a total of 7,465 incidents were reported in 2013, the most recent year for which data have been compiled and released to the public.<sup>10</sup> As shown in Table 4.14-2, a total of 2,031 of the indicated Part I crimes were reported for light-rail/bus facilities in 2013, which represents a 16 percent increase from 2012.<sup>11</sup> Part I crimes include violent crimes (homicide, rape, robbery, and aggravated assault), property crimes (burglary, motor vehicle theft, and larceny-theft over \$400), and arson. There were 731 adult arrests and 99 juvenile arrests made by the Los Angeles County Sheriff's Department (LASD) Transit Services Bureau deputies on or near light-rail/bus facilities in 2013.<sup>12</sup>

**Table 4.14-2: Los Angeles County Sheriff's Department, Transit Services Bureau, Incidents Reported for Metro Train/Bus Facilities and Rights-of-Way**

Crime	2011	2012	2013
Larceny Theft	576	787	1,006
Bicycle Theft <sup>13</sup>	125	184	206
Robbery	261	380	408
Grand Theft Auto	123	89	107
Aggravated Assault	237	283	281
Burglary	13	20	15
Arson	5	1	5
Forcible Rape	3	4	2
Homicide	2	1	1
<b>TOTAL</b> (not including vandalism)	1,345	1,749	2,031
Vandalism	357	306	404

Source: Los Angeles County Sheriff's Department, Transit Services Bureau 2011, 2012, 2013; ICF International, 2016.

<sup>9</sup> City of San Fernando Police Department. n.d. *Police*. Available: <[http://www.ci.san-fernando.ca.us/city\\_government/departments/police/index.shtml](http://www.ci.san-fernando.ca.us/city_government/departments/police/index.shtml)>. Accessed: March 9, 2013.

<sup>10</sup> Los Angeles County Sheriff's Department. 2013. *2013 Light-Rail/Bus Crime Incident and Arrest Summary*. Transit Services Bureau. Available: <<http://shq.lasdnews.net/CrimeStats/yir9600/yir2013/tsb/11.htm>>. Accessed: April 27, 2016.

<sup>11</sup> Ibid.

<sup>12</sup> Los Angeles County Sheriff's Department. 2013. *2013 Light-Rail/Bus Crime Incident and Arrest Summary*. Transit Services Bureau. Available: <<http://shq.lasdnews.net/CrimeStats/yir9600/yir2013/tsb/11.htm>>. Accessed: April 27, 2016.

<sup>13</sup> Michael Morris, Crime Analyst, Los Angeles County Sheriff's Department-Transit Policing Division. Email message, August 4, 2015 and April 27, 2016.

Figure 4.14-4: Police Stations Located in the Project Study Area



Source: ICF International, 2014.

## 4.14.3 Environmental Consequences, Impacts and Mitigation Measures

No impacts related to airport hazards and wildland fires would occur under any of the alternatives as described below.

### 4.14.3.1 Airport Hazards

The project study area is not located in the immediate vicinity of an airport. Whiteman Airport, located at 12653 Osborne St, is located approximately 3.6 miles south from the Sylmar/San Fernando Metro Station. Van Nuys Airport, located at 16461 Sherman Way, is located approximately 2 miles east of the study area. Impacts related to increased airport hazards would not occur under the No-Build Alternative, TSM Alternative, and the two build alternatives. No impact would occur. No further discussion of these impacts is required.

### 4.14.3.2 Wildland Fires

The study area is not located in a City of Los Angeles–designated wildland fire area.<sup>14</sup> The No-Build Alternative, TSM Alternative and two build alternatives are not anticipated to result in exposure to persons to wildland fire hazards. Therefore, no impacts related to wildland fires would occur under the No-Build Alternative, TSM Alternative and the two build alternatives. No further discussion of these impacts is required.

### 4.14.3.3 No-Build Alternative

#### Construction Impacts

The No-Build Alternative represents projected conditions in 2040 without implementation of the project. No new transportation infrastructure would be constructed under this alternative. Therefore, no adverse construction effects or impacts related to public safety and security would occur.

#### Operational Impacts

Under the No-Build Alternative, no new transportation infrastructure would be built within the project study area, aside from projects that are currently under construction or funded for construction and operation by 2040. Because the No-Build Alternative includes no new construction, aside from the existing transportation infrastructure and future planned projects described above, it would not result in any safety and security impacts.

#### Cumulative Impacts

The No-Build Alternative represents projected conditions in 2040 without implementation of the project. No new transportation infrastructure would be constructed under this alternative and; therefore, no effects or impacts would occur and the No-Build Alternative would not contribute to any adverse cumulative safety and security effects.

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<sup>14</sup> City of Los Angeles Safety Element. Exhibit D. <http://cityplanning.lacity.org/cwd/gnlpln/saftyelt.pdf>. Accessed: March 27, 2014.

## **Mitigation Measures**

### **Construction Mitigation Measures**

No construction mitigation measures are required.

### **Operational Mitigation Measures**

No operational mitigation measures are required.

## **Impacts Remaining After Mitigation**

### **NEPA Finding**

No effects would occur.

### **CEQA Determination**

No impacts would occur under the No-Build Alternative.

#### **4.14.3.4 TSM Alternative**

### **Construction Impacts**

The TSM Alternative could include minor physical improvements; as a consequence, construction activities would be limited in scope and duration. When construction activities would occur, all construction sites and equipment would be secured to prevent tampering and vandalism, and all applicable Metro guidelines pertaining to construction sites would be followed. As required by the City of Los Angeles Bureau of Engineering Master Specifications, the contractor would be required to keep all equipment, field offices, storage facilities, and other facilities free of graffiti. Any graffiti would be painted over, masked, or cleaned off within 24 hours after notification by the inspector. Therefore, construction impacts/effects would be minor, and no significant or substantial adverse impacts/effects would occur.

### **Operational Impacts**

#### **Pedestrian, Vehicle and Bicycle Safety**

The TSM Alternative could include improvements to the existing bus network, including enhanced operating hours and increased bus frequencies for Metro Rapid Line 761 and Local Line 233. Buses would continue to operate on existing streets. There would be no or minimal changes to the existing environment. Potential minor modifications to the roadway network would enhance the transportation network, would be compliant with ADA guidelines and would most likely not result in new pedestrian, bicycle, and/or vehicle safety impacts or conflicts.

#### **Accidents and Collisions**

Proposed increased bus service could result in a corresponding increase in the number of collisions. However, potential bus improvements under this alternative would be subject to Metro's System Safety Program Plan and its Injury and Illness Prevention Program. Based on this and given the incremental changes in bus frequencies, implementation of the TSM Alternative is not expected to result in substantial increased risk of accidents or collisions, and no substantial adverse or significant impacts are anticipated.

## **Security**

The TSM Alternative is not expected to result in a substantial increase in crime due to the increased bus frequencies. The proposed improvements under this alternative would result in minor changes to the operational characteristics of the transportation system. The project area is a highly urbanized area in the San Fernando Valley within the Cities of Los Angeles and San Fernando. Crime is a fact of urban life and will continue with or without implementation of this alternative. Personnel from the Transit Services Bureau of LASD would continue to respond in the event of a security-related emergency, with assistance provided by LAPD as necessary. Additionally, all riders would be subject to the LADOT Rider's Code of Conduct (Los Angeles Department of Transportation n.d.) and to Metro guidelines and requirements pertaining to riders. Therefore, any adverse effects or impacts related to security that might occur under the TSM Alternative are expected to be minor.

## **Cumulative Impacts**

The study area for cumulative impacts is the same as the project study area, which is depicted in Figure 4.14-3. The cumulative projects in the study area, which provide the basis for the cumulative impacts analysis, are shown in Chapter 2 and Table 2-3, and consist primarily of various types of development projects. These cumulative projects would not result in significant airport safety hazards or expose persons to wildland fire hazards. However, these projects could increase the demand for emergency and private security services, although it's not known whether increased demand would require the construction of new facilities that would result in significant impacts on the environment. The extent to which these projects would interfere with an adopted emergency response or evacuation plan would depend largely on the amount of additional traffic and resulting increase in congestion that would occur as a result of the related projects.

However, because the TSM Alternative would consist of low-cost transit service improvements and very minor physical improvements, which could have a beneficial operational effect on mobility, and no or minimal other safety and security impacts, it would not contribute to any significant adverse safety and security cumulative impacts. Therefore, the TSM Alternative would not result in a cumulatively considerable contribution to a significant cumulative impact.

## **Mitigation Measures**

### **Construction Mitigation Measures**

No construction mitigation measures would be required.

### **Operational Mitigation Measures**

No operational mitigation measures would be required.

## **Impacts Remaining After Mitigation**

### **NEPA Finding**

Effects would not be adverse.

### **CEQA Determination**

Impacts would be less than significant.

### 4.14.3.5 BRT Alternatives

#### Alternative 1 – Curb-Running BRT

##### Construction Impacts

Construction activities within public rights-of-way are not typically considered to be adverse due to their short-term nature, particularly with implementation of construction management and abatement measures. All work would conform to industry standards and specifications. During construction, lane closures, traffic detours, and designated truck routes may be required, which could adversely affect emergency vehicle response times, a potentially significant impact and adverse effect. Maintaining an adequate level of signage, construction barriers, and supervision of trained safety personnel as part of the construction team would ensure that pedestrian, bicyclist, and motorist safety is maintained during construction. Implementation of mitigation measures MM-SS-1 through MM-SS-3 would further reduce and minimize potential temporary impacts during construction.

##### Operational Impacts

###### *Pedestrian, Vehicle, and Bicycle Safety*

The buses operating under the Curb-Running BRT Alternative would be similar to existing Metro high-capacity, articulated 60-foot buses. Based on Metro's Operations Plan for the East San Fernando Valley Transit Corridor Project, the Curb-Running BRT Alternative is anticipated to result in speed improvements of 18 percent for peak hours and directions and 15 percent for off-peak hours and directions. Other than the improvements in performance and the fact that the BRT would operate in a dedicated curb lane, which would improve safety, this alternative would operate in a similar fashion to existing bus lines along the corridor and consequently, it's not expected to result in significant new safety hazards or concerns.

All current pedestrian movements across roadways would be maintained under this alternative, including all existing mid-block crossing opportunities. All current motor vehicle turns into and out of cross streets and driveways would also be maintained under this alternative. No prohibitions on left turns or right turns would be necessary.

All current Metro Rapid bus stops would be upgraded and would include design enhancements that would be ADA compliant. Canopies at upgraded bus stations would be designed to meet accessibility requirements. Other modifications to the curb lanes to accommodate the BRT improvements would also comply with ADA guidelines. This alternative, however, would result in modifications to existing bicycle lanes in the corridor. On Van Nuys Boulevard between the Metro Orange Line and San Fernando Road, with one exception (at Roscoe Boulevard), the curbside lane would be 12 feet wide or greater. Bicyclists and right-turning vehicles would be permitted within the curb lane. On Van Nuys Boulevard at Roscoe Boulevard, the curbside lane would be 11 feet wide. The existing Class II bike lanes on Van Nuys Boulevard north of Parthenia Street would be removed under this alternative. Proposed changes to the roadway network to accommodate the BRT improvements would be designed and implemented in accordance with Metro design guidelines in order to ensure pedestrian, motorist, and bicyclist safety. However, the removal of Class II bike lanes or replacement with shared lanes would increase the potential for conflicts between bicyclists and motor vehicles, reducing safety, which would be a potentially adverse effect and significant impact.

### ***Accidents and Collisions***

Where BRT buses would be placed in dedicated lanes and would be separated from mixed-flow traffic, the potential for conflict between normal street traffic and bus operations would be reduced and, therefore, the potential for accidents would decrease. Where buses would operate in mixed-flow traffic, increased bus service could potentially result in a corresponding increase in the number of collisions. However, potential bus improvements under this alternative would be subject to Metro's System Safety Program Plan. Given that fact and because existing bus service in the corridor operates in mixed-flow traffic, it is not expected that there would be a significant increase in accidents or collisions between buses and other motor vehicles under the Curb-Running BRT Alternative.

### ***Security***

The conversion of existing mixed-flow lanes to dedicated BRT lanes would result in additional roadway congestion due to the decreased roadway capacity for mixed-flow traffic. However, emergency vehicles would be able to use the BRT lanes if needed, when responding to an emergency, to be able to maintain emergency response times and existing access or evacuation plans in the event of an emergency. Therefore, impacts are not expected to be adverse under NEPA and would be less than significant under CEQA.

Security concerns would be addressed both through design considerations and by coordinating with law enforcement personnel as described in mitigation measures below. Personnel from the Transit Services Bureau of LASD would continue to respond in the event of a security-related emergency, with assistance provided by LAPD as necessary. Additionally, all riders would be subject to the LADOT Rider's Code of Conduct (Los Angeles Department of Transportation n.d.) and to Metro guidelines and requirements pertaining to riders. Therefore, the Curb-Running BRT Alternative is not expected to result in a substantial increase in crime and would not result in adverse effects on security.

### **Cumulative Impacts**

The cumulative projects listed in Table 2-3 consist of infill development projects in an existing urban area. While development of housing or commercial buildings could increase the demand for emergency and private security services, in the context of the study area, development would be limited to these individual sites that are either already developed or consist of infill development parcels. When compared with the context of the already heavily developed urban neighborhoods along and adjacent to the proposed project corridor, the cumulative projects would not result in a substantial increase in development that would clearly strain existing emergency services in the project study area.

Implementation of Alternative 1 consists of transit improvements in an existing transit corridor and would not increase demand for emergency or private security services. Alternative 1 would result in impacts, after mitigation, on bicycle safety due to the removal of existing bike lanes. However, none of the cumulative projects listed in Table 2-3 would result in the removal of bicycle lanes. Therefore, the impacts to safety due to the removal of bicycle lanes under Alternative 1, would be significant at the project-level, but since none of the other reasonably foreseeable projects would remove bicycle lanes, the impacts would not be considered a cumulatively considerable contribution to a significant cumulative impact.

## Construction Mitigation Measures

**MM-SS-1 (All Build Alternatives):** Alternate walkways for pedestrians shall be provided around construction staging sites in accordance with ADA requirements.

**MM-SS-2 (All Build Alternatives):** All pedestrian and bicyclist detour locations around staging sites shall be signed and marked in accordance with the Manual on Uniform Traffic Control Devices “work zone” guidance, and other applicable local and state requirements.

**MM-SS-3 (All Build Alternatives):** Work plans and traffic control measures shall be coordinated with emergency responders to limit effects to emergency response times.

## Operational Mitigation Measures

**MM-SS-4 (All Build Alternatives):** All stations shall be illuminated to avoid shadows and all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated. In addition, lighting would provide excellent visibility for train operators to be able to react to possible conflicts, especially to pedestrians crossing the track.

**MM-SS-5 (All Build Alternatives):** Proposed station designs shall not include design elements that obstruct visibility or observation nor provide discrete locations favorable to crime; pedestrian access to at-grade stations shall be at ground-level with clear sight lines.

### **MM-SS-6 (All Build Alternatives):**

1. Sidewalk widths shall be designed with the widest dimensions feasible in conformance with the Los Angeles/Metro’s adopted “Land Use/Transportation Policy,” and with widths exceeding 10 feet;
2. Minimum widths shall not be less than those allowed by the State of California Title 24 access requirements, or the ADA design recommendations. Section 1113A of Title 24 states that walks and sidewalks shall be a minimum of 48 inches (1,219 mm) in width, except that walks serving dwelling units in covered multi-family dwelling buildings may be reduced to 36 inches (914 mm) in clear width except at doors;
3. Accommodating pedestrian movements and flows shall take priority over other transportation improvements, including automobile access; and
4. Physical improvements shall ensure that all stations are fully accessible as defined in the ADA.

**MM-SS-7 (All Build Alternatives):** Adequate pedestrian queuing and refuge areas and wide crosswalks shall be provided in areas immediately around proposed stations to facilitate pedestrian mobility.

**MM-SS-8 (All Build Alternatives):** Metro shall coordinate and consult with the LAFD, LAPD, and LASD to develop safety and security plans for the proposed alignment, parking facilities, and station areas.

**MM-SS-9 (All Build Alternatives):** Fire separations shall be provided and maintained in public occupancy areas. Station public occupancy shall be separated from station ancillary occupancy by a minimum 2-hour fire-rated wall. The only exception is that a maximum of two station agents, supervisors, or information booths may be located within station public occupancy areas when constructed of approved noncombustible materials and limited in floor area to 100 square feet.

## **Impacts Remaining After Mitigation**

### ***NEPA Finding and CEQA Determination***

Under NEPA and CEQA, the potential for increased conflicts between bicyclists and motor vehicles and increased delay for emergency responders during project operation are potentially adverse effects and unavoidable significant impacts that would remain after implementation of proposed mitigation measures.

## **Alternative 2 – Median-Running BRT**

### **Construction Impacts**

Construction effects would be the same as those anticipated to occur under Alternative 1 – Curb-Running BRT. Effects or impacts would be potentially adverse and significant prior to implementation of mitigation measures and non-adverse under NEPA and less than significant under CEQA with implementation of mitigation measures MM-SS-1 through MM-SS-3.

### **Operational Impacts**

#### ***Pedestrian, Vehicle, and Bicycle Safety***

This alternative would include restrictions on motor vehicle and pedestrian movements as a result of reconfiguration of the roadway and reduced number of travel lanes to accommodate the BRT facilities, or for safety reasons to eliminate or minimize potential conflicts.

Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized 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. All movements across the median guideway would be prohibited. With regard to pedestrian access, all existing signal-controlled crosswalks would be maintained. However, all other pedestrian crossings on Van Nuys Boulevard at unsignalized intersections would be prohibited to avoid potential conflicts between pedestrians and the BRT vehicles.

From Sherman Way northward, the public right-of-way width of Van Nuys Boulevard is 100 feet. To accommodate two bus lanes and a left-turn lane or bus stop in the median of Van Nuys Boulevard, the sidewalk widths would be narrowed to 10 feet. This is required due to street widening that would occur in some locations under this option. At locations where the sidewalk would be narrowed, the power poles would need to be relocated. In most cases, to satisfy drainage requirements, the entire width of the sidewalk would be reconstructed. At some locations where the sidewalk width is currently less than 10 feet, there would be no sidewalk narrowing. At a curbside bus stop, sidewalks currently less than 10 feet wide would be widened to 10 feet. Although the new sidewalk width would meet the minimum 10-foot-wide accessibility requirements, at some locations with higher pedestrian activity (at the proposed Chase, Roscoe, Blythe, Sherman Way, and Vanowen Stations), the reduction in sidewalk width (from 13 feet to 10 feet) would result in further crowding of the sidewalk, particularly during passenger boarding and exiting of buses, and for this reason, members of the public, particularly those with limited mobility, may perceive this as a potentially adverse effect and significant impact to pedestrians.

A barrier the length of the alignment could be installed to prevent illegal pedestrian crossings of the BRT alignment. Fencing for pedestrian channelization could also be installed under this alternative. 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.

Metro Rapid bus stops that currently serve the 794 and 734 lines on the northern part of the alignment along Truman Street and San Fernando Road would be upgraded and have design enhancements that would be ADA compliant, including compliance with the dimensions and requirements pertaining to Bus Boarding and Alighting Areas, Bus Shelters, and Bus Stops as described in sections 8.10.2, 8.10.3, and 8.10.4 of the 2010 ADA Standards.

Along the Van Nuys Boulevard segment, bus stop platforms would be constructed in the median. The proposed stations would be consistent with Metro's Systemwide Station design.

The Median-Running BRT Alternative would also result in modifications to existing bicycle lanes in the corridor. On Van Nuys Boulevard between the Metro Orange Line and San Fernando Road, the curbside lanes would typically be 11 feet wide. Thus, motorists in the curbside lane would need to shift to the left to pass a bicyclist. The existing bike lanes extending north on Van Nuys Boulevard from Nordhoff Street would be removed and would not be replaced under this alternative. The removal of Class II bike lanes to accommodate the project would increase the potential for conflicts between bicyclists and motor vehicles traveling along Van Nuys Boulevard in this segment of the corridor, reducing safety, which would be a potentially adverse effect and significant impact.

### ***Accidents and Collisions***

The Median-Running BRT Alternative would consist of 6.7 miles of dedicated guideway, which would be separated from mixed flow traffic. When buses use a dedicated guideway or lane, it reduces the potential for conflicts between buses and mixed-flow traffic. Additionally, Metro would coordinate with LADOT to ensure busway intersections with all necessary street infrastructure would be designed and constructed to enable motorists, bicyclists, and pedestrians to interact safely with the buses. To guard motorists from accidentally driving onto the guideway, directional signs would be installed on busway entrances. Additionally, Metro guidelines pertaining to the prevention of accidents and collisions and mitigation measures specified below would further increase safety and reduce the potential for conflicts and accidents and collisions.

Approximately 2.5 miles of the alignment under this alternative would be located within mixed-flow lanes along San Fernando Road between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink station. Where buses would operate in mixed-flow traffic, increased bus service could result in a corresponding increase in the number of collisions. However, potential bus improvements would be subject to Metro's System Safety Program. Given that fact and because existing bus service in the corridor operates in mixed-flow traffic, it is not expected that there would be a significant increase in accidents or collisions between buses and other motor vehicles.

### ***Security***

The conversion of existing mixed-flow lanes to dedicated BRT lanes under this alternative would result in additional roadway congestion due to the decreased roadway capacity for mixed-flow traffic, which could adversely affect emergency vehicle response and access or evacuation plans in the event of an emergency. The proposed motor-vehicle turn restrictions described above could also result, in some instances, in emergency vehicles taking a slightly more circuitous route, and therefore require more time to respond to emergencies. For these reasons, this alternative would result in an adverse effect under NEPA and significant impact under CEQA.

Although implementation of this alternative and development of new BRT facilities in the corridor could pose security concerns, including the potential for assault, robbery, or terrorist attacks, these concerns would be addressed both through design considerations and by coordinating with law enforcement personnel as described in mitigation measures in Chapter 5. Personnel from the Transit

Services Bureau of LASD would continue to respond in the event of a security-related emergency, with assistance provided by LAPD as necessary. Additionally, all riders would be subject to the LADOT Rider's Code of Conduct (Los Angeles Department of Transportation n.d.) and to Metro guidelines and requirements pertaining to riders. The Median-Running BRT Alternative is not expected to result in a substantial increase in crime and any effects on security are expected to be non-adverse under NEPA and less-than-significant under CEQA.

## **Cumulative Impacts**

The cumulative projects listed in Table 2-3 consist of infill development projects in an existing urban area. While development of housing or commercial buildings could increase the demand for emergency and private security services, in the context of the study area, development would be limited to these individual sites that are either already developed or consist of infill development parcels. When compared with the context of the already heavily developed urban neighborhoods along and adjacent to the proposed project corridor, the cumulative projects would not result in a substantial increase in development that would clearly strain existing emergency services in the project study area.

Alternative 2 would result in impacts, after mitigation, on pedestrian sidewalk safety, bicycle safety due to the removal of existing bike lanes, and potential impacts on emergency vehicle response time due to turn restrictions and the increased congestion resulting from the removal of mixed-flow travel lanes. However, none of the cumulative projects listed in Table 2-3 would result in the removal of bicycle lanes, sidewalk narrowing, or the conversion of mixed-flow traffic lanes to bus-only lanes. Therefore, the impacts to safety due to the removal of bicycle lanes, sidewalk narrowing, and conversion of mixed-flow lanes to bus-only lanes under Alternative 2, would be significant at the project-level, but since none of the other reasonably foreseeable projects would remove bicycle lanes, narrow the sidewalks, or convert mixed-flow traffic lanes to bus-only lanes, the impacts would not be considered a cumulatively considerable contribution to a significant cumulative impact.

## **Mitigation Measures**

### ***Construction Mitigation Measures***

Safety measures MM-SS-1 through MM-SS-3 would be implemented.

### ***Operational Mitigation Measures***

Safety measures MM-SS-4 through MM-SS-9 would be implemented.

## **Impacts Remaining After Mitigation**

### ***NEPA Finding and CEQA Determination***

Under NEPA and CEQA, the reduced sidewalk widths in some locations, the potential for increased conflicts between bicyclists and motor vehicles, and increased delay for emergency responders during project operation are potentially adverse effects under NEPA and unavoidable significant impacts under CEQA that would remain after implementation of proposed mitigation measures.

### 4.14.3.6 Rail Alternatives

#### Alternative 3 – Low-Floor LRT/Tram

##### Construction Impacts

Construction of Alternative 3 – Low-Floor LRT/Tram may have temporary adverse effects on public safety and security within the study area. During construction, motorists, pedestrians, and bicyclists would experience additional safety hazards. This would result from the number and proximity of vehicles and people adjacent to Low-Floor LRT/Tram vehicle construction. Construction would also result in lane closures, traffic detours, and designated truck routes, which could adversely affect emergency vehicle response time, an adverse effect under NEPA and potentially significant impact under CEQA. The potential for significant safety and security impacts would be minimized by compliance with Occupational Safety and Health Administration (OSHA), California Occupational Safety and Health Administration (Cal/OSHA), and Metro safety and security programs, which are designed to reduce potential adverse effects during construction. Specifically, the alternative would comply with Metro safety standards for construction workers, and would be developed in conformance with Metro's Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria, Volume IX. The criteria specifically address fire protection requirements for the design and construction of LRT systems. The criteria identify and discuss fire safety as it corresponds to the following specific design criteria: station and guideway facilities, passenger vehicles, vehicle yard and maintenance facilities, system fire/life safety procedures, communications, rail operations control, and inspection, maintenance and training.

Incidents of crime adjacent to the project alignment would most likely not increase during construction. Incidents of property crime could occur at construction sites (e.g., theft of construction machinery and materials), but they would be minimized through implementation of standard site security practices by contractors. With implementation of mitigation measures MM-SS-16 through MM-SS-18, effects or impacts would be non-adverse under NEPA and less than significant under CEQA.

##### Operational Impacts

###### *Pedestrian, Vehicle, and Bicycle Safety*

The Low-Floor LRT/Tram Alternative would operate articulated vehicles on steel rails. The Low-Floor vehicles that would be electrically powered by overhead wires. For the purposes of this study, the Low-Floor LRT/Tram would consist of two cars, which would be connected to form a 180-foot-long train. Although Low-Floor LRT/Tram vehicles could operate at speeds up to 60 miles per hour (mph) in a dedicated guideway along Van Nuys Boulevard, they would not exceed the posted adjacent roadway speed limit, which is typically 35 mph. Low-Floor LRT/Tram vehicles would carry approximately 50 to 90 seated passengers and more than 200 total passengers, including standing passengers (depending on the type of Low-Floor LRT/Tram vehicle selected).

Under this alternative, most of the left turns would be prohibited from San Fernando Road through the City of San Fernando where a median dedicated guideway for the Low-Floor LRT/Tram vehicle is proposed between the Sylmar/San Fernando Metrolink station and Wolfskill Street. Furthermore, to maintain the pedestrian-oriented retail character of San Fernando Road between San Fernando Mission Boulevard and Chatsworth Drive, through traffic would be forced off of San Fernando Road on the block between Maclay Avenue and Brand Boulevard by means of turn restrictions. It should be noted that if Alternative 3 is selected as the preferred alternative, this operating scenario within the City of San Fernando would have to be confirmed or modified in

coordination with the City of San Fernando. All existing turning movements would be maintained on San Fernando Road between Wolfskill Street and Van Nuys Boulevard where the Low-Floor LRT/Tram would share travel lanes with motor vehicles. Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections where the Low-Floor LRT/Tram would be running in the median. However, all vehicle movements across the median at currently unsignalized intersections would be prohibited. This would include left turns from Van Nuys Boulevard as well as left turns and through traffic from minor side streets and private driveways. Motorists who desire to make a left turn onto an unsignalized cross street or into a driveway would have to make a U-turn at a signalized left-turn location or choose a route that would allow them to use a signalized cross street.

The proposed project build alternative would account for pedestrian safety concerns in the design of the stations. Pedestrian safety concerns would include pedestrian safety at station locations, near the alignment and at designated crossings. The proposed stations could introduce a safety hazard for pedestrians if the stations do not adequately account for pedestrian traffic and movement. This hazard could be attributed to the inherent purpose of a station, where large numbers of people congregate and cross the trackway to access or depart from the stations, which creates a potential of collisions between pedestrians and Low-Floor LRT/Tram vehicles. With that in mind, The introduction of Low-Floor LRT/Tram vehicles in mixed-flow traffic lanes along San Fernando Road (from Wolfskill Street to Van Nuys Boulevard) would create a safety concern for pedestrians at intersection crossings where pedestrians would cross over the tracks. Similarly, a potential safety hazard could occur if pedestrians attempt to cross streets and tracks illegally. Pedestrian traffic control and channelization techniques would be used to control pedestrian movements at intersections and encourage the use of designated pedestrian crossings. 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. Passengers would reach the median station platforms from crosswalks at signalized intersections. Additionally, there would be a pedestrian bridge at the Sylmar/San Fernando Metrolink station from the Low-Floor LRT/Tram platform to the Metrolink platform. Construction of the pedestrian bridge would comply with Metrolink/SCRRA Design Criteria. Fencing on overcrossings is required to prevent the dropping of large objects on passing trains. Lighting controls would be installed in accordance with Metrolink's recommended illumination levels for overhead pedestrian bridges and shall be designed to use energy efficiently.

Metro would also prepare grade crossing applications in coordination with local public agencies such as LADOT, the City of Los Angeles Bureau of Engineering, and the City Fire Department. In addition, grade crossing applications would need to be approved by the California Public Utilities Commission (CPUC).

The Low-Floor LRT/Tram stations would be ADA compliant and access to the station platforms would be from crosswalks, and passenger loading to and from the Low-Floor LRT/Trams would occur from both sides of the station platform. Canopies at the stations would incorporate station stop lighting to enhance safety. Adherence to Metro safety guidelines and mitigation measures specified below would minimize potential safety hazards.

Along Van Nuys Boulevard, where the existing sidewalks on each side of Van Nuys Boulevard are approximately 13 feet wide, sidewalks would be narrowed to 10 feet to accommodate the installation of the Low-Floor LRT/Tram guideway and a left-turn lane or tram station in the median of Van Nuys Boulevard, while providing two travel lanes in each direction. This sidewalk narrowing would occur from the Metro Orange Line to El Dorado Avenue in Pacoima, and would require the

relocation of utility poles. Although the new sidewalk width would meet the minimum 10-foot-wide accessibility requirements, at some locations with higher pedestrian activity (at the proposed Chase, Roscoe, Blythe, Sherman Way, and Vanowen Stations), the reduction in sidewalk width (from 13 feet to 10 feet) would result in further crowding of the sidewalk, particularly during passenger boarding and exiting of buses, and for this reason, members of the public, particularly those with limited mobility, may perceive this as a potentially adverse effect and significant impact to pedestrians.

This alternative would require a number of additional elements to support vehicle operations, including an overhead contact system (OCS), traction power substations (TPSSs), signaling, and an MSF. The MSF would include collision/body repair areas, paint booths, and wheel truing (the profiling of wheels to ensure the proper wheel to rail interface) machines. The MSF would be located at or near the following intersections:

- MSF Option A – Van Nuys Boulevard/Metro Orange Line;
- MSF Option B – Van Nuys Boulevard/Keswick Street; and
- MSF Option C – Van Nuys Boulevard/Arminta Street.

The OCS poles would be approximately 30 feet tall and typically located every 90 to 170 feet between two Low-Floor LRT/Tram tracks. Where the available public right-of-way width is extremely limited, the OCS poles would be placed on the sidewalk. At such locations, curbside bus stops serving local bus lines would be relocated so as to avoid having obstructions within the bus stop area. The MSF, TPSSs, and OCS would adhere to Metro safety guidelines and consequently are not expected to result in substantial adverse or significant effects or impacts. Proposed mitigation measures below would further minimize potential effects.

This alternative would result in modifications to existing bicycle lanes in the corridor. On Van Nuys Boulevard between the Metro Orange Line and San Fernando Road, the curbside lanes would typically be 11 feet wide. The existing bike lanes extending north on Van Nuys Boulevard from Nordhoff Street would be removed and would not be replaced. The removal of Class II bike lanes to accommodate the project would increase the potential for conflicts between bicyclists and motor vehicles traveling along Van Nuys Boulevard in this segment of the corridor, reducing safety, which would be a potentially adverse effect and significant impact.

### ***Accidents and Collisions***

Placement of the proposed Low-Floor LRT/Tram in a dedicated guideway would reduce the potential for conflicts between Low-Floor LRT/Tram vehicles and mixed-flow traffic. However, the Low-Floor LRT/Tram would operate in mixed-flow lanes along San Fernando Road between Van Nuys Boulevard and just north of Wolfskill Street. When operating in mixed-flow traffic, potential conflicts between the two modes could occur, particularly when motor vehicles make turns across the tracks. However, this alternative would be subject to Metro's System Safety Program. Given that fact and because existing bus service, which would be replaced by the Low-Floor LRT/Tram, operates in mixed-flow traffic, it is not expected that there would be a significant increase in accidents or collisions between vehicles. Design and operating characteristics and the grade crossing applications process as specified in mitigation measures described below would ensure impacts on safety due to the at-grade crossings would be reduced to less-than-significant levels under CEQA and non-adverse levels under NEPA.

## ***Security***

This alternative, would convert existing mixed-flow lanes to a dedicated guideway for vehicle trams. The removal of mixed-flow lanes would result in additional roadway congestion due to the decreased roadway capacity, which could adversely affect emergency vehicle response and access or evacuation plans in the event of an emergency. The proposed motor-vehicle turn restrictions could also result, in some instances, in emergency vehicles taking a slightly more circuitous route, and therefore require more time to respond to emergencies. For these reasons, this alternative would result in an adverse effect under NEPA and significant impact under CEQA.

There is potential for security issues to occur under implementation of this alternative. This includes the potential for assault, robbery, or terrorist attack. These concerns would be addressed both through design considerations and by coordinating with law enforcement personnel. Law enforcement personnel would be provided on the transit system during hours of operation. A complete Threat and Vulnerability Assessment in compliance with FTA regulations would be conducted. Low-Floor LRT/Tram facilities (such as vehicles, stations, parking lots) would be designed to provide a safe, secure, and comfortable transit system. Transit patrons would be provided with station amenities, such as covered platforms and adequate lighting. In addition, Metro would include security-related design features, such as emergency telephones, public address systems, and closed-circuit monitoring systems. Furthermore, this alternative would incorporate all necessary crime prevention measures, including Metro's crime prevention policies, to deter criminal acts and protect passengers, employees, and the community. Metro would coordinate with police and fire services to develop construction and operation plans and provide appropriate public safety and security for the Metro system, employees, and the surrounding community. Specifically, coordination would occur with the LAPD Foothill Community Police Station and the Van Nuys Community Police Station, both of which are located in the project study area. The alternative would also include coordination with the City of San Fernando Police Department, located at 910 First Street in the City of San Fernando, less than 1 mile from the Sylmar/San Fernando Metrolink station. Under this alternative, coordination would also occur with the Los Angeles County Sheriff's Department Transit Services Bureau and the TSA. As a consequence, implementation of this alternative is not expected to result in a substantial increase in the number of crimes occurring in the project study area. Additionally, the mitigation measures identified below would further reduce potential impacts and ensure public security and safety.

Fire safety would be addressed through design features. Metro's Fire/Life Safety Design Criteria outline specific requirements for fire protection at stations, along the alignment, and within Low-Floor LRT/Tram vehicles. Requirements include providing fire alarm control systems at each enclosed station facility and a public address system at each station. All Low-Floor LRT/Tram vehicles would be equipped with fire extinguishers, and fans to ventilate the vehicle in case of fire. The Low-Floor LRT/Tram vehicles would also experience reduced hazards from fire by specifying materials with minimum burning rates, smoke generation, and toxicity characteristics.

Additional design criteria address emergency responder access, passenger egress standards, standards for sprinkler systems, and standpipe connections for fire response. Adherence to these standards and federal, state, and local regulations, in conjunction with the low risk of fires at stations, would minimize potential fire safety impacts and hazards.

Under NEPA, this alternative could result in adverse effects due to the potential for conflicts between bicyclists and motor vehicles and the potential additional delay for emergency vehicles due to increased roadway congestion and turn-movement restrictions. It is expected that this alternative would result in a minimal increased risk of accidents and collisions. Mitigation measures (see below) are proposed to further reduce or minimize potential safety and security impacts.

Under CEQA, the potential for conflicts between bicyclists and motor vehicles and increased delay for emergency responders are potentially significant impacts. Other safety and security impacts would be less than significant or no impacts (wildland fire hazards and airport hazards) would occur. Also, see the proposed mitigation measures below, which are intended to further reduce potential impacts, where feasible.

### **Cumulative Impacts**

The analysis of cumulative impacts for Alternative 2 is also applicable to Alternative 3, with the exception that instead of a bus-only lane, Alternative 3 would include a median Low-Floor LRT/Tram. Development of Alternative 3 would not result in a cumulatively considerable contribution to a significant cumulative impact.

### **Mitigation Measures**

#### ***Construction Mitigation Measures***

Safety measures MM-SS-1 through MM-SS-3 would be implemented.

#### ***Operational Mitigation Measures***

Safety measures MM-SS-4 through MM-SS-9, described above (see Alternative 1), in addition to the mitigation measures below, would be implemented.

**MM-SS-10 (Alternatives 3 and 4):** For portions of the alignment where pedestrians and/or motor vehicles must cross the tracks, Metro shall prepare grade crossing applications in coordination with the CPUC and local public agencies, such as LADOT, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments. Crossings will require approval from the CPUC and will meet applicable CPUC standards for grade crossings.

**MM-SS-11 (Alternatives 3 and 4):** All proposed LRT stations and related parking facilities shall be equipped with monitoring equipment, which would primarily consist of video surveillance equipment to monitor strategic areas of the LRT stations and walkways, and/or be monitored by Metro security personnel on a regular basis.

**MM-SS-12 (Alternatives 3 and 4):** Metro shall implement a security plan for LRT operations. The plan shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel.

**MM-SS-13 (Alternatives 3 and 4):** Light rail vehicles shall be provided with front and rear safety fenders to increase light rail vehicle safety and minimize or prevent the potential for pedestrians to contact the vehicle coupler and/or fall under the LRT.

### **Impacts Remaining After Mitigation**

#### ***NEPA Finding and CEQA Determination***

Under NEPA and CEQA, the reduced sidewalk widths in some locations, the potential for increased conflicts between bicyclists and motor vehicles, and increased delay for emergency responders during project operation are potentially adverse effects and unavoidable significant impacts that would remain after implementation of proposed mitigation measures.

## Alternative 4 -LRT

### Construction Impacts

Construction of Alternative 4 may have temporary adverse effects on public safety and security in the study area. During construction motorists, pedestrians, and bicyclists would experience additional safety hazards. This would result from the number and proximity of vehicles and people adjacent to LRT construction. Construction activities, which would include an approximate 2.5-mile-long trench (cut-and-cover construction) and/or tunnel, could also result in lane closures, traffic detours, and designated truck routes, which could adversely affect emergency vehicle response time.

The potential for significant safety and security impacts would be minimized by compliance with OSHA, Cal/OSHA, and Metro safety and security programs, which are designed to reduce potential adverse effects during construction.

### Operational Impacts

#### *Pedestrian, Vehicle, and Bicycle Safety*

LRT vehicles would be similar to those currently used throughout the existing Metro LRT system. All vehicle movements across the median at currently unsignalized intersections would be prohibited under this alternative. This would include left turns from Van Nuys Boulevard as well as left turns and through traffic from side streets and private driveways. Motorists who desire to make a left turn onto an unsignalized cross street or into a driveway would have to make a U-turn at a signalized left-turn location or choose a route that would allow them to use a signalized cross street. On segments where the LRT would be in a subway, all existing left turns would be maintained.

Issues of pedestrian safety under Alternative 4 would include pedestrian safety at the alignment, station locations, and designated crossings. Of the 14 proposed stations, three are proposed to be located underground. Pedestrian safety issues would mostly apply to proposed at-grade stations and less to the proposed underground LRT facilities as the latter can be designed to avoid these concerns. Additionally, the underground stations would avoid the potential conflicts between pedestrians/bicyclists and motor vehicles that would occur with the at-grade stations.

The proposed 11 at-grade stations could introduce a new safety hazard for pedestrians if the stations do not adequately account for pedestrian traffic and movement. The occurrence of this hazard may be attributed to the inherent purpose of a station, where large numbers of people congregate and cross the trackway to access or depart from the transit stations, thus creating a potential hazard of collision between pedestrians and LRT vehicles. A pedestrian bridge at the Sylmar/San Fernando Metrolink station from the LRT platform to the parking lot is also proposed under this alternative. Construction of the pedestrian bridge would comply with Metrolink/SCRRRA Design Criteria. Fencing on overcrossings is required to prevent the dropping of large objects on passing trains. Lighting controls would be installed in accordance with Metrolink's recommended illumination levels for overhead pedestrian bridges and shall be designed to use energy efficiently. Although pedestrian safety impacts are potentially adverse and significant, implementation of mitigation measures would reduce effects/impacts to non-adverse under NEPA and less than significant under CEQA.

Although the new sidewalk width would meet the minimum 10-foot-wide accessibility requirements, at some locations with higher pedestrian activity (at the proposed Vanowen Station), the reduction in sidewalk width (from 13 feet to 10 feet) would result in further crowding of the sidewalk, particularly during passenger boarding and exiting of buses, and for this reason, members of the public, particularly those with limited mobility, may perceive this as a potentially adverse effect and significant impact to

pedestrians. The LRT Alternative would require a number of additional elements to support vehicle operations, including an OCS, TPSS, communications and signaling buildings, and an MSF. Two of the proposed MSFs would have underground connections. The MSFs would be located at or near the same intersections as those for Alternative 3. An OCS would be required under Alternative 4, with the same characteristics as those described for Alternative 3. Proposed mitigation measures would minimize potential effects.

The removal of Class II bike lanes to accommodate the project would increase the potential for conflicts between bicyclists and motor vehicles traveling along Van Nuys Boulevard in this segment of the corridor, reducing safety, which would be a potentially adverse effect and significant impact.

### ***Accidents and Collisions***

Placement of the LRT in a dedicated guideway would reduce the potential for conflicts between LRT vehicles and mixed-flow traffic. Between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink station, the LRT would operate within the existing freight/commuter rail right-of-way, but on separate dedicated tracks. As previously stated, Metro would prepare grade crossing applications in coordination with local public agencies. Design and operating characteristics and the grade crossing applications process as specified in mitigation measures described below would ensure impacts on safety due to the at-grade crossings would be reduced to less-than-significant levels under CEQA and non-adverse levels under NEPA.

### ***Security***

The removal of mixed-flow lanes would result in additional roadway congestion due to the decreased roadway capacity, which could adversely affect emergency vehicle response times and access or evacuation plans in the event of an emergency. The proposed motor vehicle turn restrictions could also result, in some instances, in emergency vehicles taking a slightly more circuitous route, and therefore, require more time to respond to emergencies. For these reasons, this alternative would result in an adverse effect under NEPA and significant impact under CEQA.

### **Cumulative Impacts**

The analysis of cumulative impacts for Alternative 2 is also applicable to Alternative 4, with the exception that instead of a bus-only lane, Alternative 4 would include a median LRT. Development of Alternative 4 would not result in a cumulatively considerable contribution to a significant cumulative impact.

### **Mitigation Measures**

#### ***Construction Mitigation Measures***

Safety measures MM-SS-1 through MM-SS-3 would be implemented.

#### ***Operational Mitigation Measures***

Safety measures MM-SS-4 through MM-SS-7, as well as the additional measures below, would be implemented.

**MM-SS-14 (Alternative 4):** To reduce potential risk of collisions between LRTs and automobiles on the street portion of Alternative 4, Metro shall coordinate with the CPUC, City and County of Los Angeles traffic control departments, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments, and also comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices for signing and pavement marking treatments.

**MM-SS-15 (Alternative 4):** The Metro Fire/Life Safety Committee has developed standard safety-related design criteria to ensure safe and adequate LRT operations in and around LRT underground stations. These criteria, which shall be adhered to, include:

1. Fire alarm protection within the station area;
2. A minimum of two fire emergency routes from each proposed station;
3. Emergency ventilation and lighting;
4. Communication systems between adjoining fire agencies; and
5. A methane detection system for each proposed station.

**MM-SS-16 (Alternative 4):** Building construction for underground stations would not be less than Type I Construction as defined in the Uniform Building Code (UBC). Type I Construction is a category of building construction that sets forth design requirements that provides for safety features such as ventilation, additional egress routes, lighting, etc.

**MM-SS-17 (Alternative 4):** Proposed stations having more than two levels below-grade or more than 80 feet to the lowest occupied level from grade shall require protected level separation or other protection features to provide safe egress to the exits.

**MM-SS-18 (Alternative 4):** The diverse needs of different types of traveling public including senior citizens, disabled citizens, low-income citizens, shall be addressed through a formal educational and outreach campaign. The campaign shall target these diverse community members to educate them on proper system use and benefits of LRT ridership.

## **Impacts Remaining After Mitigation**

### ***NEPA Finding and CEQA Determination***

Under NEPA and CEQA, the reduced sidewalk width in some locations, the potential for increased conflicts between bicyclists and motor vehicles, and increased delay for emergency responders during project operation are potentially adverse effects and unavoidable significant impacts that would remain after implementation of proposed mitigation measures.